Mikko SipilÃ¤

List of Publications by Year
in descending order

129 papers	16,148 citations	26610 56 h-index	22808 112 g-index
141 all docs	141 docs citations	141 times ranked	6497 citing authors

#	Article	IF	Citations
1	A large source of low-volatility secondary organic aerosol. Nature, 2014, 506, 476-479.	13.7	1,448
2	Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation. Nature, 2011, 476, 429-433.	13.7	1,114
3	Direct Observations of Atmospheric Aerosol Nucleation. Science, 2013, 339, 943-946.	6.0	876
4	Molecular understanding of sulphuric acidâ€"amine particle nucleation in the atmosphere. Nature, 2013, 502, 359-363.	13.7	774
5	The Role of Sulfuric Acid in Atmospheric Nucleation. Science, 2010, 327, 1243-1246.	6.0	694
6	The role of low-volatility organic compounds in initial particle growth in the atmosphere. Nature, 2016, 533, 527-531.	13.7	540
7	Ion-induced nucleation of pure biogenic particles. Nature, 2016, 533, 521-526.	13.7	528
8	Toward Direct Measurement of Atmospheric Nucleation. Science, 2007, 318, 89-92.	6.0	478
9	A new atmospherically relevant oxidant of sulphur dioxide. Nature, 2012, 488, 193-196.	13.7	465
10	Oxidation Products of Biogenic Emissions Contribute to Nucleation of Atmospheric Particles. Science, 2014, 344, 717-721.	6.0	456
11	Measurement of the nucleation of atmospheric aerosol particles. Nature Protocols, 2012, 7, 1651-1667.	5.5	435
12	Atmospheric new particle formation from sulfuric acid and amines in a Chinese megacity. Science, 2018, 361, 278-281.	6.0	415
13	Atmospheric sulphuric acid and neutral cluster measurements using CI-APi-TOF. Atmospheric Chemistry and Physics, 2012, 12, 4117-4125.	1.9	393
14	Production of extremely low volatile organic compounds from biogenic emissions: Measured yields and atmospheric implications. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7123-7128.	3.3	337
15	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.	3.3	300
16	Global atmospheric particle formation from CERN CLOUD measurements. Science, 2016, 354, 1119-1124.	6.0	289
17	Particle Size Magnifier for Nano-CN Detection. Aerosol Science and Technology, 2011, 45, 533-542.	1.5	283
18	Chemistry of Atmospheric Nucleation: On the Recent Advances on Precursor Characterization and Atmospheric Cluster Composition in Connection with Atmospheric New Particle Formation. Annual Review of Physical Chemistry, 2014, 65, 21-37.	4.8	242

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19	Molecular-scale evidence of aerosol particle formation via sequential addition of HIO3. Nature, 2016, 537, 532-534.	13.7	237
20	The Formation of Highly Oxidized Multifunctional Products in the Ozonolysis of Cyclohexene. Journal of the American Chemical Society, 2014, 136, 15596-15606.	6.6	236
21	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.	3.3	208
22	Laboratory study on new particle formation from the reaction OH + SO₂: influence of experimental conditions, H₂O vapour, NH₃ and the amine tert-butylamine on the overall process. Atmospheric Chemistry and Physics, 2010, 10, 7101-7116.	1.9	194
23	Rapid Autoxidation Forms Highly Oxidized RO₂ Radicals in the Atmosphere. Angewandte Chemie - International Edition, 2014, 53, 14596-14600.	7.2	186
24	Hydroxyl radical-induced formation of highly oxidized organic compounds. Nature Communications, 2016, 7, 13677.	5.8	178
25	Formation of Low Volatility Organic Compounds and Secondary Organic Aerosol from Isoprene Hydroxyhydroperoxide Low-NO Oxidation. Environmental Science & Technology, 2015, 49, 10330-10339.	4.6	172
26	Rapid growth of new atmospheric particles by nitric acid and ammonia condensation. Nature, 2020, 581, 184-189.	13.7	169
27	Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors. Science Advances, 2018, 4, eaau5363.	4.7	164
28	The condensation particle counter battery (CPCB): A new tool to investigate the activation properties of nanoparticles. Journal of Aerosol Science, 2007, 38, 289-304.	1.8	145
29	Atmospheric nucleation: highlights of the EUCAARI project and future directions. Atmospheric Chemistry and Physics, 2010, 10, 10829-10848.	1.9	144
30	Highly Oxidized Multifunctional Organic Compounds Observed in Tropospheric Particles: A Field and Laboratory Study. Environmental Science & Technology, 2015, 49, 7754-7761.	4.6	143
31	Oxidation of SO₂ by stabilized Criegee intermediate (sCI) radicals as a crucial source for atmospheric sulfuric acid concentrations. Atmospheric Chemistry and Physics, 2013, 13, 3865-3879.	1.9	131
32	Kinetics of the unimolecular reaction of CH₂OO and the bimolecular reactions with the water monomer, acetaldehyde and acetone under atmospheric conditions. Physical Chemistry Chemical Physics, 2015, 17, 19862-19873.	1.3	119
33	Source characterization of highly oxidized multifunctional compounds in a boreal forest environment using positive matrix factorization. Atmospheric Chemistry and Physics, 2016, 16, 12715-12731.	1.9	118
34	The effect of acidâ€“base clustering and ions on the growth of atmospheric nano-particles. Nature Communications, 2016, 7, 11594.	5.8	116
35	Observation and modelling of HO_x radicals in a boreal forest. Atmospheric Chemistry and Physics, 2014, 14, 8723-8747.	1.9	109
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.	3.3	107

