Ari Laaksonen

List of Publications by Year
in descending order

270 papers	26,109 citations	9775 73 h-index	9090 144 g-index
319 all docs	319 docs citations	319 times ranked	11123 citing authors

#	Article	IF	Citations
1	Evolution of Organic Aerosols in the Atmosphere. Science, 2009, 326, 1525-1529.	6.0	3,374
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	An amorphous solid state of biogenic secondary organic aerosol particles. Nature, 2010, 467, 824-827.	13.7	719
6	The effect of physical and chemical aerosol properties on warm cloud droplet activation. Atmospheric Chemistry and Physics, 2006, 6, 2593-2649.	1.9	690
7	The role of low-volatility organic compounds in initial particle growth in the atmosphere. Nature, 2016, 533, 527-531.	13.7	540
8	Ion-induced nucleation of pure biogenic particles. Nature, 2016, 533, 521-526.	13.7	528
9	An improved parameterization for sulfuric acidâ€“water nucleation rates for tropospheric and stratospheric conditions. Journal of Geophysical Research, 2002, 107, AAC 3-1.	3.3	492
10	Cluster activation theory as an explanation of the linear dependence between formation rate of 3nm particles and sulphuric acid concentration. Atmospheric Chemistry and Physics, 2006, 6, 787-793.	1.9	466
11	Oxidation Products of Biogenic Emissions Contribute to Nucleation of Atmospheric Particles. Science, 2014, 344, 717-721.	6.0	456
12	Atmospheric sulphuric acid and aerosol formation: implications from atmospheric measurements for nucleation and early growth mechanisms. Atmospheric Chemistry and Physics, 2006, 6, 4079-4091.	1.9	444
13	Measurement of the nucleation of atmospheric aerosol particles. Nature Protocols, 2012, 7, 1651-1667.	5.5	435
14	Parameterizations for sulfuric acid/water nucleation rates. Journal of Geophysical Research, 1998, 103, 8301-8307.	3.3	389
15	Nucleation: Measurements, Theory, and Atmospheric Applications. Annual Review of Physical Chemistry, 1995, 46, 489-524.	4.8	343
16	Connections between atmospheric sulphuric acid and new particle formation during QUEST IIIâ€“IV campaigns in Heidelberg and HyytiÃlÃ. Atmospheric Chemistry and Physics, 2007, 7, 1899-1914.	1.9	329
17	Organic aerosol components derived from 25 AMS data sets across Europe using a consistent ME-2 based source apportionment approach. Atmospheric Chemistry and Physics, 2014, 14, 6159-6176.	1.9	308
18	Ternary nucleation of H2SO4, NH3, and H2O in the atmosphere. Journal of Geophysical Research, 1999, 104, 26349-26353.	3.3	307

#	Article	IF	Citations
19	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
20	Warming-induced increase in aerosol number concentration likely to moderate climate change. Nature Geoscience, 2013, 6, 438-442.	5.4	282
21	General overview: European Integrated project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI) â€“ integrating aerosol research from nano to global scales. Atmospheric Chemistry and Physics, 2011, 11, 13061-13143.	1.9	278
22	On the roles of sulphuric acid and low-volatility organic vapours in the initial steps of atmospheric new particle formation. Atmospheric Chemistry and Physics, 2010, 10, 11223-11242.	1.9	262
23	Relationship between aerosol oxidation level and hygroscopic properties of laboratory generated secondary organic aerosol (SOA) particles. Geophysical Research Letters, 2010, 37, .	1.5	257
24	EUCAARI ion spectrometer measurements at 12 European sites â€“ analysis of new particle formation events. Atmospheric Chemistry and Physics, 2010, 10, 7907-7927.	1.9	248
25	The role of surfactants in KÃ¶hler theory reconsidered. Atmospheric Chemistry and Physics, 2004, 4, 2107-2117.	1.9	234
26	Surface tension prevails over solute effect in organic-influenced cloud droplet activation. Nature, 2017, 546, 637-641.	13.7	232
27	Humidity-dependent phase state of SOA particles from biogenic and anthropogenic precursors. Atmospheric Chemistry and Physics, 2012, 12, 7517-7529.	1.9	219
28	Explaining global surface aerosol number concentrations in terms of primary emissions and particle formation. Atmospheric Chemistry and Physics, 2010, 10, 4775-4793.	1.9	212
29	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
30	The role of VOC oxidation products in continental new particle formation. Atmospheric Chemistry and Physics, 2008, 8, 2657-2665.	1.9	202
31	Binary nucleation of waterâ€“sulfuric acid system: Comparison of classical theories with different H2SO4 saturation vapor pressures. Journal of Chemical Physics, 1990, 93, 696-701.	1.2	189
32	Ubiquity of organic nitrates from nighttime chemistry in the European submicron aerosol. Geophysical Research Letters, 2016, 43, 7735-7744.	1.5	182
33	Cloud condensation nucleus production from nucleation events at a highly polluted region. Geophysical Research Letters, 2005, 32, .	1.5	179
34	Nucleation and growth of new particles in Po Valley, Italy. Atmospheric Chemistry and Physics, 2007, 7, 355-376.	1.9	179
35	Modification of the KÃ¶hler Equation to Include Soluble Trace Gases and Slightly Soluble Substances. Journals of the Atmospheric Sciences, 1998, 55, 853-862.	0.6	178
36	Analysis of the growth of nucleation mode particles observed in Boreal forest. Tellus, Series B: Chemical and Physical Meteorology, 1998, 50, 449-462.	0.8	177

