

Ulrich K Krieger

List of Publications by Year in descending order

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80
papers

4,893
citations

109137

35
h-index

106150

65
g-index

114
all docs

114
docs citations

114
times ranked

3159
citing authors

#	ARTICLE	IF	CITATIONS
1	Extension of the AIOMFAC model by iodine and carbonate species: applications for aerosol acidity and cloud droplet activation. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 973-1013.	1.9	8
2	Photolytic radical persistence due to anoxia in viscous aerosol particles. <i>Nature Communications</i> , 2021, 12, 1769.	5.8	37
3	Photochemical degradation of iron(III) citrate/citric acid aerosol quantified with the combination of three complementary experimental techniques and a kinetic process model. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 315-338.	1.9	20
4	Ozonolysis of Oleic Acid Aerosol Revisited: Multiphase Chemical Kinetics and Reaction Mechanisms. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 3313-3323.	1.2	25
5	Relevance of Particle Morphology for Atmospheric Aerosol Processing. <i>Trends in Chemistry</i> , 2020, 2, 1-3.	4.4	16
6	Measured solid state and subcooled liquid vapour pressures of nitroaromatics using Knudsen effusion mass spectrometry. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 8293-8314.	1.9	6
7	Photophoretic spectroscopy in atmospheric chemistry – high-sensitivity measurements of light absorption by a single particle. <i>Atmospheric Measurement Techniques</i> , 2020, 13, 3191-3203.	1.2	4
8	Carbon Dioxide Diffusivity in Single, Levitated Organic Aerosol Particles. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 4484-4489.	2.1	5
9	A method for extracting calibrated volatility information from the FIGAERO-HR-ToF-CIMS and its experimental application. <i>Atmospheric Measurement Techniques</i> , 2019, 12, 1429-1439.	1.2	42
10	Visualizing reaction and diffusion in xanthan gum aerosol particles exposed to ozone. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 20613-20627.	1.3	15
11	Time evolution of steep diffusion fronts in highly viscous aerosol particles measured with Mie resonance spectroscopy. <i>Journal of Chemical Physics</i> , 2018, 149, 244506.	1.2	10
12	Shortwave radiative impact of liquid–liquid phase separation in brown carbon aerosols. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 13511-13530.	1.9	15
13	Electrodynamic balance–mass spectrometry of single particles as a new platform for atmospheric chemistry research. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 33-47.	1.2	22
14	A reference data set for validating vapor pressure measurement techniques: homologous series of polyethylene glycols. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 49-63.	1.2	41
15	Imaging Molecular Reaction and Diffusion in Organic Aerosol Particles. <i>Microscopy and Microanalysis</i> , 2018, 24, 496-497.	0.2	0
16	Tracking Water Sorption in Glassy Aerosol Particles using Morphology-Dependent Resonances. <i>Journal of Physical Chemistry A</i> , 2017, 121, 8176-8184.	1.1	16
17	Kinetic Limitation to Inorganic Ion Diffusivity and to Coalescence of Inorganic Inclusions in Viscous Liquid–Liquid Phase-Separated Particles. <i>Journal of Physical Chemistry A</i> , 2017, 121, 9284-9296.	1.1	22
18	Revising the hygroscopicity of inorganic sea salt particles. <i>Nature Communications</i> , 2017, 8, 15883.	5.8	173

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19	Technical note: Monte Carlo genetic algorithm (MCGA) for model analysis of multiphase chemical kinetics to determine transport and reaction rate coefficients using multiple experimental data sets. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 8021-8029.	1.9	33
20	Diffusivity measurements of volatile organics in levitated viscous aerosol particles. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 8453-8471.	1.9	40
21	Ozone uptake on glassy, semi-solid and liquid organic matter and the role of reactive oxygen intermediates in atmospheric aerosol chemistry. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 12662-12674.	1.3	117
22	Climatological and radiative properties of midlatitude cirrus clouds derived by automatic evaluation of lidar measurements. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 7605-7621.	1.9	40
23	Redistribution of black carbon in aerosol particles undergoing liquid-liquid phase separation. <i>Geophysical Research Letters</i> , 2015, 42, 2532-2539.	1.5	25
24	Viscous organic aerosol particles in the upper troposphere: diffusivity-controlled water uptake and ice nucleation?. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 13599-13613.	1.9	103
25	Electrodynamic balance measurements of thermodynamic, kinetic, and optical aerosol properties inaccessible to bulk methods. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 2397-2408.	1.2	39
26	Shikimic acid ozonolysis kinetics of the transition from liquid aqueous solution to highly viscous glass. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 31101-31109.	1.3	41
27	Saturation Vapor Pressures and Transition Enthalpies of Low-Volatility Organic Molecules of Atmospheric Relevance: From Dicarboxylic Acids to Complex Mixtures. <i>Chemical Reviews</i> , 2015, 115, 4115-4156.	23.0	196
28	Liquid-Liquid Phase Separation in Mixed Organic/Inorganic Single Aqueous Aerosol Droplets. <i>Journal of Physical Chemistry A</i> , 2015, 119, 4177-4190.	1.1	67
29	Retrieving the translational diffusion coefficient of water from experiments on single levitated aerosol droplets. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 16677.	1.3	64
30	Experimental determination of the temperature dependence of water activities for a selection of aqueous organic solutions. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 9993-10012.	1.9	20
31	Balloon-borne match measurements of midlatitude cirrus clouds. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 7341-7365.	1.9	28
32	Ion Depletion Near a Solution Surface: Is Image-Charge Repulsion Sufficient?. <i>Physical Review Letters</i> , 2013, 111, 266102.	2.9	2
33	Morphologies of mixed organic/inorganic/aqueous aerosol droplets. <i>Faraday Discussions</i> , 2013, 165, 289.	1.6	93
34	Response to "Comment on "Experimental evidence for excess entropy discontinuities in glass-forming solutions" [J. Chem. Phys. 139, 047101 (2013)]. <i>Journal of Chemical Physics</i> , 2013, 139, 047102.	1.2	0
35	Vapor pressures of substituted polycarboxylic acids are much lower than previously reported. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 6647-6662.	1.9	32
36	Comparing the mechanism of water condensation and evaporation in glassy aerosol. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 11613-11618.	3.3	167