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37	Effects of Chemical Complexity on the Autoxidation Mechanisms of Endocyclic Alkene Ozonolysis Products: From Methylcyclohexenes toward Understanding Î±-Pinene. Journal of Physical Chemistry A, 2015, 119, 4633-4650.	1.1	101
38	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.	1.2	99
39	H2SO4 formation from the gas-phase reaction of stabilized Criegee Intermediates with SO2: Influence of water vapour content and temperature. Atmospheric Environment, 2014, 89, 603-612.	1.9	97
40	Reactivity of stabilized Criegee intermediates (sCIs) from isoprene and monoterpene ozonolysis toward SO₂ and organic acids. Atmospheric Chemistry and Physics, 2014, 14, 12143-12153.	1.9	94
41	Gas-Phase Ozonolysis of Cycloalkenes: Formation of Highly Oxidized RO₂ Radicals and Their Reactions with NO, NO₂, SO₂, and Other RO₂ Radicals. Journal of Physical Chemistry A, 2015, 119, 10336-10348.	1.1	94
42	Role of iodine oxoacids in atmospheric aerosol nucleation. Science, 2021, 371, 589-595.	6.0	94
43	Competing atmospheric reactions of CH₂OO with SO₂and water vapour. Physical Chemistry Chemical Physics, 2014, 16, 19130.	1.3	93
44	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.	1.9	92
45	Gas-Phase Ozonolysis of Selected Olefins: The Yield of Stabilized Criegee Intermediate and the Reactivity toward SO₂. Journal of Physical Chemistry Letters, 2012, 3, 2892-2896.	2.1	88
46	On the composition of ammoniaâ€"sulfuric-acid ion clusters during aerosol particle formation. Atmospheric Chemistry and Physics, 2015, 15, 55-78.	1.9	84
47	Estimating the atmospheric concentration of Criegee intermediates and their possible interference in a FAGE-LIF instrument. Atmospheric Chemistry and Physics, 2017, 17, 7807-7826.	1.9	82
48	Laboratory Verification of PH-CPC's Ability to Monitor Atmospheric Sub-3 nm Clusters. Aerosol Science and Technology, 2009, 43, 126-135.	1.5	80
49	Contribution of sulfuric acid and oxidized organic compounds to particle formation and growth. Atmospheric Chemistry and Physics, 2012, 12, 9427-9439.	1.9	76
50	An Instrumental Comparison of Mobility and Mass Measurements of Atmospheric Small Ions. Aerosol Science and Technology, 2011, 45, 522-532.	1.5	72
51	Experimental Observation of Strongly Bound Dimers of Sulfuric Acid: Application to Nucleation in the Atmosphere. Physical Review Letters, 2011, 106, 228302.	2.9	72
52	Ambient observations of dimers from terpene oxidation in the gas phase: Implications for new particle formation and growth. Geophysical Research Letters, 2017, 44, 2958-2966.	1.5	71
53	Remarks on Ion Generation for CPC Detection Efficiency Studies in Sub-3-nm Size Range. Aerosol Science and Technology, 2013, 47, 556-563.	1.5	70
54	Differing Mechanisms of New Particle Formation at Two Arctic Sites. Geophysical Research Letters, 2021, 48, e2020GL091334.	1.5	70