#	Article	IF	Citations
37	Can chemical effects on cloud droplet number rival the first indirect effect?. Geophysical Research Letters, 2002, 29, 29-1-29-4.	1.5	176
38	Organic aerosol formation via sulphate cluster activation. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	175
39	ATMOSPHERIC SCIENCE: Reshaping the Theory of Cloud Formation. Science, 2001, 292, 2025-2026.	6.0	172
40	Sensitivity of aerosol concentrations and cloud properties to nucleation and secondary organic distribution in ECHAM5-HAM global circulation model. Atmospheric Chemistry and Physics, 2009, 9, 1747-1766.	1.9	153
41	Size and composition measurements of background aerosol and new particle growth in a Finnish forest during QUEST 2 using an Aerodyne Aerosol Mass Spectrometer. Atmospheric Chemistry and Physics, 2006, 6, 315-327.	1.9	150
42	Cloud forming potential of secondary organic aerosol under near atmospheric conditions. Geophysical Research Letters, 2008, 35, .	1.5	145
43	Atmospheric nucleation: highlights of the EUCAARI project and future directions. Atmospheric Chemistry and Physics, 2010, 10, 10829-10848.	1.9	144
44	Scaling Properties of the Critical Nucleus in Classical and Molecular-Based Theories of Vapor-Liquid Nucleation. Physical Review Letters, 1996, 76, 2754-2757.	2.9	141
45	Analysis of the growth of nucleation mode particles observed in Boreal forest. Tellus, Series B: Chemical and Physical Meteorology, 2022, 50, 449.	0.8	140
46	Adsorptive uptake of water by semisolid secondary organic aerosols. Geophysical Research Letters, 2015, 42, 3063-3068.	1.5	139
47	Hygroscopic growth of ultrafine ammonium sulphate aerosol measured using an ultrafine tandem differential mobility analyzer. Journal of Geophysical Research, 2000, 105, 22231-22242.	3.3	133
48	Trends in the average temperature in Finland, 1847â€“2013. Stochastic Environmental Research and Risk Assessment, 2015, 29, 1521-1529.	1.9	130
49	The role of relative humidity in continental new particle formation. Journal of Geophysical Research, 2011, 116, .	3.3	127
50	A statistical proxy for sulphuric acid concentration. Atmospheric Chemistry and Physics, 2011, 11, 11319-11334.	1.9	124
51	Surfactants in cloud droplet activation: mixed organic-inorganic particles. Atmospheric Chemistry and Physics, 2010, 10, 5663-5683.	1.9	123
52	On the formation of sulphuric acid â€“ amine clusters in varying atmospheric conditions and its influence on atmospheric new particle formation. Atmospheric Chemistry and Physics, 2012, 12, 9113-9133.	1.9	119
53	Experiments on gasâ€“liquid nucleation of sulfuric acid and water. Journal of Chemical Physics, 1997, 107, 920-926.	1.2	118
54	Ab initio study of gas-phase sulphuric acid hydrates containing 1 to 3 water molecules. Journal of Chemical Physics, 1998, 108, 1031-1039.	1.2	116