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37	Liquid-liquid phase separation and morphology of internally mixed dicarboxylic acids/ammonium sulfate/water particles. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 2691-2712.	1.9	161
38	Experimental evidence for excess entropy discontinuities in glass-forming solutions. <i>Journal of Chemical Physics</i> , 2012, 136, 074515.	1.2	21
39	Measurements of Thermodynamic and Optical Properties of Selected Aqueous Organic and Organic-Inorganic Mixtures of Atmospheric Relevance. <i>Journal of Physical Chemistry A</i> , 2012, 116, 9954-9968.	1.1	63
40	Liquid-liquid phase separation in aerosol particles: Dependence on O:C, organic functionalities, and compositional complexity. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	95
41	Exploring the complexity of aerosol particle properties and processes using single particle techniques. <i>Chemical Society Reviews</i> , 2012, 41, 6631.	18.7	294
42	Ultra-slow water diffusion in aqueous sucrose glasses. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 3514.	1.3	249
43	Measurements of the timescales for the mass transfer of water in glassy aerosol at low relative humidity and ambient temperature. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 4739-4754.	1.9	149
44	New and extended parameterization of the thermodynamic model AIOMFAC: calculation of activity coefficients for organic-inorganic mixtures containing carboxyl, hydroxyl, carbonyl, ether, ester, alkenyl, alkyl, and aromatic functional groups. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 9155-9206.	1.9	317
45	Observations and calculations of two-dimensional angular optical scattering (TAOS) patterns of a single levitated cluster of two and four microspheres. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2011, 112, 1761-1765.	1.1	6
46	The vapor pressures and activities of dicarboxylic acids reconsidered: the impact of the physical state of the aerosol. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 11753-11767.	1.9	67
47	Grazing angle 2MeV RBS on the surface of a liquid with atomic layer depth resolution. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2010, 268, 1711-1713.	0.6	1
48	Uptake of nitric acid on NaCl single crystals measured by backscattering spectrometry. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2010, 268, 2202-2204.	0.6	1
49	Efflorescence of Ammonium Sulfate and Coated Ammonium Sulfate Particles: Evidence for Surface Nucleation. <i>Journal of Physical Chemistry A</i> , 2010, 114, 9486-9495.	1.1	66
50	Evaporation kinetics of a non-spherical, levitated aerosol particle using optical resonance spectroscopy for precision sizing: Errata. <i>Optics Express</i> , 2010, 18, 10760.	1.7	2
51	Diffusion constants of Br in NaCl measured by Rutherford backscattering spectroscopy. <i>Journal of Applied Physics</i> , 2009, 105, 124910.	1.1	0
52	Liquid-Liquid Phase Separation in Mixed Organic/Inorganic Aerosol Particles. <i>Journal of Physical Chemistry A</i> , 2009, 113, 10966-10978.	1.1	163
53	Evaporation kinetics of a non-spherical, levitated aerosol particle using optical resonance spectroscopy for precision sizing. <i>Optics Express</i> , 2009, 17, 4659.	1.7	26
54	Using dynamic light scattering to characterize mixed phase single particles levitated in a quasi-electrostatic balance. <i>Faraday Discussions</i> , 2008, 137, 377-388.	1.6	22

