Christopher PÃ¶hlker

List of Publications by Year
in descending order

83 papers	5,101 citations	109264 35 h-index	98753 67 g-index
180 all docs	180 docs citations	180 times ranked	5302 citing authors

#	Article	IF	Citations
1	Bioaerosols in the Earth system: Climate, health, and ecosystem interactions. Atmospheric Research, 2016, 182, 346-376.	1.8	609
2	High concentrations of biological aerosol particles and ice nuclei during and after rain. Atmospheric Chemistry and Physics, 2013, 13, 6151-6164.	1.9	355
3	Substantial convection and precipitation enhancements by ultrafineaerosol particles. Science, 2018, 359, 411-418.	6.0	290
4	Autofluorescence of atmospheric bioaerosols â€“ fluorescent biomolecules and potential interferences. Atmospheric Measurement Techniques, 2012, 5, 37-71.	1.2	267
5	The Amazon Tall Tower Observatory (ATTO): overview of pilot measurements on ecosystem ecology, meteorology, trace gases, and aerosols. Atmospheric Chemistry and Physics, 2015, 15, 10723-10776.	1.9	218
6	Biogenic Potassium Salt Particles as Seeds for Secondary Organic Aerosol in the Amazon. Science, 2012, 337, 1075-1078.	6.0	188
7	Biological aerosol particles as a key determinant of ice nuclei populations in a forest ecosystem. Journal of Geophysical Research D: Atmospheres, 2013, 118, 10,100.	1.2	144
8	The Green Ocean Amazon Experiment (GoAmazon2014/5) Observes Pollution Affecting Gases, Aerosols, Clouds, and Rainfall over the Rain Forest. Bulletin of the American Meteorological Society, 2017, 98, 981-997.	1.7	128
9	ACRIDICONâ€“CHUVA Campaign: Studying Tropical Deep Convective Clouds and Precipitation over Amazonia Using the New German Research Aircraft HALO. Bulletin of the American Meteorological Society, 2016, 97, 1885-1908.	1.7	124
10	Amazon boundary layer aerosol concentration sustained by vertical transport during rainfall. Nature, 2016, 539, 416-419.	13.7	112
11	The impact of rain on ice nuclei populations at a forested site in Colorado. Geophysical Research Letters, 2013, 40, 227-231.	1.5	110
12	Long-term cloud condensation nuclei number concentration, particle number size distribution and chemical composition measurements at regionally representative observatories. Atmospheric Chemistry and Physics, 2018, 18, 2853-2881.	1.9	108
13	Long-term observations of cloud condensation nuclei in the Amazon rain forest â€“ Part 1: Aerosol size distribution, hygroscopicity, and new model parametrizations for CCN prediction. Atmospheric Chemistry and Physics, 2016, 16, 15709-15740.	1.9	105
14	Aerosol characteristics and particle production in the upper troposphere over the Amazon Basin. Atmospheric Chemistry and Physics, 2018, 18, 921-961.	1.9	105
15	Systematic characterization and fluorescence threshold strategies for the wideband integrated bioaerosol sensor (WIBS) using size-resolved biological and interfering particles. Atmospheric Measurement Techniques, 2017, 10, 4279-4302.	1.2	98
16	Autofluorescence of atmospheric bioaerosols: spectral fingerprints and taxonomic trends of pollen. Atmospheric Measurement Techniques, 2013, 6, 3369-3392.	1.2	94
17	Satellite retrieval of cloud condensation nuclei concentrations by using clouds as CCN chambers. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5828-5834.	3.3	91
18	EUREC⁴A. Earth System Science Data, 2021, 13, 4067-4119.	3.7	88