#	Article	IF	Citations
55	The effect of acidâ€“base clustering and ions on the growth of atmospheric nano-particles. Nature Communications, 2016, 7, 11594.	5.8	116
56	Global analysis of continental boundary layer new particle formation based on long-term measurements. Atmospheric Chemistry and Physics, 2018, 18, 14737-14756.	1.9	113
57	SALSA â€“ a Sectional Aerosol module for Large Scale Applications. Atmospheric Chemistry and Physics, 2008, 8, 2469-2483.	1.9	110
58	Aerosol hygroscopicity and CCN activation kinetics in a boreal forest environment during the 2007 EUCAARI campaign. Atmospheric Chemistry and Physics, 2011, 11, 12369-12386.	1.9	110
59	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
60	Results from the CERN pilot CLOUD experiment. Atmospheric Chemistry and Physics, 2010, 10, 1635-1647.	1.9	96
61	Hygroscopic properties of ultrafine aerosol particles in the boreal forest: diurnal variation, solubility and the influence of sulfuric acid. Atmospheric Chemistry and Physics, 2007, 7, 211-222.	1.9	95
62	Nanoparticle formation by ozonolysis of inducible plant volatiles. Atmospheric Chemistry and Physics, 2005, 5, 1489-1495.	1.9	94
63	Aerosol Liquid Water Driven by Anthropogenic Nitrate: Implications for Lifetimes of Water-Soluble Organic Gases and Potential for Secondary Organic Aerosol Formation. Environmental Science & Technology, 2014, 48, 11127-11136.	4.6	94
64	Hygroscopic growth of ultrafine sodium chloride particles. Journal of Geophysical Research, 2001, 106, 20749-20757.	3.3	93
65	Increasing large scale windstorm damage in Western, Central and Northern European forests, 1951â€“2010. Scientific Reports, 2017, 7, 46397.	1.6	93
66	Bounce behavior of freshly nucleated biogenic secondary organic aerosol particles. Atmospheric Chemistry and Physics, 2011, 11, 8759-8766.	1.9	92
67	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
68	Clouds without supersaturation. Nature, 1997, 388, 336-337.	13.7	90
69	Physicochemical properties and origin of organic groups detected in boreal forest using an aerosol mass spectrometer. Atmospheric Chemistry and Physics, 2010, 10, 2063-2077.	1.9	87
70	Formation and growth of nucleated particles into cloud condensation nuclei: modelâ€“measurement comparison. Atmospheric Chemistry and Physics, 2013, 13, 7645-7663.	1.9	87
71	Molecular dynamics simulations of gasâ€“liquid nucleation of Lennard-Jones fluid. Journal of Chemical Physics, 2000, 113, 9741-9747.	1.2	86
72	New particle formation events in semi-clean South African savannah. Atmospheric Chemistry and Physics, 2011, 11, 3333-3346.	1.9	86

#	Article	IF	Citations
73	The composition of nucleation and Aitken modes particles during coastal nucleation events: evidence for marine secondary organic contribution. Atmospheric Chemistry and Physics, 2006, 6, 4601-4616.	1.9	85
74	The effect of H₂O adsorption on cloud drop activation of insoluble particles: a theoretical framework. Atmospheric Chemistry and Physics, 2007, 7, 6175-6180.	1.9	84
75	On the composition of ammoniaâ€“sulfuric-acid ion clusters during aerosol particle formation. Atmospheric Chemistry and Physics, 2015, 15, 55-78.	1.9	84
76	Early snowmelt significantly enhances boreal springtime carbon uptake. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11081-11086.	3.3	84
77	Interfacial curvature free energy, the Kelvin relation, and vaporâ€“liquid nucleation rate. Journal of Chemical Physics, 1997, 106, 5284-5287.	1.2	82
78	Liquid-drop formalism and free-energy surfaces in binary homogeneous nucleation theory. Journal of Chemical Physics, 1999, 111, 2019-2027.	1.2	82
79	Chemical composition, main sources and temporal variability of PM₁ aerosols in southern African grassland. Atmospheric Chemistry and Physics, 2014, 14, 1909-1927.	1.9	81
80	Measurement of the molecular content of binary nuclei. II. Use of the nucleation rate surface for waterâ€“ethanol. Journal of Chemical Physics, 1994, 100, 6062-6072.	1.2	78
81	Commentary on cloud modelling and the mass accommodation coefficient of water. Atmospheric Chemistry and Physics, 2005, 5, 461-464.	1.9	78
82	Revised parametrization of the Dillmann-Meier theory of homogeneous nucleation. Physical Review E, 1994, 49, 5517-5524.	0.8	77
83	Surfactant partitioning in cloud droplet activation: a study of C8, C10, C12 and C14 normal fatty acid sodium salts. Tellus, Series B: Chemical and Physical Meteorology, 2022, 60, 416.	0.8	77
84	Two Sulfuric Acids in Small Water Clusters. Journal of Physical Chemistry A, 2003, 107, 8648-8658.	1.1	74
85	Application of several activity coefficient models to water-organic-electrolyte aerosols of atmospheric interest. Atmospheric Chemistry and Physics, 2005, 5, 2475-2495.	1.9	74
86	Changes in the production rate of secondary aerosol particles in Central Europe in view of decreasing SO₂ emissions between 1996 and 2006. Atmospheric Chemistry and Physics, 2010, 10, 1071-1091.	1.9	74
87	Sulfate aerosol formation in the Arctic boundary layer. Journal of Geophysical Research, 1998, 103, 8309-8321.	3.3	69
88	A novel tandem differential mobility analyzer with organic vapor treatment of aerosol particles. Atmospheric Chemistry and Physics, 2001, 1, 51-60.	1.9	68
89	Mass yields of secondary organic aerosols from the oxidation of Î±-pinene and real plant emissions. Atmospheric Chemistry and Physics, 2011, 11, 1367-1378.	1.9	68
90	New particle formation from the oxidation of direct emissions of pine seedlings. Atmospheric Chemistry and Physics, 2009, 9, 8121-8137.	1.9	64

