Johannes Hunger

List of Publications by Year in descending order

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90 papers	4,620 citations	81743 39 h-index	102304 66 g-index
96 all docs	96 docs citations	96 times ranked	4556 citing authors

#	Article	IF	Citations
1	Conductivities of Binary Mixtures of Ionic Liquids with Polar Solvents. Journal of Chemical & Engineering Data, 2009, 54, 472-479.	1.0	267
2	Dynamics of Imidazolium Ionic Liquids from a Combined Dielectric Relaxation and Optical Kerr Effect Study: Evidence for Mesoscopic Aggregation. Journal of the American Chemical Society, 2009, 131, 11140-11146.	6.6	248
3	Temperature Dependence of the Dielectric Properties and Dynamics of Ionic Liquids. ChemPhysChem, 2009, 10, 723-733.	1.0	196
4	Liquid flow along a solid surface reversibly alters interfacial chemistry. Science, 2014, 344, 1138-1142.	6.0	187
5	The Bending Mode of Water: A Powerful Probe for Hydrogen Bond Structure of Aqueous Systems. Journal of Physical Chemistry Letters, 2020, 11, 8459-8469.	2.1	175
6	Interactions and Dynamics in Ionic Liquids. Journal of Physical Chemistry B, 2008, 112, 4854-4858.	1.2	158
7	Strong frequency dependence of vibrational relaxation in bulk and surface water reveals sub-picosecond structural heterogeneity. Nature Communications, 2015, 6, 8384.	5.8	132
8	Why are ionic liquid ions mainly associated in water? A Carâ€“Parrinello study of 1-ethyl-3-methyl-imidazolium chloride water mixture. Journal of Chemical Physics, 2008, 129, 104505.	1.2	130
9	Complex Formation in Aqueous Trimethylamine-N-oxide (TMAO) Solutions. Journal of Physical Chemistry B, 2012, 116, 4783-4795.	1.2	127
10	Influence of Concentration and Temperature on the Dynamics of Water in the Hydrophobic Hydration Shell of Tetramethylurea. Journal of the American Chemical Society, 2010, 132, 15671-15678.	6.6	124
11	Electrical conductivity and translational diffusion in the 1-butyl-3-methylimidazolium tetrafluoroborate ionic liquid. Journal of Chemical Physics, 2008, 128, 214509.	1.2	115
12	Anisotropic Water Reorientation around Ions. Journal of Physical Chemistry B, 2011, 115, 12638-12647.	1.2	108
13	Aqueous Heterogeneity at the Air/Water Interface Revealed by 2Dâ€HDâ€SFG Spectroscopy. Angewandte Chemie - International Edition, 2014, 53, 8146-8149.	7.2	106
14	Diffusion in ionic liquids: the interplay between molecular structure and dynamics. Soft Matter, 2011, 7, 1678.	1.2	104
15	On the collective network of ionic liquid/water mixtures. II. Decomposition and interpretation of dielectric spectra. Journal of Chemical Physics, 2008, 129, 184501.	1.2	95
16	Glasslike behavior in aqueous electrolyte solutions. Journal of Chemical Physics, 2008, 128, 161102.	1.2	94
17	From Ionic Liquid to Electrolyte Solution: Dynamics of 1-N-Butyl-3-N-methylimidazolium Tetrafluoroborate/Dichloromethane Mixtures. Journal of Physical Chemistry B, 2008, 112, 12913-12919.	1.2	91
18	On the origin of the extremely different solubilities of polyethers in water. Nature Communications, 2019, 10, 2893.	5.8	88