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19	Seasonal cycles of fluorescent biological aerosol particles in boreal and semi-arid forests of Finland and Colorado. Atmospheric Chemistry and Physics, 2013, 13, 11987-12001.	1.9	85
20	Bioaerosol field measurements: Challenges and perspectives in outdoor studies. Aerosol Science and Technology, 2020, 54, 520-546.	1.5	81
21	Ambient measurements of biological aerosol particles near Killarney, Ireland: a comparison between real-time fluorescence and microscopy techniques. Atmospheric Chemistry and Physics, 2014, 14, 8055-8069.	1.9	79
22	Fluorescent bioaerosol particle, molecular tracer, and fungal spore concentrations during dry and rainy periods in a semi-arid forest. Atmospheric Chemistry and Physics, 2016, 16, 15165-15184.	1.9	73
23	Ice nucleating particles at a coastal marine boundary layer site: correlations with aerosol type and meteorological conditions. Atmospheric Chemistry and Physics, 2015, 15, 12547-12566.	1.9	71
24	CCN activity and organic hygroscopicity of aerosols downwind of an urban region in central Amazonia: seasonal and diel variations and impact of anthropogenic emissions. Atmospheric Chemistry and Physics, 2017, 17, 11779-11801.	1.9	71
25	Long-term observations of cloud condensation nuclei over the Amazon rain forest â€“ Part 2: Variability and characteristics of biomass burning, long-range transport, and pristine rain forest aerosols. Atmospheric Chemistry and Physics, 2018, 18, 10289-10331.	1.9	64
26	Impact of biomass burning aerosols on radiation, clouds, and precipitation over the Amazon: relative importance of aerosolâ€“cloud and aerosolâ€“radiation interactions. Atmospheric Chemistry and Physics, 2020, 20, 13283-13301.	1.9	59
27	Black and brown carbon over central Amazonia: long-term aerosol measurements at the ATTO site. Atmospheric Chemistry and Physics, 2018, 18, 12817-12843.	1.9	54
28	Long-term study on coarse mode aerosols in the Amazon rain forest with the frequent intrusion of Saharan dust plumes. Atmospheric Chemistry and Physics, 2018, 18, 10055-10088.	1.9	52
29	Soluble iron nutrients in Saharan dust over the central Amazon rainforest. Atmospheric Chemistry and Physics, 2017, 17, 2673-2687.	1.9	51
30	Radical Formation by Fine Particulate Matter Associated with Highly Oxygenated Molecules. Environmental Science & Technology, 2019, 53, 12506-12518.	4.6	45
31	Regional-scale simulations of fungal spore aerosols using an emission parameterization adapted to local measurements of fluorescent biological aerosol particles. Atmospheric Chemistry and Physics, 2015, 15, 6127-6146.	1.9	44
32	Chemical composition, microstructure, and hygroscopic properties of aerosol particles at the Zotino Tall Tower Observatory (ZOTTO), Siberia, during a summer campaign. Atmospheric Chemistry and Physics, 2015, 15, 8847-8869.	1.9	44
33	Comparison of different Aethalometer correction schemes and a reference multi-wavelength absorption technique for ambient aerosol data. Atmospheric Measurement Techniques, 2017, 10, 2837-2850.	1.2	44
34	Modeling investigation of light-absorbing aerosols in the Amazon Basin during the wet season. Atmospheric Chemistry and Physics, 2016, 16, 14775-14794.	1.9	42
35	Land cover and its transformation in the backward trajectory footprint region of the Amazon Tall Tower Observatory. Atmospheric Chemistry and Physics, 2019, 19, 8425-8470.	1.9	41
36	Influx of African biomass burning aerosol during the Amazonian dry season through layered transatlantic transport of black carbon-rich smoke. Atmospheric Chemistry and Physics, 2020, 20, 4757-4785.	1.9	40