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55	A combined particle trap/HTDMA hygroscopicity study of mixed inorganic/organic aerosol particles. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 5589-5601.	1.9	147
56	Simultaneous Measurements of PM ₁₀ and PM ₁ using a single TEOM [#] . <i>Aerosol Science and Technology</i> , 2007, 41, 975-980.	1.5	5
57	Improved inverted bubble method for measuring small contact angles at crystal-solution-vapor interfaces. <i>Applied Optics</i> , 2007, 46, 5835.	2.1	6
58	Hygroscopic growth and water uptake kinetics of two-phase aerosol particles consisting of ammonium sulfate, adipic and humic acid mixtures. <i>Journal of Aerosol Science</i> , 2007, 38, 157-171.	1.8	206
59	Bromine Enrichment in the Near-Surface Region of Br-Doped NaCl Single Crystals Diagnosed by Rutherford Backscattering Spectrometry. <i>Journal of Physical Chemistry A</i> , 2007, 111, 4312-4321.	1.1	16
60	Phase Changes during Hygroscopic Cycles of Mixed Organic/Inorganic Model Systems of Tropospheric Aerosols. <i>Journal of Physical Chemistry A</i> , 2006, 110, 1881-1893.	1.1	171
61	White light Mie resonance spectroscopy used to measure very low vapor pressures of substances in aqueous solution aerosol particles. <i>Optics Express</i> , 2006, 14, 6951.	1.7	83
62	Oxalic acid as a heterogeneous ice nucleus in the upper troposphere and its indirect aerosol effect. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 3115-3129.	1.9	145
63	Reply to "Comment on the "Thermodynamic Dissociation Constant of the Bisulfate Ion from Raman and Ion Interaction Modeling Studies of Aqueous Sulfuric Acid at Low Temperatures" Journal of Physical Chemistry A, 2005, 109, 2707-2709.	1.1	12
64	Using photon-counting histograms to characterize levitated liquid aerosol particles with a single, solid inclusion. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2004, 89, 191-200.	1.1	10
65	Morphological Investigations of Single Levitated H ₂ SO ₄ /NH ₃ /H ₂ O Aerosol Particles during Deliquescence/Efflorescence Experiments. <i>Journal of Physical Chemistry A</i> , 2004, 108, 2700-2709.	1.1	86
66	An experimental examination of intensity fluctuations of a host droplet containing an inclusion. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2003, 79-80, 873-880.	1.1	5
67	Thermodynamic Dissociation Constant of the Bisulfate Ion from Raman and Ion Interaction Modeling Studies of Aqueous Sulfuric Acid at Low Temperatures. <i>Journal of Physical Chemistry A</i> , 2003, 107, 4322-4332.	1.1	114
68	The Application of RBS To Investigate The Diffusion of HCl Into The Near Surface Region Of Ice. <i>AIP Conference Proceedings</i> , 2003, , .	0.3	0
69	Technical Note: Organics-Induced Fluorescence in Raman Studies of Sulfuric Acid Aerosols. <i>Aerosol Science and Technology</i> , 2002, 36, 510-512.	1.5	11
70	Rutherford Backscattering to Study the Near-Surface Region of Volatile Liquids and Solids. <i>Science</i> , 2002, 295, 1048-1050.	6.0	23
71	RBS analysis of trace gas uptake on ice. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2002, 190, 47-53.	0.6	3
72	Two-dimensional angular light-scattering in aqueous NaCl single aerosol particles during deliquescence and efflorescence. <i>Optics Express</i> , 2001, 8, 314.	1.7	60

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73	Light-scattering intensity fluctuations in single aerosol particles during deliquescence. Journal of Quantitative Spectroscopy and Radiative Transfer, 2001, 70, 545-554.	1.1	19
74	Measurement of the refractive indices of H ₂ SO ₄ -HNO ₃ -H ₂ O solutions to stratospheric temperatures. Applied Optics, 2000, 39, 3691.	2.1	45
75	Supercooling of single H ₂ SO ₄ /H ₂ O aerosols to 158 K: No evidence for the occurrence of the octahydrate. Geophysical Research Letters, 2000, 27, 2097-2100.	1.5	33
76	Densities and refractive indices of H ₂ SO ₄ /HNO ₃ /H ₂ O solutions to stratospheric temperatures. Geophysical Research Letters, 1996, 23, 3707-3710.	1.5	66
77	Experimental evidence for nonclassical fourth-order interferences in the quasielastic light scattering of water. Physical Review A, 1995, 52, R1827-R1830.	1.0	4
78	Evidence of Quantum Correlation Effects of Protons and Deuterons in the Raman Spectra of Liquid H ₂ O-D ₂ O. Physical Review Letters, 1995, 75, 3008-3011.	2.9	47
79	Size-dependent stratospheric droplet composition in Lee wave temperature fluctuations and their potential role in PSC freezing. Geophysical Research Letters, 1995, 22, 3031-3034.	1.5	147
80	Field assisted transport of Na ⁺ ions, Ca ²⁺ ions and electrons in commercial soda-lime glass I: Experimental. Journal of Non-Crystalline Solids, 1988, 102, 50-61.	1.5	91