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55	The effect of H₂SO₄ â€" amine clustering on chemical ionization mass spectrometry (CIMS) measurements of gas-phase sulfuric acid. Atmospheric Chemistry and Physics, 2011, 11, 3007-3019.	1.9	69
56	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.	1.9	68
57	Observations of biogenic ion-induced cluster formation in the atmosphere. Science Advances, 2018, 4, eaar5218.	4.7	64
58	Enhanced growth rate of atmospheric particles from sulfuric acid. Atmospheric Chemistry and Physics, 2020, 20, 7359-7372.	1.9	58
59	Pan-Eurasian Experiment (PEEX): towards a holistic understanding of the feedbacks and interactions in the landâ€"atmosphereâ€"oceanâ€"society continuum in the northern Eurasian region. Atmospheric Chemistry and Physics, 2016, 16, 14421-14461.	1.9	57
60	Influence of temperature on the molecular composition of ions and charged clusters during pure biogenic nucleation. Atmospheric Chemistry and Physics, 2018, 18, 65-79.	1.9	56
61	A comparison of HONO budgets for two measurement heights at a field station within the boreal forest in Finland. Atmospheric Chemistry and Physics, 2015, 15, 799-813.	1.9	52
62	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.	4.6	51
63	Deep convective clouds as aerosol production engines: Role of insoluble organics. Journal of Geophysical Research, 2006, 111, .	3.3	50
64	The role of ions in new particle formation in the CLOUD chamber. Atmospheric Chemistry and Physics, 2017, 17, 15181-15197.	1.9	50
65	Molecular understanding of the suppression of new-particle formation by isoprene. Atmospheric Chemistry and Physics, 2020, 20, 11809-11821.	1.9	49
66	Enhancement of atmospheric H₂SO₄ / H₂O nucleation: organic oxidation products versus amines. Atmospheric Chemistry and Physics, 2014, 14, 751-764.	1.9	48
67	Characterisation of corona-generated ions used in a Neutral cluster and Air Ion Spectrometer (NAIS). Atmospheric Measurement Techniques, 2011, 4, 2767-2776.	1.2	47
68	Experimental investigation of ionâ€"ion recombination under atmospheric conditions. Atmospheric Chemistry and Physics, 2015, 15, 7203-7216.	1.9	46
69	Heterogeneous Nucleation onto Ions and Neutralized Ions: Insights into Sign-Preference. Journal of Physical Chemistry C, 2016, 120, 7444-7450.	1.5	45
70	Homogenous nucleation of sulfuric acid and water at close to atmospherically relevant conditions. Atmospheric Chemistry and Physics, 2011, 11, 5277-5287.	1.9	44
71	Observations of Nano-CN in the Nocturnal Boreal Forest. Aerosol Science and Technology, 2011, 45, 499-509.	1.5	43
72	Nanoparticles in boreal forest and coastal environment: a comparison of observations and implications of the nucleation mechanism. Atmospheric Chemistry and Physics, 2010, 10, 7009-7016.	1.9	42