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19	Association of ionic liquids in solution: a combined dielectric and conductivity study of [bmim][Cl] in water and in acetonitrile. Physical Chemistry Chemical Physics, 2011, 13, 17588.	1.3	87
20	Organic Linker Defines the Excitedâ€State Decay of Photocatalytic MILâ€125(Ti)â€Type Materials. ChemSusChem, 2016, 9, 388-395.	3.6	84
21	Saturation of charge-induced water alignment at model membrane surfaces. Science Advances, 2018, 4, eaap7415.	4.7	76
22	Dynamics of RTILs: A comparative dielectric and OKE study. Journal of Molecular Liquids, 2014, 192, 19-25.	2.3	72
23	Water-mediated interactions between trimethylamine-N-oxide and urea. Physical Chemistry Chemical Physics, 2015, 17, 298-306.	1.3	70
24	1-Ethyl-3-methylimidazolium Ethylsulfate in Water, Acetonitrile, and Dichloromethane: Molar Conductivities and Association Constants. Journal of Chemical & Engineering Data, 2011, 56, 1261-1267.	1.0	65
25	Hydrogen-Bond Dynamics in a Protic Ionic Liquid: Evidence of Large-Angle Jumps. Journal of Physical Chemistry Letters, 2012, 3, 3034-3038.	2.1	65
26	Dipole Correlations in the Ionic Liquid 1-N-Ethyl-3-N-methylimidazolium Ethylsulfate and Its Binary Mixtures with Dichloromethane. Journal of Physical Chemistry B, 2009, 113, 9527-9537.	1.2	64
27	Dielectric Relaxation and Solvation Dynamics in a Prototypical Ionic Liquid + Dipolar Protic Liquid Mixture: 1-Butyl-3-Methylimidazolium Tetrafluoroborate + Water. Journal of Physical Chemistry B, 2013, 117, 15356-15368.	1.2	64
28	Direct observation of mode-specific phonon-band gap coupling in methylammonium lead halide perovskites. Nature Communications, 2017, 8, 687.	5.8	63
29	Structure and Dynamics of 1-N-Alkyl-3-N-Methylimidazolium Tetrafluoroborate + Acetonitrile Mixtures. Journal of Physical Chemistry B, 2012, 116, 7509-7521.	1.2	61
30	Molar Conductivities and Association Constants of 1-Butyl-3-methylimidazolium Chloride and 1-Butyl-3-methylimidazolium Tetrafluoroborate in Methanol and DMSO. Journal of Chemical & Engineering Data, 2010, 55, 1799-1803.	1.0	57
31	Picosecond orientational dynamics of water in living cells. Nature Communications, 2017, 8, 904.	5.8	57
32	Femtosecond study of the effects of ions and hydrophobes on the dynamics of water. Faraday Discussions, 2013, 160, 171-189.	1.6	55
33	Are Nanoscale Ion Aggregates Present in Aqueous Solutions of Guanidinium Salts?. Journal of Physical Chemistry B, 2010, 114, 13617-13627.	1.2	50
34	Vibrational couplings and energy transfer pathways of waterâ€™s bending mode. Nature Communications, 2020, 11, 5977.	5.8	50
35	Correlation between polarity parameters and dielectric properties of [Na][TOTO]â€”a sodium ionic liquid. Physical Chemistry Chemical Physics, 2010, 12, 14341.	1.3	48
36	Hydration Dynamics of Hyaluronan and Dextran. Biophysical Journal, 2012, 103, L10-L12.	0.2	47

