

# Katrianne Lehtipalo

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3190177/publications.pdf>

Version: 2024-02-01

108  
papers

10,927  
citations

50273

46  
h-index

33889

99  
g-index

164  
all docs

164  
docs citations

164  
times ranked

4960  
citing authors

#	ARTICLE	IF	CITATIONS
1	Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation. <i>Nature</i> , 2011, 476, 429-433.	27.8	1,114
2	Direct Observations of Atmospheric Aerosol Nucleation. <i>Science</i> , 2013, 339, 943-946.	12.6	876
3	Molecular understanding of sulphuric acid–amine particle nucleation in the atmosphere. <i>Nature</i> , 2013, 502, 359-363.	27.8	774
4	The role of low-volatility organic compounds in initial particle growth in the atmosphere. <i>Nature</i> , 2016, 533, 527-531.	27.8	540
5	Ion-induced nucleation of pure biogenic particles. <i>Nature</i> , 2016, 533, 521-526.	27.8	528
6	Oxidation Products of Biogenic Emissions Contribute to Nucleation of Atmospheric Particles. <i>Science</i> , 2014, 344, 717-721.	12.6	456
7	Measurement of the nucleation of atmospheric aerosol particles. <i>Nature Protocols</i> , 2012, 7, 1651-1667.	12.0	435
8	Organic condensation: a vital link connecting aerosol formation to cloud condensation nuclei (CCN) concentrations. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 3865-3878.	4.9	392
9	Molecular understanding of atmospheric particle formation from sulfuric acid and large oxidized organic molecules. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 17223-17228.	7.1	300
10	Global atmospheric particle formation from CERN CLOUD measurements. <i>Science</i> , 2016, 354, 1119-1124.	12.6	289
11	Particle Size Magnifier for Nano-CN Detection. <i>Aerosol Science and Technology</i> , 2011, 45, 533-542.	3.1	283
12	EUCAARI ion spectrometer measurements at 12 European sites – analysis of new particle formation events. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 7907-7927.	4.9	248
13	Atmospheric ions and nucleation: a review of observations. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 767-798.	4.9	228
14	Neutral molecular cluster formation of sulfuric acid–dimethylamine observed in real time under atmospheric conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 15019-15024.	7.1	208
15	Causes and importance of new particle formation in the present-day and preindustrial atmospheres. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 8739-8760.	3.3	198
16	New Particle Formation in the Atmosphere: From Molecular Clusters to Global Climate. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 7098-7146.	3.3	185
17	Rapid growth of new atmospheric particles by nitric acid and ammonia condensation. <i>Nature</i> , 2020, 581, 184-189.	27.8	169
18	Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors. <i>Science Advances</i> , 2018, 4, eaau5363.	10.3	164

#	ARTICLE	IF	CITATIONS
19	Seasonal variation of CCN concentrations and aerosol activation properties in boreal forest. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 13269-13285.	4.9	121
20	Rapid growth of organic aerosol nanoparticles over a wide tropospheric temperature range. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 9122-9127.	7.1	118
21	The effect of acid–base clustering and ions on the growth of atmospheric nano-particles. <i>Nature Communications</i> , 2016, 7, 11594.	12.8	116
22	Reduced anthropogenic aerosol radiative forcing caused by biogenic new particle formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 12053-12058.	7.1	107
23	Effect of ions on sulfuric acid–water binary particle formation: 2. Experimental data and comparison with QC–normalized classical nucleation theory. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 1752-1775.	3.3	99
24	Role of iodine oxoacids in atmospheric aerosol nucleation. <i>Science</i> , 2021, 371, 589-595.	12.6	94
25	New particle formation in the sulfuric acid–dimethylamine–water system: reevaluation of CLOUD chamber measurements and comparison to an aerosol nucleation and growth model. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 845-863.	4.9	92
26	Results of the first air ion spectrometer calibration and intercomparison workshop. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 141-154.	4.9	85
27	On the composition of ammonia–sulfuric-acid ion clusters during aerosol particle formation. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 55-78.	4.9	84
28	Long-term analysis of clear-sky new particle formation events and nonevents in Hyytiälä. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 6227-6241.	4.9	84
29	Laboratory Verification of PH-CPC's Ability to Monitor Atmospheric Sub-3 nm Clusters. <i>Aerosol Science and Technology</i> , 2009, 43, 126-135.	3.1	80
30	Applicability of condensation particle counters to measure atmospheric clusters. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 4049-4060.	4.9	74
31	Sub-3 nm particle size and composition dependent response of a nano-CPC battery. <i>Atmospheric Measurement Techniques</i> , 2014, 7, 689-700.	3.1	73
32	Experimental particle formation rates spanning tropospheric sulfuric acid and ammonia abundances, ion production rates, and temperatures. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 12,377.	3.3	71
33	Measurements of sub-3–nm particles using a particle size magnifier in different environments: from clean mountain top to polluted megacities. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 2163-2187.	4.9	71
34	Overview of the Antarctic Circumnavigation Expedition: Study of Preindustrial-like Aerosols and Their Climate Effects (ACE-SPACE). <i>Bulletin of the American Meteorological Society</i> , 2019, 100, 2260-2283.	3.3	71
35	Remarks on Ion Generation for CPC Detection Efficiency Studies in Sub-3-nm Size Range. <i>Aerosol Science and Technology</i> , 2013, 47, 556-563.	3.1	70
36	Molecular understanding of new-particle formation from $\alpha$ -pinene between $\sim$ 50 and +25% $\Delta$ T. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 9183-9207.	4.9	68

