

Martin Schnaiter

List of Publications by Year in descending order

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84
papers

7,082
citations

87888

38
h-index

64796

79
g-index

119
all docs

119
docs citations

119
times ranked

5096
citing authors

#	ARTICLE	IF	CITATIONS
1	Accurate Retrieval of Asymmetry Parameter for Large and Complex Ice Crystals From In-situ Polar Nephelometer Measurements. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	3.3	8
2	The Light Absorption Heating Method for Measurement of Light Absorption by Particles Collected on Filters. <i>Atmosphere</i> , 2022, 13, 824.	2.3	1
3	In situ observation of riming in mixed-phase clouds using the PHIPS probe. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 7087-7103.	4.9	6
4	PHIPS-HALO: the airborne Particle Habit Imaging and Polar Scattering probe – Part 3: Single-particle phase discrimination and particle size distribution based on the angular-scattering function. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 3049-3070.	3.1	8
5	Observations of Clouds, Aerosols, Precipitation, and Surface Radiation over the Southern Ocean: An Overview of CAPRICORN, MARCUS, MICRE, and SOCRATES. <i>Bulletin of the American Meteorological Society</i> , 2021, 102, E894-E928.	3.3	103
6	Sources, Occurrence and Characteristics of Fluorescent Biological Aerosol Particles Measured Over the Pristine Southern Ocean. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD034811.	3.3	15
7	High homogeneous freezing onsets of sulfuric acid aerosol at cirrus temperatures. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 14403-14425.	4.9	16
8	Observations and Modeling of Rime Splintering in Southern Ocean Cumuli. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD035479.	3.3	9
9	Structure of an Atmospheric River Over Australia and the Southern Ocean: II. Microphysical Evolution. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD032514.	3.3	14
10	Microphysical Properties of Generating Cells Over the Southern Ocean: Results From SOCRATES. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD032237.	3.3	27
11	Specifying the light-absorbing properties of aerosol particles in fresh snow samples, collected at the Environmental Research Station Schneefernerhaus (UFS), Zugspitze. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 10829-10844.	4.9	10
12	Accounting for the effects of nonideal minor structures on the optical properties of black carbon aerosols. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 2917-2931.	4.9	24
13	The Arctic Cloud Puzzle: Using ALOUD/PASCAL Multiplatform Observations to Unravel the Role of Clouds and Aerosol Particles in Arctic Amplification. <i>Bulletin of the American Meteorological Society</i> , 2019, 100, 841-871.	3.3	145
14	Black carbon aggregates: A database for optical properties. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019, 222-223, 170-179.	2.3	34
15	A comprehensive in situ and remote sensing data set from the Arctic Cloud Observations Using airborne measurements during polar Day (ALOUD) campaign. <i>Earth System Science Data</i> , 2019, 11, 1853-1881.	9.9	42
16	Heterogeneous Ice Nucleation Ability of NaCl and Sea Salt Aerosol Particles at Cirrus Temperatures. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 2841-2860.	3.3	21
17	Aerosol characteristics and particle production in the upper troposphere over the Amazon Basin. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 921-961.	4.9	105
18	Additional global climate cooling by clouds due to ice crystal complexity. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 15767-15781.	4.9	37

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19	Investigations of Mesoscopic Complexity of Small Ice Crystals in Midlatitude Cirrus. <i>Geophysical Research Letters</i> , 2018, 45, 11,465.	4.0	6
20	PHIPS-HALO: the airborne particle habit imaging and polar scattering probe“ Part2: Characterization and first results. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 341-357.	3.1	24
21	The absorption Å...ngstrÅm exponent of black carbon: from numerical aspects. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 6259-6273.	4.9	158
22	ML-CIRRUS: The Airborne Experiment on Natural Cirrus and Contrail Cirrus with the High-Altitude Long-Range Research Aircraft HALO. <i>Bulletin of the American Meteorological Society</i> , 2017, 98, 271-288.	3.3	107
23	Mixed-Phase Clouds: Progress and Challenges. <i>Meteorological Monographs</i> , 2017, 58, 5.1-5.50.	5.0	165
24	Intercomparison study and optical asphericity measurements of small ice particles in the CERN CLOUD experiment. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 3231-3248.	3.1	4
25	PHIPS“HALO: the airborne Particle Habit Imaging and Polar Scattering probe “ Part 1: Design and operation. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 3131-3144.	3.1	34
26	A novel single-cavity three-wavelength photoacoustic spectrometer for atmospheric aerosol research. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 5331-5346.	3.1	33
27	In situ characterization of mixed phase clouds using the Small Ice Detector and the Particle Phase Discriminator. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 159-177.	3.1	28
28	Development and characterization of an ice-selecting pumped counterflow virtual impactor (IS-PCVI) to study ice crystal residuals. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 3817-3836.	3.1	12
29	Quasi-Spherical Ice in Convective Clouds. <i>Journals of the Atmospheric Sciences</i> , 2016, 73, 3885-3910.	1.7	28
30	Ice nucleation activity of agricultural soil dust aerosols from Mongolia, Argentina, and Germany. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 13,559.	3.3	49
31	A global view of atmospheric ice particle complexity. <i>Geophysical Research Letters</i> , 2016, 43, 11,913.	4.0	10
32	The Microphysical Properties of Small Ice Particles Measured by the Small Ice Detector-3 Probe during the MACPEX Field Campaign. <i>Journals of the Atmospheric Sciences</i> , 2016, 73, 4775-4791.	1.7	8
33	Heterogeneous ice nucleation of viscous secondary organic aerosol produced from ozonolysis of <i>α</i>-pinene. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 6495-6509.	4.9	71
34	Ice nucleating particles in the Saharan Air Layer. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 9067-9087.	4.9	93
35	Phase transition observations and discrimination of small cloud particles by light polarization in expansion chamber experiments. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 3651-3664.	4.9	11
36	Observation of viscosity transition in <i>α</i>-pinene secondary organic aerosol. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 4423-4438.	4.9	55