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37	Hydration of Sodium Alginate in Aqueous Solution. Macromolecules, 2014, 47, 771-776.	2.2	45
38	Ab Initio Liquid Water Dynamics in Aqueous TMAO Solution. Journal of Physical Chemistry B, 2015, 119, 10597-10606.	1.2	44
39	Broadband dielectric response of dichloromethane. Chemical Physics Letters, 2009, 471, 85-91.	1.2	42
40	Ionic Liquids: Not only Structurally but also Dynamically Heterogeneous. Angewandte Chemie - International Edition, 2015, 54, 687-690.	7.2	41
41	Trimethylamine-N-oxide: its hydration structure, surface activity, and biological function, viewed by vibrational spectroscopy and molecular dynamics simulations. Physical Chemistry Chemical Physics, 2017, 19, 6909-6920.	1.3	39
42	Dissecting Hofmeister Effects: Direct Anionâ€“Amide Interactions Are Weaker than Cationâ€“Amide Binding. Angewandte Chemie - International Edition, 2016, 55, 8125-8128.	7.2	38
43	Rattling the cage: Micro- to mesoscopic structure in liquids as simple as argon and as complicated as water. Journal of Molecular Liquids, 2011, 159, 2-8.	2.3	37
44	Unveiling the Amphiphilic Nature of TMAO by Vibrational Sum Frequency Generation Spectroscopy. Journal of Physical Chemistry C, 2016, 120, 17435-17443.	1.5	33
45	On the Orientational Mobility of Water Molecules in Proton and Sodium Terminated Nafion Membranes. Journal of Physical Chemistry C, 2013, 117, 12930-12935.	1.5	31
46	Ultrafast Vibrational Dynamics of Water Disentangled by Reverse NonequilibriumAbÂInitioMolecular Dynamics Simulations. Physical Review X, 2015, 5, .	2.8	31
47	Macroscopic conductivity of aqueous electrolyte solutions scales with ultrafast microscopic ion motions. Nature Communications, 2020, 11, 1611.	5.8	31
48	Energy Relaxation Dynamics of the Hydration Complex of Hydroxide. Journal of Physical Chemistry A, 2011, 115, 14593-14598.	1.1	28
49	Hydrogen Bond Dynamics in Primary Alcohols: A Femtosecond Infrared Study. Journal of Physical Chemistry B, 2015, 119, 1558-1566.	1.2	28
50	Role of Water in CaCO₃ Biomineralization. Journal of the American Chemical Society, 2021, 143, 1758-1762.	6.6	28
51	Between a hydrogen and a covalent bond. Science, 2021, 371, 123-124.	6.0	28
52	Relative Permittivity of Dimethylsulfoxide and N,N-Dimethylformamide at Temperatures from (278 to 328) K and Pressures from (0.1 to 5) MPa. Journal of Chemical & Engineering Data, 2010, 55, 2055-2065.	1.0	27
53	Large Hydrogen-Bond Mismatch between TMAO and Urea Promotes Their Hydrophobic Association. CheM, 2018, 4, 2615-2627.	5.8	27
54	Water in Contact with a Cationic Lipid Exhibits Bulklike Vibrational Dynamics. Journal of Physical Chemistry B, 2016, 120, 10069-10078.	1.2	26

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55	Vibrational and orientational dynamics of water in aqueous hydroxide solutions. Journal of Chemical Physics, 2011, 135, 124517.	1.2	23
56	A Conductance Study of Guanidinium Chloride, Thiocyanate, Sulfate, and Carbonate in Dilute Aqueous Solutions: Ion-Association and Carbonate Hydrolysis Effects. Journal of Physical Chemistry B, 2013, 117, 615-622.	1.2	22
57	Role of Ion-Pairs in BrÃ¸nsted Acid Catalysis. ACS Catalysis, 2015, 5, 6630-6633.	5.5	21
58	Observation of Water Separated Ion-Pairs between Cations and Phospholipid Headgroups. Journal of Physical Chemistry B, 2014, 118, 4397-4403.	1.2	18
59	Simulating Energy Relaxation in Pumpâ€“Probe Vibrational Spectroscopy of Hydrogen-Bonded Liquids. Journal of Chemical Theory and Computation, 2017, 13, 1284-1292.	2.3	18
60	Tritopic ion-pair receptors based on anionâ€“Ï€ interactions for selective CaX₂binding. Dalton Transactions, 2018, 47, 7883-7887.	1.6	17
61	Dynamical heterogeneities of rotational motion in room temperature ionic liquids evidenced by molecular dynamics simulations. Journal of Chemical Physics, 2018, 148, 193811.	1.2	15
62	Quantifying transient interactions between amide groups and the guanidinium cation. Physical Chemistry Chemical Physics, 2015, 17, 28539-28543.	1.3	14
63	Harvesting the photoexcited holes on a photocatalytic proton reduction metalâ€“organic framework. Faraday Discussions, 2017, 201, 71-86.	1.6	14
64	Dynamics of Dicyanamide in Ionic Liquids is Dominated by Local Interactions. Journal of Physical Chemistry B, 2019, 123, 1831-1839.	1.2	14
65	Effect of Cations on the Hydrated Proton. Journal of the American Chemical Society, 2014, 136, 12808-12811.	6.6	12
66	Complexity in Acidâ€“Base Titrations: Multimer Formation Between Phosphoric Acids and Imines. Chemistry - A European Journal, 2017, 23, 10853-10860.	1.7	12
67	Anionic and cationic Hofmeister effects are non-additive for guanidinium salts. Physical Chemistry Chemical Physics, 2017, 19, 9724-9728.	1.3	11
68	Dielectric response of light, heavy and heavy-oxygen water: isotope effects on the hydrogen-bonding network's collective relaxation dynamics. Physical Chemistry Chemical Physics, 2021, 23, 5467-5473.	1.3	11
69	Energy Relaxation and Thermal Diffusion in Infrared Pumpâ€“Probe Spectroscopy of Hydrogen-Bonded Liquids. Journal of Physical Chemistry Letters, 2019, 10, 3447-3452.	2.1	10
70	Specific Ion Effects on an Oligopeptide: Bidentate Binding Matters for the Guanidinium Cation. Angewandte Chemie - International Edition, 2019, 58, 332-337.	7.2	10
71	Probing Water State during Lipidic Mesophases Phase Transitions. Angewandte Chemie - International Edition, 2021, 60, 25274-25280.	7.2	10
72	Interfacial Water Structure of Binary Liquid Mixtures Reflects Nonideal Behavior. Journal of Physical Chemistry B, 2021, 125, 10639-10646.	1.2	8