#	ARTICLE	IF	CITATIONS
37	Photo-oxidation of Aromatic Hydrocarbons Produces Low-Volatility Organic Compounds. <i>Environmental Science &amp; Technology</i> , 2020, 54, 7911-7921.	10.0	66
38	Observations of biogenic ion-induced cluster formation in the atmosphere. <i>Science Advances</i> , 2018, 4, eaar5218.	10.3	64
39	Performance of diethylene glycol-based particle counters in the sub-3 nm size range. <i>Atmospheric Measurement Techniques</i> , 2013, 6, 1793-1804.	3.1	63
40	Size-dependent influence of NO <sub>x</sub> on the growth rates of organic aerosol particles. <i>Science Advances</i> , 2020, 6, eaay4945.	10.3	61
41	Analysis of atmospheric neutral and charged molecular clusters in boreal forest using pulse-height CPC. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 4177-4184.	4.9	59
42	Overview of measurements and current instrumentation for 1–10 nm aerosol particle number size distributions. <i>Journal of Aerosol Science</i> , 2020, 148, 105584.	3.8	58
43	Enhanced growth rate of atmospheric particles from sulfuric acid. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 7359-7372.	4.9	58
44	Influence of temperature on the molecular composition of ions and charged clusters during pure biogenic nucleation. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 65-79.	4.9	56
45	The Synergistic Role of Sulfuric Acid, Bases, and Oxidized Organics Governing New Particle Formation in Beijing. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL091944.	4.0	53
46	Formation of Highly Oxygenated Organic Molecules from $\alpha$ -Pinene Ozonolysis: Chemical Characteristics, Mechanism, and Kinetic Model Development. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 873-883.	2.7	52
47	Insight into Acid–Base Nucleation Experiments by Comparison of the Chemical Composition of Positive, Negative, and Neutral Clusters. <i>Environmental Science &amp; Technology</i> , 2014, 48, 13675-13684.	10.0	51
48	The role of ions in new particle formation in the CLOUD chamber. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 15181-15197.	4.9	50
49	Formation and growth of sub-3-nm aerosol particles in experimental chambers. <i>Nature Protocols</i> , 2020, 15, 1013-1040.	12.0	49
50	Molecular understanding of the suppression of new-particle formation by isoprene. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 11809-11821.	4.9	49
51	Experimental investigation of ion–ion recombination under atmospheric conditions. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 7203-7216.	4.9	46
52	Heterogeneous Nucleation onto Ions and Neutralized Ions: Insights into Sign-Preference. <i>Journal of Physical Chemistry C</i> , 2016, 120, 7444-7450.	3.1	45
53	Observations of Nano-CN in the Nocturnal Boreal Forest. <i>Aerosol Science and Technology</i> , 2011, 45, 499-509.	3.1	43
54	Nanoparticles in boreal forest and coastal environment: a comparison of observations and implications of the nucleation mechanism. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 7009-7016.	4.9	42