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73	Major contribution of neutral clusters to new particle formation at the interface between the boundary layer and the free troposphere. Atmospheric Chemistry and Physics, 2015, 15, 3413-3428.	1.9	42
74	Sources and sinks driving sulfuric acid concentrations in contrasting environments: implications on proxy calculations. Atmospheric Chemistry and Physics, 2020, 20, 11747-11766.	1.9	42
75	Estimates of global dew collection potential on artificial surfaces. Hydrology and Earth System Sciences, 2015, 19, 601-613.	1.9	40
76	High-Resolution Mobility and Mass Spectrometry of Negative Ions Produced in a ²⁴¹Am Aerosol Charger. Aerosol Science and Technology, 2014, 48, 261-270.	1.5	37
77	Evolution of particle composition in CLOUD nucleation experiments. Atmospheric Chemistry and Physics, 2013, 13, 5587-5600.	1.9	33
78	The role of H₂SO₄-NH<sub>3</sub&a anion clusters in ion-induced aerosol nucleation mechanisms in the boreal forest. Atmospheric Chemistry and Physics, 2018, 18, 13231-13243.	1.9	33
79	Evidence for Diverse Biogeochemical Drivers of Boreal Forest New Particle Formation. Geophysical Research Letters, 2018, 45, 2038-2046.	1.5	31
80	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.	1.2	30
81	Sulphuric acid and aerosol particle production in the vicinity of an oil refinery. Atmospheric Environment, 2015, 119, 156-166.	1.9	29
82	Solar eclipse demonstrating the importance of photochemistry in new particle formation. Scientific Reports, 2017, 7, 45707.	1.6	29
83	Synergistic HNO3â€“H2SO4â€“NH3 upper tropospheric particle formation. Nature, 2022, 605, 483-489.	13.7	26
84	Direct field evidence of autocatalytic iodine release from atmospheric aerosol. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	25
85	Unexpectedly acidic nanoparticles formed in dimethylamineâ€“ammoniaâ€“sulfuric-acid nucleation experiments at CLOUD. Atmospheric Chemistry and Physics, 2016, 16, 13601-13618.	1.9	24
86	Chemical characterization of atmospheric ions at the high altitude research station Jungfraujoch (Switzerland). Atmospheric Chemistry and Physics, 2017, 17, 2613-2629.	1.9	24
87	Highly Oxidized Second-Generation Products from the Gas-Phase Reaction of OH Radicals with Isoprene. Journal of Physical Chemistry A, 2016, 120, 10150-10159.	1.1	23
88	Measurementâ€“model comparison of stabilized Criegee intermediateÂand highly oxygenated molecule productionÂinÂtheÂCLOUDÂchamber. Atmospheric Chemistry and Physics, 2018, 18, 2363-2380.	1.9	21
89	Nanometer Particle Detection by the Condensation Particle Counter UF-02proto. Aerosol Science and Technology, 2008, 42, 521-527.	1.5	18
90	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.	1.5	18

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91	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.	1.2	17
92	Total sulfate vs. sulfuric acid monomer concenterations in nucleation studies. Atmospheric Chemistry and Physics, 2015, 15, 3429-3443.	1.9	16
93	In-situ observations of EyjafjallajÃ¶kull ash particles by hot-air balloon. Atmospheric Environment, 2012, 48, 104-112.	1.9	14
94	Long-term measurement of sub-3â€‰nm particles and their precursor gases in the boreal forest. Atmospheric Chemistry and Physics, 2021, 21, 695-715.	1.9	14
95	Measurement of iodine species and sulfuric acid using bromide chemical ionization mass spectrometers. Atmospheric Measurement Techniques, 2021, 14, 4187-4202.	1.2	13
96	Measurement report: The influence of traffic and new particle formation on the size distribution of 1â€"800â€‰nm particles in Helsinki â€" a street canyon and an urban background station comparison. Atmospheric Chemistry and Physics, 2021, 21, 9931-9953.	1.9	13
97	Overview of the biosphere-aerosol-cloud-climate interactions (BACCI) studies. Tellus, Series B: Chemical and Physical Meteorology, 2008, 60, 300-317.	0.8	12
98	A chamber study of the influence of boreal BVOC emissions and sulfuric acid on nanoparticle formation rates at ambient concentrations. Atmospheric Chemistry and Physics, 2016, 16, 1955-1970.	1.9	9
99	Wintertime subarctic new particle formation from Kola Peninsula sulfur emissions. Atmospheric Chemistry and Physics, 2021, 21, 17559-17576.	1.9	9
100	Estimation of sulfuric acid concentration using ambient ion composition and concentration data obtained with atmospheric pressure interface time-of-flight ion mass spectrometer. Atmospheric Measurement Techniques, 2022, 15, 1957-1965.	1.2	8
101	Terpene emissions from boreal wetlands can initiate stronger atmospheric new particle formation than boreal forests. Communications Earth & Environment, 2022, 3, .	2.6	8
102	Measurement report: Atmospheric new particle formation in a coastal agricultural site explained with binPMF analysis of nitrate CI-APi-TOF spectra. Atmospheric Chemistry and Physics, 2022, 22, 8097-8115.	1.9	8
103	Experimental observation of two-photon photoelectric effect from silver aerosol nanoparticles. New Journal of Physics, 2007, 9, 368-368.	1.2	7
104	Counting Efficiency of a TSI Environmental Particle Counter Monitor Model 3783. Aerosol Science and Technology, 2013, 47, 482-487.	1.5	7
105	Effect of ions on the measurement of sulfuric acid in the CLOUD experiment at CERN. Atmospheric Measurement Techniques, 2014, 7, 3849-3859.	1.2	7
106	Investigation of new particle formation mechanisms and aerosol processes at Marambio Station, Antarctic Peninsula. Atmospheric Chemistry and Physics, 2022, 22, 8417-8437.	1.9	7
107	Measurement report: Long-term measurements of aerosol precursor concentrations in the Finnish subarctic boreal forest. Atmospheric Chemistry and Physics, 2022, 22, 2237-2254.	1.9	6
108	An evaluation of new particle formation events in Helsinki during a Baltic Sea cyanobacterial summer bloom. Atmospheric Chemistry and Physics, 2022, 22, 6365-6391.	1.9	6