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37	Cloud chamber experiments on the origin of ice crystal complexity in cirrus clouds. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 5091-5110.	4.9	56
38	Ice residual properties in mixed-phase clouds at the high-alpine Jungfraujoch site. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 12343-12362.	3.3	25
39	ACRIDICON-CHUVA Campaign: Studying Tropical Deep Convective Clouds and Precipitation over Amazonia Using the New German Research Aircraft HALO. <i>Bulletin of the American Meteorological Society</i> , 2016, 97, 1885-1908.	3.3	124
40	Comparison of measured and computed phase functions of individual tropospheric ice crystals. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2016, 178, 379-389.	2.3	13
41	Laboratory investigations of mineral dust near-backscattering depolarization ratios. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2016, 178, 192-208.	2.3	34
42	Crystallization and immersion freezing ability of oxalic and succinic acid in multicomponent aqueous organic aerosol particles. <i>Geophysical Research Letters</i> , 2015, 42, 2464-2472.	4.0	12
43	Regional-scale simulations of fungal spore aerosols using an emission parameterization adapted to local measurements of fluorescent biological aerosol particles. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 6127-6146.	4.9	44
44	The Ice Selective Inlet: a novel technique for exclusive extraction of pristine ice crystals in mixed-phase clouds. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 3087-3106.	3.1	20
45	Laboratory study of microphysical and scattering properties of corona-producing cirrus clouds. <i>Applied Optics</i> , 2014, 53, 7566.	2.1	9
46	Enhanced high-temperature ice nucleation ability of crystallized aerosol particles after preactivation at low temperature. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 8212-8230.	3.3	16
47	A comprehensive parameterization of heterogeneous ice nucleation of dust surrogate: laboratory study with hematite particles and its application to atmospheric models. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 13145-13158.	4.9	18
48	Fluorescent biological aerosol particles measured with the Waveband Integrated Bioaerosol Sensor WIBS-4: laboratory tests combined with a one year field study. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 225-243.	4.9	130
49	Laser filament-induced aerosol formation. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 4593-4604.	4.9	25
50	The accommodation coefficient of water molecules on ice - cirrus cloud studies at the AIDA simulation chamber. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 4451-4466.	4.9	62
51	Single Particle Soot Photometer intercomparison at the AIDA chamber. <i>Atmospheric Measurement Techniques</i> , 2012, 5, 3077-3097.	3.1	152
52	Influence of particle size and shape on the backscattering linear depolarisation ratio of small ice crystals - cloud chamber measurements in the context of contrail and cirrus microphysics. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 10465-10484.	4.9	71
53	Complex refractive indices of Saharan dust samples at visible and near UV wavelengths: a laboratory study. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 2491-2512.	4.9	141
54	Ice cloud processing of ultra-viscous/glassy aerosol particles leads to enhanced ice nucleation ability. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 8589-8610.	4.9	65

