Thorsten Bartels-Rausch

List of Publications by Year
in descending order

51	1,868	304743 22	276875 41
papers	citations	h-index	g-index
64	64	64	2464
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ice structures, patterns, and processes: A view across the icefields. Reviews of Modern Physics, 2012, 84, 885-944.	45.6	277
2	A review of airâ€“ice chemical and physical interactions (AICI): liquids, quasi-liquids, and solids in snow. Atmospheric Chemistry and Physics, 2014, 14, 1587-1633.	4.9	235
3	Ten things we need to know about ice and snow. Nature, 2013, 494, 27-29.	27.8	150
4	Organics in environmental ices: sources, chemistry, and impacts. Atmospheric Chemistry and Physics, 2012, 12, 9653-9678.	4.9	110
5	Determination of phenylurea herbicides in natural waters at concentrations below 1 ng lâˆ'1 using solid-phase extraction, derivatization, and solid-phase microextractionâ€“gas chromatographyâ€“mass spectrometry. Journal of Chromatography A, 2001, 930, 9-19.	3.7	66
6	A surface-stabilized ozonide triggers bromide oxidation at the aqueous solution-vapour interface. Nature Communications, 2017, 8, 700.	12.8	59
7	Humic acid in ice: Photo-enhanced conversion of nitrogen dioxide into nitrous acid. Atmospheric Environment, 2010, 44, 5443-5450.	4.1	54
8	The Environmental Photochemistry of Oxide Surfaces and the Nature of Frozen Salt Solutions: A New in Situ XPS Approach. Topics in Catalysis, 2016, 59, 591-604.	2.8	54
9	Adsorption of Acetic Acid on Ice Studied by Ambient-Pressure XPS and Partial-Electron-Yield NEXAFS Spectroscopy at 230â€“240 K. Journal of Physical Chemistry A, 2013, 117, 401-409.	2.5	52
10	Heterogeneous photochemistry of imidazole-2-carboxaldehyde: HO₂ radical formation and aerosol growth. Atmospheric Chemistry and Physics, 2016, 16, 11823-11836.	4.9	48
11	Large mixing ratios of atmospheric nitrous acid (HONO) at Concordia (East Antarctic Plateau) in summer: a strong source from surface snow?. Atmospheric Chemistry and Physics, 2014, 14, 9963-9976.	4.9	47
12	Viscosity controls humidity dependence of N₂O₅ uptake to citric acid aerosol. Atmospheric Chemistry and Physics, 2015, 15, 13615-13625.	4.9	46
13	Particle-Phase Photosensitized Radical Production and Aerosol Aging. Environmental Science & Technology, 2018, 52, 7680-7688.	10.0	45
14	Atmospheric Pressure Coated-Wall Flow-Tube Study of Acetone Adsorption on Ice. Journal of Physical Chemistry A, 2005, 109, 4531-4539.	2.5	43
15	UVA/Vis-induced nitrous acid formation on polyphenolic films exposed to gaseous NO2. Photochemical and Photobiological Sciences, 2011, 10, 1680-1690.	2.9	43
16	Photochemical Formation of Nitrite and Nitrous Acid (HONO) upon Irradiation of Nitrophenols in Aqueous Solution and in Viscous Secondary Organic Aerosol Proxy. Environmental Science & Technology, 2017, 51, 7486-7495.	10.0	42
17	The partitioning of acetone to different types of ice and snow between 198 and 223 K. Geophysical Research Letters, 2004, 31, .	4.0	39
18	Photoinduced reduction of divalent mercury in ice by organic matter. Chemosphere, 2011, 82, 199-203.	8.2	32

