Damien Laage

List of Publications by Year in Descending Order

70 papers	5,097 citations	35 h-index	71 g-index
75 ext. papers	5,642 ext. citations	7.6 avg, IF	6.23 L-index

#	Paper	IF	Citations
70	Water Diffusion Proceeds via a Hydrogen-Bond Jump Exchange Mechanism. *Journal of Physical Chemistry Letters*, **2022**, 13, 4660-4666	6.4	0
69	Using Activation Energies to Elucidate Mechanisms of Water Dynamics. *Journal of Physical Chemistry A*, **2021**, 125, 9941-9952	2.8	3
68	On the role of hydrogen-bond exchanges in the spectral diffusion of water. *Journal of Chemical Physics*, **2021**, 154, 064501	3.9	6
67	Confined Water's Dielectric Constant Reduction Is Due to the Surrounding Low Dielectric Media and Not to Interfacial Molecular Ordering. *Journal of Physical Chemistry Letters*, **2021**, 12, 4319-4326	6.4	12
66	A Model Electron Transfer Reaction in Confined Aqueous Solution. *ChemPhysChem*, **2021**, 22, 2247-2255	3.2	1
65	Thermal Adaptation of Enzymes: Impacts of Conformational Shifts on Catalytic Activation Energy and Optimum Temperature. *Chemistry - A European Journal*, **2020**, 26, 10045-10056	4.8	2
64	Water dynamics at electrified graphene interfaces: a jump model perspective. *Physical Chemistry Chemical Physics*, **2020**, 22, 10581-10591	3.6	9
63	Protein Preferential Solvation in Water:Glycerol Mixtures. *Journal of Physical Chemistry B*, **2020**, 124, 1424-1437	3.4	7
62	Water Structure, Dynamics, and Sum-Frequency Generation Spectra at Electrified Graphene Interfaces. *Journal of Physical Chemistry Letters*, **2020**, 11, 624-631	6.4	28
61	Differences in thermal structural changes and melting between mesophilic and thermophilic dihydrofolate reductase enzymes. *Physical Chemistry Chemical Physics*, **2020**, 22, 18361-18373	3.6	5
60	Activation energies and the extended jump model: How temperature affects reorientation and hydrogen-bond exchange dynamics in water. *Journal of Chemical Physics*, **2020**, 153, 074110	3.9	8
59	Effect of Ions on Water Dynamics in Dilute and Concentrated Aqueous Salt Solutions. *Journal of Physical Chemistry B*, **2019**, 123, 3312-3324	3.4	23
58	Ion-Induced Long-Range Orientational Correlations in Water: Strong or Weak, Physiologically Relevant or Unimportant, and Unique to Water or Not?. *Journal of Physical Chemistry Letters*, **2018**, 9, 2056-2057	6.4	12
57	Water dynamics in concentrated electrolytes: Local ion effect on hydrogen-bond jumps rather than collective coupling to ion clusters. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E4953-E4954	11.5	6
56	Water Dynamics in the Hydration Shells of Biomolecules. *Chemical Reviews*, **2017**, 117, 10694-10725	68.1	410
55	Size and Origins of Long-Range Orientational Water Correlations in Dilute Aqueous Salt Solutions. *Journal of Physical Chemistry Letters*, **2017**, 8, 2031-2035	6.4	20
54	Perspective: Structure and ultrafast dynamics of biomolecular hydration shells. *Structural Dynamics*, **2017**, 4, 044018	3.2	23