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55	Glassy aerosols with a range of compositions nucleate ice heterogeneously at cirrus temperatures. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 8611-8632.	4.9	94
56	Infrared Optical Constants of Crystalline Sodium Chloride Dihydrate: Application To Study the Crystallization of Aqueous Sodium Chloride Solution Droplets at Low Temperatures. <i>Journal of Physical Chemistry A</i> , 2012, 116, 8557-8571.	2.5	17
57	Studies of propane flame soot acting as heterogeneous ice nuclei in conjunction with single particle soot photometer measurements. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 9549-9561.	4.9	58
58	Ice nucleation properties of fine ash particles from the Eyjafjallajökull eruption in April 2010. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 12945-12958.	4.9	60
59	New cloud chamber experiments on the heterogeneous ice nucleation ability of oxalic acid in the immersion mode. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 2083-2110.	4.9	48
60	Particle Habit Imaging Using Incoherent Light: A First Step toward a Novel Instrument for Cloud Microphysics. <i>Journal of Atmospheric and Oceanic Technology</i> , 2011, 28, 493-512.	1.3	19
61	First correlated measurements of the shape and light scattering properties of cloud particles using the new Particle Habit Imaging and Polar Scattering (PHIPS) probe. <i>Atmospheric Measurement Techniques</i> , 2011, 4, 2125-2142.	3.1	27
62	An aerosol chamber investigation of the heterogeneous ice nucleating potential of refractory nanoparticles. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 1227-1247.	4.9	38
63	High variability of the heterogeneous ice nucleation potential of oxalic acid dihydrate and sodium oxalate. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 7617-7641.	4.9	27
64	Heterogeneous nucleation of ice particles on glassy aerosols under cirrus conditions. <i>Nature Geoscience</i> , 2010, 3, 233-237.	12.9	302
65	A review of optical measurements at the aerosol and cloud chamber AIDA. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2009, 110, 930-949.	2.3	63
66	Infrared Optical Constants of Highly Diluted Sulfuric Acid Solution Droplets at Cirrus Temperatures. <i>Journal of Physical Chemistry A</i> , 2008, 112, 11661-11676.	2.5	23
67	The effect of organic coating on the heterogeneous ice nucleation efficiency of mineral dust aerosols. <i>Environmental Research Letters</i> , 2008, 3, 025007.	5.2	230
68	Technical Note: A numerical test-bed for detailed ice nucleation studies in the AIDA cloud simulation chamber. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 243-256.	4.9	14
69	Characterization of Small Ice Crystals Using Frequency Analysis of Azimuthal Scattering Patterns. , 2007, , .		7
70	Strong spectral dependence of light absorption by organic carbon particles formed by propane combustion. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 2981-2990.	4.9	143
71	Efficiency of the deposition mode ice nucleation on mineral dust particles. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 3007-3021.	4.9	328
72	Optical properties and mineralogical composition of different Saharan mineral dust samples: a laboratory study. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 3315-3323.	4.9	143

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73	Spectral light absorption by ambient aerosols influenced by biomass burning in the Amazon Basin. I: Comparison and field calibration of absorption measurement techniques. Atmospheric Chemistry and Physics, 2006, 6, 3443-3462.	4.9	285
74	Chamber Simulations of Cloud Chemistry: The AIDA Chamber. , 2006, , 67-82.		18
75	Measurement of Wavelength-Resolved Light Absorption by Aerosols Utilizing a UV-VIS Extinction Cell. Aerosol Science and Technology, 2005, 39, 249-260.	3.1	89
76	Ice nucleation on flame soot aerosol of different organic carbon content. Meteorologische Zeitschrift, 2005, 14, 477-484.	1.0	94
77	Effect of sulfuric acid coating on heterogeneous ice nucleation by soot aerosol particles. Journal of Geophysical Research, 2005, 110, .	3.3	191
78	Absorption amplification of black carbon internally mixed with secondary organic aerosol. Journal of Geophysical Research, 2005, 110, .	3.3	350
79	Operation and performance of a differential mobility particle sizer and a TSI 3010 condensation particle counter at stratospheric temperatures and pressures. Journal of Aerosol Science, 2004, 35, 981-993.	3.8	32
80	Absorption of light by soot particles: determination of the absorption coefficient by means of aethalometers. Journal of Aerosol Science, 2003, 34, 1445-1463.	3.8	1,035
81	UV-VIS-NIR spectral optical properties of soot and soot-containing aerosols. Journal of Aerosol Science, 2003, 34, 1421-1444.	3.8	416
82	Coating of soot and (NH ₄) ₂ SO ₄ particles by ozonolysis products of α -pinene. Journal of Aerosol Science, 2003, 34, 1297-1321.	3.8	179
83	Experimental investigation of homogeneous freezing of sulphuric acid particles in the aerosol chamber AIDA. Atmospheric Chemistry and Physics, 2003, 3, 211-223.	4.9	178
84	Particle habit imaging using incoherent light: a first step towards a novel instrument for cloud microphysics. Journal of Atmospheric and Oceanic Technology, 0, , 110301123615052.	1.3	2