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37	Composition and mixing state of atmospheric aerosols determined by electron microscopy: method development and application to aged Saharan dust deposition in the Caribbean boundary layer. Atmospheric Chemistry and Physics, 2018, 18, 13429-13455.	1.9	35
38	Overview: Precipitation characteristics and sensitivities to environmental conditions during GoAmazon2014/5 and ACRIDICON-CHUVA. Atmospheric Chemistry and Physics, 2018, 18, 6461-6482.	1.9	34
39	Fluorescent biological aerosol particle measurements at a tropical high-altitude site in southern India during the southwest monsoon season. Atmospheric Chemistry and Physics, 2016, 16, 9805-9830.	1.9	33
40	Spectral Intensity Bioaerosol Sensor (SIBS): an instrument for spectrally resolved fluorescence detection of single particles in real time. Atmospheric Measurement Techniques, 2019, 12, 1337-1363.	1.2	33
41	Characterization and differentiation of rock varnish types from different environments by microanalytical techniques. Chemical Geology, 2017, 459, 91-118.	1.4	31
42	Synthesis and reactivity of ferrocenyl functionalized Sn/S cages. Chemical Communications, 2010, 46, 2605.	2.2	30
43	Comparing parameterized versus measured microphysical properties of tropical convective cloud bases during the ACRIDICONâ€“CHUVA campaign. Atmospheric Chemistry and Physics, 2017, 17, 7365-7386.	1.9	30
44	Elemental Mixing State of Aerosol Particles Collected in Central Amazonia during GoAmazon2014/15. Atmosphere, 2017, 8, 173.	1.0	30
45	Tropical and Boreal Forest â€“ Atmosphere Interactions: A Review. Tellus, Series B: Chemical and Physical Meteorology, 2022, 74, 24.	0.8	27
46	Infrequent occurrence of new particle formation at a semi-rural location, Gadanki, in tropical Southern India. Atmospheric Environment, 2014, 94, 264-273.	1.9	26
47	Efflorescence upon humidification? Xâ€ray microspectroscopic in situ observation of changes in aerosol microstructure and phase state upon hydration. Geophysical Research Letters, 2014, 41, 3681-3689.	1.5	24
48	Long-term deposition and condensation ice-nucleating particle measurements from four stations across the globe. Atmospheric Chemistry and Physics, 2020, 20, 15983-16006.	1.9	24
49	Single-particle characterization of aerosols collected at a remote site in the Amazonian rainforest and an urban site in Manaus, Brazil. Atmospheric Chemistry and Physics, 2019, 19, 1221-1240.	1.9	23
50	Microanalytical methods for in-situ high-resolution analysis of rock varnish at the micrometer to nanometer scale. Chemical Geology, 2015, 411, 57-68.	1.4	22
51	Observations of atmospheric monoaromatic hydrocarbons at urban, semi-urban and forest environments in the Amazon region. Atmospheric Environment, 2016, 128, 175-184.	1.9	22
52	Black manganese-rich crusts on a Gothic cathedral. Atmospheric Environment, 2017, 171, 205-220.	1.9	21
53	Is There a Classical Inertial Sublayer Over the Amazon Forest?. Geophysical Research Letters, 2019, 46, 5614-5622.	1.5	21
54	Water uptake of subpollen aerosol particles: hygroscopic growth, cloud condensation nuclei activation, and liquidâ€“liquid phase separation. Atmospheric Chemistry and Physics, 2021, 21, 6999-7022.	1.9	20