#	Article	IF	Citations
19	Suppression of aqueous surface hydrolysis by monolayers of short chain organic amphiphiles. Physical Chemistry Chemical Physics, 2007, 9, 1362-9.	2.8	29
20	Uptake of acetone, ethanol and benzene to snow and ice: effects of surface area and temperature. Environmental Research Letters, 2008, 3, 045008.	5.2	28
21	Interaction of gaseous elemental mercury with snow surfaces: laboratory investigation. Environmental Research Letters, 2008, 3, 045009.	5.2	26
22	Coexistence of Physisorbed and Solvated HCl at Warm Ice Surfaces. Journal of Physical Chemistry Letters, 2017, 8, 4757-4762.	4.6	26
23	Light-induced protein nitration and degradation with HONOÂemission. Atmospheric Chemistry and Physics, 2017, 17, 11819-11833.	4.9	22
24	Co-adsorption of acetic acid and nitrous acid on ice. Physical Chemistry Chemical Physics, 2010, 12, 7194.	2.8	20
25	An atmospheric pressure chemical ionization mass spectrometer (APCI-MS) combined with a chromatographic technique to measure the adsorption enthalpy of acetone on ice. International Journal of Mass Spectrometry, 2003, 226, 279-290.	1.5	19
26	Emerging Areas in Atmospheric Photochemistry. Topics in Current Chemistry, 2012, 339, 1-53.	4.0	18
27	The adsorption of peroxynitric acid on ice between 230 K and 253 K. Atmospheric Chemistry and Physics, 2012, 12, 1833-1845.	4.9	18
28	Standard States and Thermochemical Kinetics in Heterogeneous Atmospheric Chemistry. Journal of Physical Chemistry A, 2012, 116, 6312-6316.	2.5	18
29	Meltâ€Induced Fractionation of Major Ions and Trace Elements in an Alpine Snowpack. Journal of Geophysical Research F: Earth Surface, 2019, 124, 1647-1657.	2.8	18
30	Reversibly Physisorbed and Chemisorbed Water on Carboxylic Salt Surfaces Under Atmospheric Conditions. Journal of Physical Chemistry C, 2020, 124, 5263-5269.	3.1	18
31	Experimental Evidence for the Formation of Solvation Shells by Soluble Species at a Nonuniform Airâ€“Ice Interface. ACS Earth and Space Chemistry, 2017, 1, 572-579.	2.7	17
32	A continuous flow diffusion chamber study of sea salt particles acting as cloud nuclei: deliquescence and ice nucleation. Tellus, Series B: Chemical and Physical Meteorology, 2022, 70, 1463806.	1.6	16
33	X-Ray Excited Electron Spectroscopy to Study Gasâ€“Liquid Interfaces of Atmospheric Relevance. , 2018, , 135-166.		16
34	Diffusion of volatile organics through porous snow: impact of surface adsorption and grain boundaries. Atmospheric Chemistry and Physics, 2013, 13, 6727-6739.	4.9	14
35	Pre-melting and the adsorption of formic acid at the airâ€“ice interface at 253 K as seen by NEXAFS and XPS. Physical Chemistry Chemical Physics, 2018, 20, 24408-24417.	2.8	14
36	Disordered Adsorbed Water Layers on TiO₂ Nanoparticles under Subsaturated Humidity Conditions at 235 K. Journal of Physical Chemistry Letters, 2019, 10, 7433-7438.	4.6	11

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37	Microphysics of the aqueous bulk counters the water activity driven rate acceleration of bromide oxidation by ozone from 289â€“245 K. Environmental Sciences: Processes and Impacts, 2019, 21, 63-73.	3.5	10
38	Temporal evolution of surface and grain boundary area in artificial ice beads and implications for snow chemistry. Journal of Glaciology, 2012, 58, 815-817.	2.2	9
39	Ordered Hydrogen Bonding Structure of Water Molecules Adsorbed on Silver Iodide Particles under Subsaturated Conditions. Journal of Physical Chemistry C, 2021, 125, 11628-11635.	3.1	9
40	Interfacial supercooling and the precipitation of hydrohalite in frozen NaCl solutions as seen by X-ray absorption spectroscopy. Cryosphere, 2021, 15, 2001-2020.	3.9	8
41	Efficient bulk mass accommodation and dissociation of N₂O₅ in neutral aqueous aerosol. Atmospheric Chemistry and Physics, 2017, 17, 6493-6502.	4.9	7
42	A novel synthesis of the N-13 labeled atmospheric trace gas peroxynitric acid. Radiochimica Acta, 2011, 99, 285-292.	1.2	6
43	Fostering multidisciplinary research on interactions between chemistry, biology, and physics within the coupled cryosphere-atmosphere system. Elementa, 2019, 7, .	3.2	6
44	Microscale Rearrangement of Ammonium Induced by Snow Metamorphism. Frontiers in Earth Science, 2019, 7, .	1.8	5
45	Snow heterogeneous reactivity of bromide with ozone lost during snow metamorphism. Atmospheric Chemistry and Physics, 2020, 20, 13443-13454.	4.9	5
46	Correction to â€œThe partitioning of acetone to different types of ice and snow between 198 and 223 Kâ€. Geophysical Research Letters, 2004, 31, .	4.0	3
47	Production and use of 13N labeled N2O5 to determine gasâ€“aerosol interaction kinetics. Radiochimica Acta, 2014, .	1.2	3
48	The air we breathe: Past, present, and future: general discussion. Faraday Discussions, 2017, 200, 501-527.	3.2	1
49	Comment on â€˜Possible contribution of triboelectricity to snow - air interactions'. Environmental Chemistry, 2012, 9, 119.	1.5	1
50	Atmospheric chemistry processes: general discussion. Faraday Discussions, 2017, 200, 353-378.	3.2	0
51	The physics and chemistry of ice. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20190138.	3.4	0