53	Nuclear Quantum Effects in Water Reorientation and Hydrogen-Bond Dynamics. *Journal of Physical Chemistry Letters*, **2017**, 8, 2602-2607	6.4	40
52	Water Librations in the Hydration Shell of Phospholipids. *Journal of Physical Chemistry Letters*, **2017**, 8, 4492-4497	6.4	7
51	Ab Initio Simulations of Water Dynamics in Aqueous TMAO Solutions: Temperature and Concentration Effects. *Journal of Physical Chemistry B*, **2017**, 121, 11189-11197	3.4	21
50	Coupled Valence-Bond State Molecular Dynamics Description of an Enzyme-Catalyzed Reaction in a Non-Aqueous Organic Solvent. *Journal of Physical Chemistry B*, **2017**, 121, 7027-7041	3.4	8
49	Reorientation of Isomeric Butanols: The Multiple Effects of Steric Bulk Arrangement on Hydrogen-Bond Dynamics. *Journal of Physical Chemistry B*, **2016**, 120, 1546-59	3.4	11
48	On the Structural and Dynamical Properties of DOPC Reverse Micelles. *Langmuir*, **2016**, 32, 10610-10620	4	32
47	Dynamical Disorder in the DNA Hydration Shell. *Journal of the American Chemical Society*, **2016**, 138, 7610-20	16.4	80
46	Simulations of the infrared, Raman, and 2D-IR photon echo spectra of water in nanoscale silica pores. *Journal of Chemical Physics*, **2016**, 144, 194709	3.9	15
45	Orientational Dynamics of Water at an Extended Hydrophobic Interface. *Journal of the American Chemical Society*, **2016**, 138, 5551-60	16.4	38
44	Are there dynamical effects in enzyme catalysis? Some thoughts concerning the enzymatic chemical step. *Archives of Biochemistry and Biophysics*, **2015**, 582, 42-55	4.1	30
43	Characterization of the Local Structure in Liquid Water by Various Order Parameters. *Journal of Physical Chemistry B*, **2015**, 119, 8406-18	3.4	108
42	Origins of the non-exponential reorientation dynamics of nanoconfined water. *Journal of Chemical Physics*, **2014**, 141, 18C523	3.9	33
41	Temperature dependence of hydrophobic hydration dynamics: from retardation to acceleration. *Journal of Physical Chemistry B*, **2014**, 118, 1574-83	3.4	30
40	Water dynamics in protein hydration shells: the molecular origins of the dynamical perturbation. *Journal of Physical Chemistry B*, **2014**, 118, 7715-29	3.4	163
39	Reorientational dynamics of water confined in zeolites. *ChemPhysChem*, **2014**, 15, 521-9	3.2	37
38	Comparative study of hydration shell dynamics around a hyperactive antifreeze protein and around ubiquitin. *Journal of Chemical Physics*, **2014**, 141, 22D529	3.9	42
37	Mechanisms of acceleration and retardation of water dynamics by ions. *Journal of the American Chemical Society*, **2013**, 135, 11824-31	16.4	166
36	Backbone effects on the charge transport in poly-imidazole membranes: a theoretical study. *Journal of Materials Chemistry A*, **2013**, 1, 7751	13	10

35	Biomolecular hydration dynamics: a jump model perspective. *Chemical Society Reviews*, **2013**, 42, 5672-83	38.5	81
34	Water Reorientation and Ultrafast Infrared Spectroscopy **2013**, 73-98		3
33	Water jump reorientation and ultrafast vibrational spectroscopy. *Journal of Photochemistry and Photobiology A: Chemistry*, **2012**, 234, 75-82	4.7	7
32	Water jump reorientation: from theoretical prediction to experimental observation. *Accounts of Chemical Research*, **2012**, 45, 53-62	24.3	82
31	Charge transport in poly-imidazole membranes: a fresh appraisal of the Grotthuss mechanism. *Physical Chemistry Chemical Physics*, **2012**, 14, 10910-8	3.6	26
30	Communication: On the origin of the non-Arrhenius behavior in water reorientation dynamics. *Journal of Chemical Physics*, **2012**, 137, 031101	3.9	52
29	Magnitude and molecular origin of water slowdown next to a protein. *Journal of the American Chemical Society*, **2012**, 134, 4116-9	16.4	150
28	Reorientation dynamics of nanoconfined water: power-law decay, hydrogen-bond jumps, and test of a two-state model. *Journal of Chemical Physics*, **2012**, 136, 044513	3.9	64
27	Water reorientation dynamics in the first hydration shells of F- and I-. *Physical Chemistry Chemical Physics*, **2011**, 13, 19895-901	3.6	49
26	Dynamics of water in concentrated solutions of amphiphiles: key roles of local structure and aggregation. *Journal of Physical Chemistry B*, **2011**, 115, 3254-62	3.4	64
25	Reorientation and allied dynamics in water and aqueous solutions. *Annual Review of Physical Chemistry*, **2011**, 62, 395-416	15.7	268
24	Non-monotonic dependence of water reorientation dynamics on surface hydrophilicity: competing effects of the hydration structure and hydrogen-bond strength. *Physical Chemistry Chemical Physics* , **2011**, 13, 19911-7	3.6	51
23	On the reorientation and hydrogen-bond dynamics of alcohols. *Journal of Physical Chemistry B*, **2011**, 115, 12173-8	3.4	41
22	Direct Evidence of Angular Jumps During Water Reorientation Through Two-Dimensional Infrared Anisotropy. *Journal of Physical Chemistry Letters*, **2010**, 1, 1511-1516	6.4	39
21	Water hydrogen-bond dynamics around amino acids: the key role of hydrophilic hydrogen-bond acceptor groups. *Journal of Physical Chemistry B*, **2010**, 114, 2083-9	3.4	100
20	Water reorientation, hydrogen-bond dynamics and 2D-IR spectroscopy next to an extended hydrophobic surface. *Faraday Discussions*, **2010**, 146, 263-81; discussion 283-98, 395-401	3.6	93
19	Water hydrogen bond dynamics in aqueous solutions of amphiphiles. *Journal of Physical Chemistry B*, **2010**, 114, 3052-9	3.4	97
18	Water reorientation in the hydration shells of hydrophilic and hydrophobic solutes. *Science China: Physics, Mechanics and Astronomy*, **2010**, 53, 1068-1072	3.6	10

