Andreas KÃ¼rten

List of Publications by Year
in descending order

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85 papers	9,383 citations	66343 42 h-index	76900 74 g-index
107 all docs	107 docs citations	107 times ranked	5374 citing authors

#	Article	IF	Citations
1	Survival of newly formed particles in haze conditions. Environmental Science Atmospheres, 2022, 2, 491-499.	2.4	8
2	Synergistic HNO3â€“H2SO4â€“NH3 upper tropospheric particle formation. Nature, 2022, 605, 483-489.	27.8	26
3	Determination of the collision rate coefficient between charged iodic acid clusters and iodic acid using the appearance time method. Aerosol Science and Technology, 2021, 55, 231-242.	3.1	18
4	Molecular characterization of ultrafine particles using extractive electrospray time-of-flight mass spectrometry. Environmental Science Atmospheres, 2021, 1, 434-448.	2.4	10
5	Role of iodine oxoacids in atmospheric aerosol nucleation. Science, 2021, 371, 589-595.	12.6	94
6	The driving factors of new particle formation and growth in the polluted boundary layer. Atmospheric Chemistry and Physics, 2021, 21, 14275-14291.	4.9	38
7	Chemical composition of nanoparticles from <i>Î±</i>-pinene nucleation and the influence of isoprene and relative humidity at low temperature. Atmospheric Chemistry and Physics, 2021, 21, 17099-17114.	4.9	12
8	Rapid growth of new atmospheric particles by nitric acid and ammonia condensation. Nature, 2020, 581, 184-189.	27.8	169
9	Size-dependent influence of NO _x on the growth rates of organic aerosol particles. Science Advances, 2020, 6, eaay4945.	10.3	61
10	Measurement of ammonia, amines and iodine compounds using protonated water cluster chemical ionization mass spectrometry. Atmospheric Measurement Techniques, 2020, 13, 2501-2522.	3.1	21
11	Enhanced growth rate of atmospheric particles from sulfuric acid. Atmospheric Chemistry and Physics, 2020, 20, 7359-7372.	4.9	58
12	Molecular understanding of the suppression of new-particle formation by isoprene. Atmospheric Chemistry and Physics, 2020, 20, 11809-11821.	4.9	49
13	Molecular understanding of new-particle formation from <i>Î±</i>-pinene between â˜50 and +25â€‰Â°C. Atmospheric Chemistry and Physics, 2020, 20, 9183-9207.	4.9	68
14	Molecular Composition and Volatility of Nucleated Particles from Î±-Pinene Oxidation between â˜50 Â°C and +25 Â°C. Environmental Science & Technology, 2019, 53, 12357-12365.	10.0	32
15	New particle formation from sulfuric acid and ammonia: nucleation and growth model based on thermodynamics derived from CLOUD measurements for a wide range of conditions. Atmospheric Chemistry and Physics, 2019, 19, 5033-5050.	4.9	41
16	Formation of Highly Oxygenated Organic Molecules from Î±-Pinene Ozonolysis: Chemical Characteristics, Mechanism, and Kinetic Model Development. ACS Earth and Space Chemistry, 2019, 3, 873-883.	2.7	52
17	Measurementâ€“model comparison of stabilized Criegee intermediateÂand highly oxygenated molecule productionÂinÂtheÂCLOUDÂchamber. Atmospheric Chemistry and Physics, 2018, 18, 2363-2380.	4.9	21
18	New particle formation in the sulfuric acidâ€“dimethylamineâ€“water system: reevaluation of CLOUD chamber measurements and comparison to an aerosol nucleation and growth model. Atmospheric Chemistry and Physics, 2018, 18, 845-863.	4.9	92