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73	Precision waveguide system for measurement of complex permittivity of liquids at frequencies from 60 to 90ÂGHz. Review of Scientific Instruments, 2011, 82, 104703.	0.6	7
74	A new force field including charge directionality for TMAO in aqueous solution. Journal of Chemical Physics, 2016, 145, 064103.	1.2	7
75	Composition-Dependent Hydrogen-Bonding Motifs and Dynamics in BrÃ¸nsted Acidâ€“Base Mixtures. Journal of Physical Chemistry B, 2020, 124, 7229-7238.	1.2	7
76	Hydrophobic pattern of alkylated ureas markedly affects water rotation and hydrogen bond dynamics in aqueous solution. Physical Chemistry Chemical Physics, 2019, 21, 20672-20677.	1.3	6
77	Hofmeisterâ€Effekte unter der Lupe: Die direkte Anionâ€Amidâ€Bindung ist schwÃ¤cher als die Kationâ€Amidâ€Bindung. Angewandte Chemie, 2016, 128, 8257-8261.	1.6	5
78	CF3-groups critically enhance the binding of thiourea catalysts to ketones â€“ a NMR and FT-IR study. Journal of Molecular Liquids, 2019, 296, 111829.	2.3	3
79	Hydrogenâ€Bond Structure and Dynamics of TADDOL Asymmetric Organocatalysts Correlate with Catalytic Activity. Chemistry - A European Journal, 2019, 25, 9984-9990.	1.7	3
80	A single methyl group drastically changes ureaâ€™s hydration dynamics. Journal of Chemical Physics, 2022, 156, 164504.	1.2	3
81	Chemical Speciation in Ionic Liquids and their Mixtures with Polar Solvents Using Dielectric Spectroscopy. ACS Symposium Series, 2010, , 61-74.	0.5	2
82	Femto- to Nanosecond Dynamics in Ionic Liquids: From Single Molecules to Collective Motions. Advances in Dielectrics, 2016, , 53-71.	1.2	2
83	A water window on surface chemistry. Science, 2017, 357, 755-756.	6.0	2
84	Enhancement of Ion Pairing of Sr(II) and Ba(II) Salts by a Tritopic Ionâ€Pair Receptor in Solution. ChemPhysChem, 2020, 21, 1957-1965.	1.0	2
85	Probing Water State during Lipidic Mesophases Phase Transitions. Angewandte Chemie, 2021, 133, 25478-25484.	1.6	2
86	Terahertz dynamics of ionic liquids from a combined dielectric relaxation, terahertz, and optical Kerr effect study: evidence for mesoscopic aggregation. Proceedings of SPIE, 2010, , .	0.8	1
87	Glasslike Behaviour in Aqueous Electrolyte Solutions. Springer Series in Chemical Physics, 2009, , 484-486.	0.2	1
88	Intense THz-assisted modulation of semiconductor optical properties. , 2018, , .		0
89	Spezifische Ionenâ€Effekte am Beispiel eines Oligopeptids: die Rolle zweizÃ¤hniger Koordination beim Guanidiniumâ€Kation. Angewandte Chemie, 2019, 131, 338-343.	1.6	0
90	Association Equilibria of Organo-Phosphoric Acids with Imines from a Combined Dielectric and Nuclear Magnetic Resonance Spectroscopy Approach. Analytical Chemistry, 2021, 93, 3914-3921.	3.2	0