#	ARTICLE	IF	CITATIONS
55	Major contribution of neutral clusters to new particle formation at the interface between the boundary layer and the free troposphere. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 3413-3428.	4.9	42
56	Biogenic particles formed in the Himalaya as an important source of free tropospheric aerosols. <i>Nature Geoscience</i> , 2021, 14, 4-9.	12.9	40
57	The driving factors of new particle formation and growth in the polluted boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 14275-14291.	4.9	38
58	Sizing of neutral sub 3nm tungsten oxide clusters using Airmodus Particle Size Magnifier. <i>Journal of Aerosol Science</i> , 2015, 87, 53-62.	3.8	37
59	Trends in new particle formation in eastern Lapland, Finland: effect of decreasing sulfur emissions from Kola Peninsula. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 4383-4396.	4.9	36
60	Operation of the Airmodus A11 nano Condensation Nucleus Counter at various inlet pressures and various operation temperatures, and design of a new inlet system. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 2977-2988.	3.1	35
61	Intercomparison of air ion spectrometers: an evaluation of results in varying conditions. <i>Atmospheric Measurement Techniques</i> , 2011, 4, 805-822.	3.1	34
62	Evolution of particle composition in CLOUD nucleation experiments. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 5587-5600.	4.9	33
63	The role of $\text{H}_2\text{SO}_4$ , $\text{SO}_4$ , $\text{NH}_3$ anion clusters in ion-induced aerosol nucleation mechanisms in the boreal forest. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 13231-13243.	4.9	33
64	Molecular Composition and Volatility of Nucleated Particles from $\alpha$ -Pinene Oxidation between $\sim 50$ $^{\circ}\text{C}$ and $+25$ $^{\circ}\text{C}$ . <i>Environmental Science &amp; Technology</i> , 2019, 53, 12357-12365.	10.0	32
65	Sulphuric acid and aerosol particle production in the vicinity of an oil refinery. <i>Atmospheric Environment</i> , 2015, 119, 156-166.	4.1	29
66	Hygroscopicity of nanoparticles produced from homogeneous nucleation in the CLOUD experiments. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 293-304.	4.9	29
67	Solar eclipse demonstrating the importance of photochemistry in new particle formation. <i>Scientific Reports</i> , 2017, 7, 45707.	3.3	29
68	Tropical and Boreal Forest " Atmosphere Interactions: A Review. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 74, 24.	1.6	27
69	Synergistic $\text{HNO}_3$ " $\text{H}_2\text{SO}_4$ " $\text{NH}_3$ upper tropospheric particle formation. <i>Nature</i> , 2022, 605, 483-489.	27.8	26
70	Estimating the contribution of ion-ion recombination to sub-2 nm cluster concentrations from atmospheric measurements. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 11391-11401.	4.9	25
71	High concentrations of sub-3nm clusters and frequent new particle formation observed in the Po Valley, Italy, during the PEGASOS 2012 campaign. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 1919-1935.	4.9	25
72	Unexpectedly acidic nanoparticles formed in dimethylamine " ammonia " sulfuric-acid nucleation experiments at CLOUD. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 13601-13618.	4.9	24