#	Article	IF	Citations
91	Forestation of boreal peatlands: Impacts of changing albedo and greenhouse gas fluxes on radiative forcing. Journal of Geophysical Research, 2010, 115, .	3.3	64
92	Observing wind, aerosol particles, cloud and precipitation: Finland's new ground-based remote-sensing network. Atmospheric Measurement Techniques, 2014, 7, 1351-1375.	1.2	64
93	On the theories of type 1 polar stratospheric cloud formation. Journal of Geophysical Research, 1995, 100, 11275.	3.3	62
94	Nucleation probability in binary heterogeneous nucleation of waterâ€“n-propanol vapor mixtures on insoluble and soluble nanoparticles. Physical Review E, 2003, 67, 021605.	0.8	58
95	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
96	An explicit cluster model for binary nuclei in waterâ€“alcohol systems. Journal of Chemical Physics, 1991, 95, 6745-6748.	1.2	56
97	Overview of the field measurement campaign in HyytiÃlÃ, August 2001 in the framework of the EU project OSOA. Atmospheric Chemistry and Physics, 2004, 4, 657-678.	1.9	56
98	Adsorption of Water on 8â^'15 nm NaCl and (NH4)2SO4Aerosols Measured Using an Ultrafine Tandem Differential Mobility Analyzer. Journal of Physical Chemistry A, 2001, 105, 8183-8188.	1.1	54
99	A model intercomparison of CCN-limited tenuous clouds in the high Arctic. Atmospheric Chemistry and Physics, 2018, 18, 11041-11071.	1.9	54
100	Atmospheric submicron aerosol composition and particulate organic nitrate formation in a boreal forestlandâ€“urban mixed region. Atmospheric Chemistry and Physics, 2014, 14, 13483-13495.	1.9	53
101	Cloud formation of particles containing humic-like substances. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	52
102	Modelling the formation of organic particles in the atmosphere. Atmospheric Chemistry and Physics, 2004, 4, 1071-1083.	1.9	51
103	The effects of increasing atmospheric ozone on biogenic monoterpene profiles and the formation of secondary aerosols. Atmospheric Environment, 2007, 41, 4877-4887.	1.9	51
104	Determination of the biogenic secondary organic aerosol fraction in the boreal forest by NMR spectroscopy. Atmospheric Chemistry and Physics, 2012, 12, 941-959.	1.9	51
105	Surfactant effects in global simulations of cloud droplet activation. Geophysical Research Letters, 2012, 39, .	1.5	51
106	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
107	Binary heterogeneous nucleation of a water-sulphuric acid system: The effect of hydrate interaction. Journal of Aerosol Science, 1991, 22, 823-830.	1.8	50
108	Thermodynamics, gas-liquid nucleation, and size-dependent surface tension. Europhysics Letters, 1996, 35, 367-372.	0.7	50