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19	Influence of temperature on the molecular composition of ions and charged clusters during pure biogenic nucleation. Atmospheric Chemistry and Physics, 2018, 18, 65-79.	4.9	56
20	Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors. Science Advances, 2018, 4, eaau5363.	10.3	164
21	Size-resolved online chemical analysis of nanoaerosol particles: a thermal desorption differential mobility analyzer coupled to a chemical ionization time-of-flight mass spectrometer. Atmospheric Measurement Techniques, 2018, 11, 5489-5506.	3.1	16
22	Rapid growth of organic aerosol nanoparticles over a wide tropospheric temperature range. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9122-9127.	7.1	118
23	Causes and importance of new particle formation in the presentâ€day and preindustrial atmospheres. Journal of Geophysical Research D: Atmospheres, 2017, 122, 8739-8760.	3.3	198
24	Characterization of Aerosol Particles Produced by a Skyscraper Demolition by Blasting. Journal of Aerosol Science, 2017, 112, 11-18.	3.8	6
25	The role of ions in new particle formation in the CLOUD chamber. Atmospheric Chemistry and Physics, 2017, 17, 15181-15197.	4.9	50
26	Evaporation of sulfate aerosols at low relative humidity. Atmospheric Chemistry and Physics, 2017, 17, 8923-8938.	4.9	11
27	Detection of dimethylamine in the low pptv range using nitrate chemical ionization atmospheric pressure interface time-of-flight (CI-APi-TOF) mass spectrometry. Atmospheric Measurement Techniques, 2016, 9, 2135-2145.	3.1	27
28	Characterization of the mass-dependent transmission efficiency of a CIMS. Atmospheric Measurement Techniques, 2016, 9, 1449-1460.	3.1	85
29	Effect of ions on sulfuric acidâ€water binary particle formation: 2. Experimental data and comparison with QCâ€normalized classical nucleation theory. Journal of Geophysical Research D: Atmospheres, 2016, 121, 1752-1775.	3.3	99
30	Comparison of the SAWNUC model with CLOUD measurements of sulphuric acidâ€water nucleation. Journal of Geophysical Research D: Atmospheres, 2016, 121, 12401-12414.	3.3	16
31	Effect of dimethylamine on the gas phase sulfuric acid concentration measured by Chemical Ionization Mass Spectrometry. Journal of Geophysical Research D: Atmospheres, 2016, 121, 3036-3049.	3.3	17
32	Experimental particle formation rates spanning tropospheric sulfuric acid and ammonia abundances, ion production rates, and temperatures. Journal of Geophysical Research D: Atmospheres, 2016, 121, 12,377.	3.3	71
33	The role of low-volatility organic compounds in initial particle growth in the atmosphere. Nature, 2016, 533, 527-531.	27.8	540
34	Ion-induced nucleation of pure biogenic particles. Nature, 2016, 533, 521-526.	27.8	528
35	New particle formation in the free troposphere: A question of chemistry and timing. Science, 2016, 352, 1109-1112.	12.6	348
36	Reduced anthropogenic aerosol radiative forcing caused by biogenic new particle formation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12053-12058.	7.1	107

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37	Modeling the thermodynamics and kinetics of sulfuric acid-dimethylamine-water nanoparticle growth in the CLOUD chamber. Aerosol Science and Technology, 2016, 50, 1017-1032.	3.1	13
38	Global atmospheric particle formation from CERN CLOUD measurements. Science, 2016, 354, 1119-1124.	12.6	289
39	The effect of acidâ€“base clustering and ions on the growth of atmospheric nano-particles. Nature Communications, 2016, 7, 11594.	12.8	116
40	Unexpectedly acidic nanoparticles formed in dimethylamineâ€“ammoniaâ€“sulfuric-acid nucleation experiments at CLOUD. Atmospheric Chemistry and Physics, 2016, 16, 13601-13618.	4.9	24
41	Observation of new particle formation and measurement of sulfuric acid, ammonia, amines and highly oxidized organic molecules at a rural site in central Germany. Atmospheric Chemistry and Physics, 2016, 16, 12793-12813.	4.9	76
42	Hygroscopicity of nanoparticles produced from homogeneous nucleation in the CLOUD experiments. Atmospheric Chemistry and Physics, 2016, 16, 293-304.	4.9	29
43	Experimental investigation of ionâ€“ion recombination under atmospheric conditions. Atmospheric Chemistry and Physics, 2015, 15, 7203-7216.	4.9	46
44	Thermodynamics of the formation of sulfuric acid dimers in the binary (H₂SO₄â€“H<sub>2</sub and ternary (H₂SO₄â€“H<sub>2</sub system. Atmospheric Chemistry and Physics, 2015, 15, 10701-10721.	4.9	27
45	On the derivation of particle nucleation rates from experimental formation rates. Atmospheric Chemistry and Physics, 2015, 15, 4063-4075.	4.9	33
46	Elemental composition and clustering behaviour of Î±-pinene oxidation products for different oxidation conditions. Atmospheric Chemistry and Physics, 2015, 15, 4145-4159.	4.9	17
47	Bisulfate â€“ cluster based atmospheric pressure chemical ionization mass spectrometer for high-sensitivity (< 100 ppqV) detection of atmospheric dimethyl amine: proof-of-concept and first ambient data from boreal forest. Atmospheric Measurement Techniques, 2015, 8, 4001-4011.	3.1	30
48	On the composition of ammoniaâ€“sulfuric-acid ion clusters during aerosol particle formation. Atmospheric Chemistry and Physics, 2015, 15, 55-78.	4.9	84
49	Effect of ions on the measurement of sulfuric acid in the CLOUD experiment at CERN. Atmospheric Measurement Techniques, 2014, 7, 3849-3859.	3.1	7
50	Insight into Acidâ€“Base Nucleation Experiments by Comparison of the Chemical Composition of Positive, Negative, and Neutral Clusters. Environmental Science & Technology, 2014, 48, 13675-13684.	10.0	51
51	Oxidation Products of Biogenic Emissions Contribute to Nucleation of Atmospheric Particles. Science, 2014, 344, 717-721.	12.6	456
52	Neutral molecular cluster formation of sulfuric acidâ€“dimethylamine observed in real time under atmospheric conditions. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15019-15024.	7.1	208
53	Molecular understanding of sulphuric acidâ€“amine particle nucleation in the atmosphere. Nature, 2013, 502, 359-363.	27.8	774
54	Ternary H[sub 2]SO[sub 4]-H[sub 2]O-NH[sub 3] neutral and charged nucleation rates for a wide range of atmospheric conditions. , 2013, , .		0