#	ARTICLE	IF	CITATIONS
73	Measurement of model comparison of stabilized Criegee intermediate and highly oxygenated molecule production in the CLOUD chamber. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 2363-2380.	4.9	21
74	Growth rates of atmospheric molecular clusters based on appearance times and collision-evaporation fluxes: Growth by monomers. <i>Journal of Aerosol Science</i> , 2014, 78, 55-70.	3.8	20
75	Vertical profiles of sub-300 nm particles over the boreal forest. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 4127-4138.	4.9	20
76	Towards understanding the characteristics of new particle formation in the Eastern Mediterranean. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 9223-9251.	4.9	19
77	Determination of the collision rate coefficient between charged iodine acid clusters and iodine acid using the appearance time method. <i>Aerosol Science and Technology</i> , 2021, 55, 231-242.	3.1	18
78	Elemental composition and clustering behaviour of $\alpha$ -pinene oxidation products for different oxidation conditions. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 4145-4159.	4.9	17
79	Effect of dimethylamine on the gas phase sulfuric acid concentration measured by Chemical Ionization Mass Spectrometry. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 3036-3049.	3.3	17
80	Comparison of the SAWNUC model with CLOUD measurements of sulphuric acid-water nucleation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 12401-12414.	3.3	16
81	Growth of atmospheric clusters involving cluster-cluster collisions: comparison of different growth rate methods. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 5545-5560.	4.9	16
82	A new high-transmission inlet for the Caltech nano-RDMA for size distribution measurements of sub-300 nm ions at ambient concentrations. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 2709-2720.	3.1	14
83	Long-term measurement of sub-300 nm particles and their precursor gases in the boreal forest. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 695-715.	4.9	14
84	Low-Volatility Vapors and New Particle Formation Over the Southern Ocean During the Antarctic Circumnavigation Expedition. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD035126.	3.3	14
85	Modeling the thermodynamics and kinetics of sulfuric acid-dimethylamine-water nanoparticle growth in the CLOUD chamber. <i>Aerosol Science and Technology</i> , 2016, 50, 1017-1032.	3.1	13
86	First measurements of the number size distribution of 1-20 nm aerosol particles released from manufacturing processes in a cleanroom environment. <i>Aerosol Science and Technology</i> , 2017, 51, 685-693.	3.1	12
87	Emerging Investigator Series: COVID-19 lockdown effects on aerosol particle size distributions in northern Italy. <i>Environmental Science Atmospheres</i> , 2021, 1, 214-227.	2.4	12
88	Chemical composition of nanoparticles from $\alpha$ -pinene nucleation and the influence of isoprene and relative humidity at low temperature. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 17099-17114.	4.9	12
89	Technical Note: Using DEG-CPCs at upper tropospheric temperatures. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 7547-7555.	4.9	11
90	The standard operating procedure for Airmodus Particle Size Magnifier and nano-Condensation Nucleus Counter. <i>Journal of Aerosol Science</i> , 2022, 159, 105896.	3.8	11

#	ARTICLE	IF	CITATIONS
91	Molecular characterization of ultrafine particles using extractive electrospray time-of-flight mass spectrometry. <i>Environmental Science Atmospheres</i> , 2021, 1, 434-448.	2.4	10
92	A chamber study of the influence of boreal BVOC emissions and sulfuric acid on nanoparticle formation rates at ambient concentrations. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 1955-1970.	4.9	9
93	Zeppelin-led study on the onset of new particle formation in the planetary boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 12649-12663.	4.9	9
94	Towards a concentration closure of sub-6 nm aerosol particles and sub-3 nm atmospheric clusters. <i>Journal of Aerosol Science</i> , 2022, 159, 105878.	3.8	9
95	Combining instrument inversions for sub-10 nm aerosol number size-distribution measurements. <i>Journal of Aerosol Science</i> , 2022, 159, 105862.	3.8	9
96	Wintertime subarctic new particle formation from Kola Peninsula sulfur emissions. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 17559-17576.	4.9	9
97	Effects of different correction algorithms on absorption coefficient $\hat{\kappa}$ a comparison of three optical absorption photometers at a boreal forest site. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 6419-6441.	3.1	8
98	Survival of newly formed particles in haze conditions. <i>Environmental Science Atmospheres</i> , 2022, 2, 491-499.	2.4	8
99	The versatile size analyzing nuclei counter (vSANC). <i>Aerosol Science and Technology</i> , 2016, 50, 947-958.	3.1	7
100	Measurement report: Long-term measurements of aerosol precursor concentrations in the Finnish subarctic boreal forest. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 2237-2254.	4.9	6
101	An evaluation of new particle formation events in Helsinki during a Baltic Sea cyanobacterial summer bloom. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 6365-6391.	4.9	6
102	What controls the observed size-dependency of the growth rates of sub-10 nm atmospheric particles?. <i>Environmental Science Atmospheres</i> , 2022, 2, 449-468.	2.4	5
103	Activation of sub-3 nm organic particles in the particle size magnifier using humid and dry conditions. <i>Journal of Aerosol Science</i> , 2022, 161, 105945.	3.8	3
104	Characterization of diethylene glycol-condensation particle counters for detection of sub-3 nm particles. , 2013, , .		2
105	The particle size magnifier closing the gap between measurement of molecules, molecular clusters and aerosol particles. , 2013, , .		0
106	Ion generation and CPC detection efficiency studies in sub 3-nm size range. , 2013, , .		0
107	Laboratory characterization of a size-resolved CPC battery to infer the composition of freshly formed atmospheric nuclei. , 2013, , .		0
108	Sulphur dioxide and sulphuric acid concentrations in the vicinity of Kilpilahti industrial area. , 2013, , .		0