#	Article	IF	Citations
109	Theory of Size Dependent Deliquescence of Nanoparticles:Â Relation to Heterogeneous Nucleation and Comparison with Experiments. Journal of Physical Chemistry B, 2001, 105, 7708-7722.	1.2	50
110	The influence of surfactant properties on critical supersaturations of cloud condensation nuclei. Journal of Aerosol Science, 2006, 37, 1730-1736.	1.8	50
111	Weekly precipitation cycles? Lack of evidence from United States surface stations. Geophysical Research Letters, 2007, 34, .	1.5	49
112	Biotic stress accelerates formation of climate-relevant aerosols in boreal forests. Atmospheric Chemistry and Physics, 2015, 15, 12139-12157.	1.9	48
113	Simulations on the effect of sulphuric acid formation on atmospheric aerosol concentrations. Atmospheric Environment, 1995, 29, 377-382.	1.9	47
114	Students' initial knowledge of electric and magnetic fieldsâ€"more profound explanations and reasoning models for undesired conceptions. European Journal of Physics, 2007, 28, 51-60.	0.3	47
115	Effect of aerosol concentration and absorbing aerosol on the radiation fog life cycle. Atmospheric Environment, 2016, 133, 26-33.	1.9	47
116	Some consequences of the nucleation theorem for binary fluids. Journal of Chemical Physics, 1995, 102, 6846-6850.	1.2	45
117	Gasâ€"liquid nucleation of nonideal binary mixtures. I. A density functional study. Journal of Chemical Physics, 1995, 102, 5803-5810.	1.2	45
118	Spatial distributions and seasonal cycles of aerosols in India and China seen in global climate-aerosol model. Atmospheric Chemistry and Physics, 2011, 11, 7975-7990.	1.9	45
119	Sources and atmospheric processing of organic aerosol in the Mediterranean: insights from aerosol mass spectrometer factor analysis. Atmospheric Chemistry and Physics, 2011, 11, 12499-12515.	1.9	44
120	Modification of the Dillmannâ€"Meier theory of homogeneous nucleation. Journal of Chemical Physics, 1993, 99, 764-765.	1.2	43
121	Supercooled cirrus cloud formation modified by nitric acid pollution of the upper troposphere. Geophysical Research Letters, 1997, 24, 3009-3012.	1.5	43
122	A density functional study of liquidâ€"liquid interfaces in partially miscible systems. Journal of Chemical Physics, 1999, 110, 5906-5912.	1.2	43
123	SO₂ oxidation products other than H₂SO₄ as a trigger of new particle formation. Part 2: Comparison of ambient and laboratory measurements, and atmospheric implications. Atmospheric Chemistry and Physics, 2008, 8, 7255-7264.	1.9	41
124	Reliable potential for small sulfuric acidâ€"water clusters. Chemical Physics, 2003, 287, 7-19.	0.9	40
125	Binary homogeneous nucleation in waterâ€"succinic acid and waterâ€"glutaric acid systems. Journal of Chemical Physics, 2004, 120, 282-291.	1.2	40
126	Aerosol Chemical Composition in Cloud Events by High Resolution Time-of-Flight Aerosol Mass Spectrometry. Environmental Science & Technology, 2013, 47, 2645-2653.	4.6	40