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109	Diurnal evolution of negative atmospheric ions above the boreal forest: from ground level to the free troposphere. Atmospheric Chemistry and Physics, 2022, 22, 8547-8577.	1.9	5
110	Soft X-ray Atmospheric Pressure Photoionization in Liquid Chromatographyâ€“Mass Spectrometry. Analytical Chemistry, 2021, 93, 9309-9313.	3.2	2
111	Cluster measurements at CLOUD using a high resolution ion mobility spectrometer-mass spectrometer combination. , 2013, , .		1
112	Molecular steps of neutral sulfuric acid and dimethylamine nucleation in CLOUD. , 2013, , .		1
113	The charging of neutral dimethylamine and dimethylamineâ€“sulfuric acid clusters using protonated acetone. Atmospheric Measurement Techniques, 2015, 8, 2577-2588.	1.2	1
114	On Water Condensation Particle Counters and their Applicability to Field Measurements. , 2007, , 707-710.		1
115	Contribution of oxidized organic compounds to nanoparticle growth. , 2013, , .		0
116	Measurement of neutral sulfuric acid-dimethylamine clusters using CI-APi-TOF-MS. , 2013, , .		0
117	On atmospheric neutral and ion clusters observed in HyytiaÌˆlaÌˆ spring 2011. , 2013, , .		0
118	Measuring composition and growth of ion clusters of sulfuric acid, ammonia, amines and oxidized organics as first steps of nucleation in the CLOUD experiment. , 2013, , .		0
119	Charged and neutral binary nucleation of sulfuric acid in free troposphere conditions. , 2013, , .		0
120	The particle size magnifier closing the gap between measurement of molecules, molecular clusters and aerosol particles. , 2013, , .		0
121	How do amines affect the growth of recently formed aerosol particles. , 2013, , .		0
122	Nucleation of H[sub 2]SO[sub 4] and oxidized organics in CLOUD experiment. , 2013, , .		0
123	Evolution of Î±-pinene oxidation products in the presence of varying oxidizers: Negative APi-TOF point of view. , 2013, , .		0
124	Evolution of alpha-pinene oxidation products in the presence of varying oxidizers: CI-APi-TOF point of view. , 2013, , .		0
125	Chemistry of stabilized Criegee intermediates in the CLOUD chamber. , 2013, , .		0
126	Sulphur dioxide and sulphuric acid concentrations in the vicinity of Kilpilahti industrial area. , 2013, , .		0

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127	Investigating the Chemical Composition of Growing Nucleation Mode Particles with CPC Battery. , 2007, , 984-988.		0
128	Atmospheric Charged and Total Particle Formation Rates below 3 nm. , 2007, , 953-956.		0
129	Generation of Nanoparticles from Vapours in Case of Exhaust Filtration. , 2010, , 77-89.		0