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55	Characterization of steady-state fluorescence properties of polystyrene latex spheres using off- and online spectroscopic methods. Atmospheric Measurement Techniques, 2018, 11, 3987-4003.	1.2	16
56	African volcanic emissions influencing atmospheric aerosols over the Amazon rain forest. Atmospheric Chemistry and Physics, 2018, 18, 10391-10405.	1.9	16
57	Occurrence and growth of sub-50â€‰nm aerosol particles in the Amazonian boundary layer. Atmospheric Chemistry and Physics, 2022, 22, 3469-3492.	1.9	16
58	Overview: On the transport and transformation of pollutants in the outflow of major population centres â€“ observational data from the EMeRGe European intensive operational period in summer 2017. Atmospheric Chemistry and Physics, 2022, 22, 5877-5924.	1.9	16
59	Remote Sensing of Sea Salt Aerosol below Trade Wind Clouds. Journals of the Atmospheric Sciences, 2019, 76, 1189-1202.	0.6	15
60	Visualizing reaction and diffusion in xanthan gum aerosol particles exposed to ozone. Physical Chemistry Chemical Physics, 2019, 21, 20613-20627.	1.3	15
61	Total OH reactivity over the Amazon rainforest: variability with temperature, wind, rain, altitude, time of day, season, and an overall budget closure. Atmospheric Chemistry and Physics, 2021, 21, 6231-6256.	1.9	15
62	Size-Resolved Single-Particle Fluorescence Spectrometer for Real-Time Analysis of Bioaerosols: Laboratory Evaluation and Atmospheric Measurements. Environmental Science & Technology, 2019, 53, 13257-13264.	4.6	14
63	Aerosol measurement methods to quantify spore emissions from fungi and cryptogamic covers in the Amazon. Atmospheric Measurement Techniques, 2020, 13, 153-164.	1.2	14
64	Influence of seasonality on the aerosol microbiome of the Amazon rainforest. Science of the Total Environment, 2021, 760, 144092.	3.9	13
65	Comparison of aircraft measurements during GoAmazon2014/5 and ACRIDICON-CHUVA. Atmospheric Measurement Techniques, 2020, 13, 661-684.	1.2	12
66	Bioaerosols in the Amazon rain forest: temporal variations and vertical profiles of Eukarya, Bacteria, and Archaea. Biogeosciences, 2021, 18, 4873-4887.	1.3	12
67	Understanding nighttime methane signals at the Amazon Tall Tower Observatory (ATTO). Atmospheric Chemistry and Physics, 2020, 20, 6583-6606.	1.9	11
68	Black carbon aerosol reductions during COVID-19 confinement quantified by aircraft measurements over Europe. Atmospheric Chemistry and Physics, 2022, 22, 8683-8699.	1.9	11
69	Microclimatic conditions and water content fluctuations experienced by epiphytic bryophytes in an Amazonian rain forest. Biogeosciences, 2020, 17, 5399-5416.	1.3	10
70	Illustration of microphysical processes in Amazonian deep convective clouds in the gamma phase space: introduction and potential applications. Atmospheric Chemistry and Physics, 2017, 17, 14727-14746.	1.9	8
71	Concentrations and biosphereâ€“atmosphere fluxes of inorganic trace gases and associated ionic aerosol counterparts over the Amazon rainforest. Atmospheric Chemistry and Physics, 2020, 20, 15551-15584.	1.9	7
72	Frequent new particle formation at remote sites in the subboreal forest of North America. Atmospheric Chemistry and Physics, 2022, 22, 2487-2505.	1.9	7

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73	How weather events modify aerosol particle size distributions in the Amazon boundary layer. Atmospheric Chemistry and Physics, 2021, 21, 18065-18086.	1.9	7
74	Empirical formulation for multiple groups of primary biological ice nucleating particles from field observations over Amazonia. Journals of the Atmospheric Sciences, 2021, , .	0.6	5
75	MIMiX: a Multipurpose In situ Microreactor system for X-ray microspectroscopy to mimic atmospheric aerosol processing. Atmospheric Measurement Techniques, 2020, 13, 3717-3729.	1.2	5
76	The challenge of simulating the sensitivity of the Amazonian cloud microstructure to cloud condensation nuclei number concentrations. Atmospheric Chemistry and Physics, 2020, 20, 1591-1605.	1.9	4
77	Observed and simulated variability of droplet spectral dispersion in convective clouds over the Amazon. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035076.	1.2	4
78	Planetary Boundary Layer Height Modulates Aerosolâ€”Water Vapor Interactions During Winter in the Megacity of Delhi. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035681.	1.2	4
79	Cloud droplet formation at the base of tropical convective clouds: closure between modeling and measurement results of ACRIDICONâ€“CHUVA. Atmospheric Chemistry and Physics, 2021, 21, 17513-17528.	1.9	3
80	Artifacts from manganese reduction in rock samples prepared by focused ion beam (FIB) slicing for X-ray microspectroscopy. Geoscientific Instrumentation, Methods and Data Systems, 2019, 8, 97-111.	0.6	2
81	Satelliteâ€Based Detection of Secondary Droplet Activation in Convective Clouds. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	2
82	X-ray Microspectroscopy and Ptychography on Nanoscale Structures in Rock Varnish. Journal of Physical Chemistry C, 2021, 125, 22684-22697.	1.5	1
83	Imaging Molecular Reaction and Diffusion in Organic Aerosol Particles. Microscopy and Microanalysis, 2018, 24, 496-497.	0.2	0