#	Article	IF	Citations
127	On the cluster compositions in the classical binary nucleation theory. Journal of Chemical Physics, 1993, 99, 6832-6835.	1.2	39
128	SO₂ oxidation products other than H₂SO₄ as a trigger of new particle formation. Part 1: Laboratory investigations. Atmospheric Chemistry and Physics, 2008, 8, 6365-6374.	1.9	38
129	Size-dependent activation of aerosols into cloud droplets at a subarctic background site during the second Pallas Cloud Experiment (2nd PaCE): method development and data evaluation. Atmospheric Chemistry and Physics, 2009, 9, 4841-4854.	1.9	38
130	Geographical and diurnal features of amineâ€enhanced boundary layer nucleation. Journal of Geophysical Research D: Atmospheres, 2015, 120, 9606-9624.	1.2	37
131	A simplified treatment of surfactant effects on cloud drop activation. Geoscientific Model Development, 2011, 4, 107-116.	1.3	36
132	Relation of air mass history to nucleation events in Po Valley, Italy, using back trajectories analysis. Atmospheric Chemistry and Physics, 2007, 7, 839-853.	1.9	35
133	A Unifying Model for Adsorption and Nucleation of Vapors on Solid Surfaces. Journal of Physical Chemistry A, 2015, 119, 3736-3745.	1.1	35
134	Extended hydrates interaction model: Hydrate formation and the energetics of binary homogeneous nucleation. Journal of Chemical Physics, 1991, 94, 7411-7413.	1.2	34
135	Herbivory by an Outbreaking Moth Increases Emissions of Biogenic Volatiles and Leads to Enhanced Secondary Organic Aerosol Formation Capacity. Environmental Science & Technology, 2016, 50, 11501-11510.	4.6	34
136	Effects of SO₂ oxidation on ambient aerosol growth in water and ethanol vapours. Atmospheric Chemistry and Physics, 2005, 5, 767-779.	1.9	33
137	Meteorological and trace gas factors affecting the number concentration of atmospheric Aitken (<i>D</i>_p = 50 nm) particles in the continental boundary layer: parameterization using a multivariate mixed effects model. Geoscientific Model Development, 2011, 4, 1-13.	1.3	33
138	Evolution of particle composition in CLOUD nucleation experiments. Atmospheric Chemistry and Physics, 2013, 13, 5587-5600.	1.9	33
139	Homogeneous heteromolecular nucleation of sulphuric acid and water vapours in stratospheric conditions: a theoretical study of the effect of hydrate interaction. Journal of Aerosol Science, 1991, 22, 779-787.	1.8	30
140	Strange Predictions by Binary Heterogeneous Nucleation Theory Compared with a Quantitative Experimentâ€. Journal of Physical Chemistry B, 2001, 105, 11800-11808.	1.2	30
141	A method for detecting the presence of organic fraction in nucleation mode sized particles. Atmospheric Chemistry and Physics, 2005, 5, 3277-3287.	1.9	30
142	Roadside aerosol study using hygroscopic, organic and volatility TDMAs: Characterization and mixing state. Atmospheric Environment, 2010, 44, 976-986.	1.9	30
143	Biomass burning aerosols observed in Eastern Finland during the Russian wildfires in summer 2010 â€" Part 1: In-situ aerosol characterization. Atmospheric Environment, 2012, 47, 269-278.	1.9	30
144	Long-term measurements of cloud droplet concentrations and aerosolâ€"cloud interactions in continental boundary layer clouds. Tellus, Series B: Chemical and Physical Meteorology, 2013, 65, 20138.	0.8	30

#	Article	IF	Citations
145	Climate impacts of changing aerosol emissions since 1996. Geophysical Research Letters, 2014, 41, 4711-4718.	1.5	30
146	Nucleation of binary waterâ€"nâ€alcohol vapors. Journal of Chemical Physics, 1992, 97, 1983-1989.	1.2	29
147	Hygroscopicity of nanoparticles produced from homogeneous nucleation in the CLOUD experiments. Atmospheric Chemistry and Physics, 2016, 16, 293-304.	1.9	29
148	The effect of potential truncation on the gasâ€"liquid surface tension of planar interfaces and droplets. Journal of Chemical Physics, 2001, 114, 5796-5801.	1.2	28
149	Breakdown of the Capillarity Approximation in Binary Nucleation:Â A Density Functional Studyâ€. Journal of Physical Chemistry B, 2001, 105, 11678-11682.	1.2	27
150	Partitioning of semivolatile surface-active compounds between bulk, surface and gas phase. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	27
151	On-Line Characterization of Morphology and Water Adsorption on Fumed Silica Nanoparticles. Aerosol Science and Technology, 2011, 45, 1441-1447.	1.5	26
152	Surface fractal dimension, water adsorption efficiency and cloud nucleation activity of insoluble aerosol. Scientific Reports, 2016, 6, 25504.	1.6	26
153	Upper tropospheric SO2conversion into sulfuric acid aerosols and cloud condensation nuclei. Journal of Geophysical Research, 2000, 105, 1459-1469.	3.3	25
154	Comparison of the experimental mobility equivalent diameter for small cluster ions with theoretical particle diameter corrected by effect of vapour polarity. Chemical Physics Letters, 2003, 382, 6-11.	1.2	25
155	On the formation of radiation fogs under heavily polluted conditions. Atmospheric Chemistry and Physics, 2003, 3, 581-589.	1.9	25
156	Multimodel estimates of the changes in the Baltic Sea ice cover during the present century. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 66, 22617.	0.8	25
157	High concentrations of sub-3nm clusters and frequent new particle formation observed in the Po Valley, Italy, during the PEGASOS 2012 campaign. Atmospheric Chemistry and Physics, 2016, 16, 1919-1935.	1.9	25
158	Changes in cloud properties due to NOxemissions. Geophysical Research Letters, 1995, 22, 239-242.	1.5	24
159	Gasâ€"liquid nucleation in partially miscible systems: Free-energy surfaces and structures of nuclei from density functional calculations. Journal of Chemical Physics, 1999, 111, 5485-5490.	1.2	24
160	Surface Tensions and Densities of Sulfuric Acid + Dimethylamine + Water Solutions. Journal of Chemical & Engineering Data, 2004, 49, 917-922.	1.0	24
161	Black carbon concentration and deposition estimations in Finland by the regional aerosolâ€"climate model REMO-HAM. Atmospheric Chemistry and Physics, 2013, 13, 4033-4055.	1.9	24
162	Biogeophysical impacts of peatland forestation on regional climate changes in Finland. Biogeosciences, 2014, 11, 7251-7267.	1.3	24