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55	Role of organics in particle nucleation: From the lab to global model. , 2013, , .		1
56	Measurement of neutral sulfuric acid-dimethylamine clusters using CI-APi-TOF-MS. , 2013, , .		0
57	The radiative effect of ion-induced inorganic nucleation in the free troposphere. , 2013, , .		0
58	Aerosol nucleation and growth in a mixture of sulfuric acid/alpha-pinene oxidation products at the CERN CLOUD chamber. , 2013, , .		0
59	A double inversion: Size and time resolved growth rates for aerosol particles in the CERN CLOUD experiment. , 2013, , .		0
60	Characterization of diethylene glycol-condensation particle counters for detection of sub-3 nm particles. , 2013, , .		2
61	Particle nucleation events at the high Alpine station Jungfraujoch. , 2013, , .		0
62	Evolution of nanoparticle composition in CLOUD in presence of sulphuric acid, ammonia and organics. , 2013, , .		1
63	Experimental study on the influence of dimethylamine on the detection of gas phase sulfuric acid using chemical ionization mass spectrometry (CIMS). , 2013, , .		0
64	Performance of diethylene glycol-based particle counters in the sub-3 nm size range. Atmospheric Measurement Techniques, 2013, 6, 1793-1804.	3.1	63
65	Molecular understanding of atmospheric particle formation from sulfuric acid and large oxidized organic molecules. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 17223-17228.	7.1	300
66	Evolution of particle composition in CLOUD nucleation experiments. Atmospheric Chemistry and Physics, 2013, 13, 5587-5600.	4.9	33
67	Contribution of sulfuric acid and oxidized organic compounds to particle formation and growth. Atmospheric Chemistry and Physics, 2012, 12, 9427-9439.	4.9	76
68	Numerical simulations of mixing conditions and aerosol dynamics in the CERN CLOUD chamber. Atmospheric Chemistry and Physics, 2012, 12, 2205-2214.	4.9	44
69	Calibration of a Chemical Ionization Mass Spectrometer for the Measurement of Gaseous Sulfuric Acid. Journal of Physical Chemistry A, 2012, 116, 6375-6386.	2.5	132
70	Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation. Nature, 2011, 476, 429-433.	27.8	1,114
71	A fibre-optic UV system for H2SO4 production in aerosol chambers causing minimal thermal effects. Journal of Aerosol Science, 2011, 42, 532-543.	3.8	44
72	Comparison of chemical characteristics of 495 biomass burning plumes intercepted by the NASA DC-8 aircraft during the ARCTAS/CARB-2008 field campaign. Atmospheric Chemistry and Physics, 2011, 11, 13325-13337.	4.9	106

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73	Performance of a corona ion source for measurement of sulfuric acid by chemical ionization mass spectrometry. Atmospheric Measurement Techniques, 2011, 4, 437-443.	3.1	71
74	Nitrogen oxides and PAN in plumes from boreal fires during ARCTAS-B and their impact on ozone: an integrated analysis of aircraft and satellite observations. Atmospheric Chemistry and Physics, 2010, 10, 9739-9760.	4.9	234
75	Response to Comment on â€œUnexpected Epoxide Formation in the Gas-Phase Photooxidation of Isopreneâ€. Science, 2010, 327, 644-644.	12.6	1
76	Enhanced organic mass fraction and decreased hygroscopicity of cloud condensation nuclei (CCN) during new particle formation events. Geophysical Research Letters, 2010, 37, .	4.0	138
77	Unexpected Epoxide Formation in the Gas-Phase Photooxidation of Isoprene. Science, 2009, 325, 730-733.	12.6	837
78	Characterization of a Modified Expansion Condensation Particle Counter for Detection of Nanometer-Sized Particles. Aerosol Science and Technology, 2009, 43, 767-780.	3.1	12
79	Trace Detection of Organic Compounds in Complex Sample Matrixes by Single Photon Ionization Ion Trap Mass Spectrometry: Real-Time Detection of Security-Relevant Compounds and Online Analysis of the Coffee-Roasting Process. Analytical Chemistry, 2009, 81, 4456-4467.	6.5	38
80	Secondary organic aerosol formation from photooxidation of naphthalene and alkylnaphthalenes: implications for oxidation of intermediate volatility organic compounds (IVOCs). Atmospheric Chemistry and Physics, 2009, 9, 3049-3060.	4.9	300
81	Evidence for ice particles in the tropical stratosphere from in-situ measurements. Atmospheric Chemistry and Physics, 2009, 9, 6775-6792.	4.9	100
82	Detection of security relevant substances within the cooperative project SAFE XUV. , 2008, , .		0
83	Applicability of condensation particle counters to measure atmospheric clusters. Atmospheric Chemistry and Physics, 2008, 8, 4049-4060.	4.9	74
84	Development and characterization of an ion trap mass spectrometer for the on-line chemical analysis of atmospheric aerosol particles. International Journal of Mass Spectrometry, 2007, 265, 30-39.	1.5	15
85	Characterization of an Automated, Water-Based Expansion Condensation Nucleus Counter for Ultrafine Particles. Aerosol Science and Technology, 2005, 39, 1174-1183.	3.1	18