17	Echoes of a salty exchange. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 967-8	11.5	7
16	Why water reorientation slows without iceberg formation around hydrophobic solutes. *Journal of Physical Chemistry B*, **2009**, 113, 2428-35	3.4	310
15	Reinterpretation of the liquid water quasi-elastic neutron scattering spectra based on a nondiffusive jump reorientation mechanism. *Journal of Physical Chemistry B*, **2009**, 113, 2684-7	3.4	52
14	On the residence time for water in a solute hydration shell: application to aqueous halide solutions. *Journal of Physical Chemistry B*, **2008**, 112, 7697-701	3.4	131
13	On the molecular mechanism of water reorientation. *Journal of Physical Chemistry B*, **2008**, 112, 14230-42	3.4	335
12	Photoinduced intramolecular charge transfer in push-pull polyenes: effects of solvation, electron-donor group, and polyenic chain length. *Journal of Physical Chemistry B*, **2008**, 112, 358-68	3.4	30
11	Reorientional dynamics of water molecules in anionic hydration shells. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 11167-72	11.5	255
10	A molecular jump mechanism of water reorientation. *Science*, **2006**, 311, 832-5	33.3	866
9	On the ultrafast infrared spectroscopy of anion hydration shell hydrogen bond dynamics. *Journal of Physical Chemistry A*, **2006**, 110, 11237-43	2.8	60
8	Do more strongly hydrogen-bonded water molecules reorient more slowly ?. *Chemical Physics Letters*, **2006**, 433, 80-85	2.5	106
7	Intermolecular vibration□ibration energy transfer in solution: Hydrogen fluoride in water. *Chemical Physics Letters*, **2005**, 405, 453-458	2.5	16
6	On the dissociation of aromatic radical anions in solution. *ChemPhysChem*, **2003**, 4, 61-6	3.2	41
5	On the Dissociation of Aromatic Radical Anions in Solution. 1. Formulation and Application top-Cyanochlorobenzene Radical Anion. *Journal of Physical Chemistry A*, **2003**, 107, 11271-11291	2.8	35
4	Charged Push□ull Polyenes in Solution: Anomalous Solvatochromism and Nonlinear Optical Properties. *Journal of Physical Chemistry A*, **2003**, 107, 6032-6046	2.8	52
3	On the Dissociation of Aromatic Radical Anions in Solution. 2. Reaction Path and Rate Constant Analysis. *Journal of Physical Chemistry A*, **2003**, 107, 11292-11306	2.8	38
2	Multiple relaxation pathways in push-pull polyenes. *Photochemical and Photobiological Sciences*, **2002**, 1, 526-35	4.2	9
1	Excited-State Dynamics in Polar Solvents of Push□ull Polyenes Designed for Nonlinear Optics. *Journal of Physical Chemistry A*, **2000**, 104, 2396-2401	2.8	28