#	Article	IF	Citations
163	The regional climate model REMO (v2015) coupled with the 1-D freshwater lake model FLake (v1): Fenno-Scandinavian climate and lakes. Geoscientific Model Development, 2018, 11, 1321-1342.	1.3	24
164	An adsorption theory of heterogeneous nucleation of water vapour on nanoparticles. Atmospheric Chemistry and Physics, 2016, 16, 135-143.	1.9	23
165	The self-consistency correction to homogeneous nucleation: Extension to binary systems. Journal of Aerosol Science, 1992, 23, 309-312.	1.8	22
166	Study of finely divided aqueous systems as an aid to understanding the formation mechanism of polar stratospheric clouds: Case of HNO3/H2O and H2SO4/H2O systems. Journal of Geophysical Research, 2003, 108, .	3.3	22
167	Density-functional studies of amphiphilic binary mixtures. I. Phase behavior. Journal of Chemical Physics, 2000, 113, 4476-4479.	1.2	21
168	Surface tensions and densities of H2SO4+ NH3+ water solutions. Geophysical Research Letters, 2005, 32, .	1.5	21
169	Effect of particle phase oligomer formation on aerosol growth. Atmospheric Environment, 2007, 41, 1768-1776.	1.9	21
170	The impact of aerosol emissions on the 1.5â€‰Â°C pathways. Environmental Research Letters, 2018, 13, 044011.	2.2	21
171	The Turnbull correlation and the freezing of stratospheric aerosol droplets. Journal of Geophysical Research, 1998, 103, 10875-10884.	3.3	20
172	Seasonal cycle and source analyses of aerosol optical properties in a semi-urban environment at Puijo station in Eastern Finland. Atmospheric Chemistry and Physics, 2012, 12, 5647-5659.	1.9	20
173	Disjoining pressure of thin films on spherical core particles. Journal of Chemical Physics, 2003, 119, 10363-10366.	1.2	19
174	The regional aerosol-climate model REMO-HAM. Geoscientific Model Development, 2012, 5, 1323-1339.	1.3	19
175	Parameterization of the nitric acid effect on CCN activation. Atmospheric Chemistry and Physics, 2005, 5, 879-885.	1.9	18
176	Using discriminant analysis as a nucleation event classification method. Atmospheric Chemistry and Physics, 2006, 6, 5549-5557.	1.9	18
177	Effective aerosol optical depth from pyranometer measurements of surface solar radiation (global) Tj ETQq1 1 0.784314 rgBT /Overlo	1.9	18
178	Binary nucleation kinetics: A matrix method. Journal of Chemical Physics, 1994, 101, 9997-10002.	1.2	17
179	Time-resolved growth behavior of acid aerosols in ethanol vapor with a tandem-DMA technique. Journal of Aerosol Science, 2004, 35, 851-867.	1.8	17
180	Identification of new particle formation events with deep learning. Atmospheric Chemistry and Physics, 2018, 18, 9597-9615.	1.9	17

#	Article	IF	Citations
181	Surfactant Effects and an Order-Disorder Transition in Binary Gas-Liquid Nucleation. Physical Review Letters, 2000, 84, 2184-2187.	2.9	16
182	Soluble-Insoluble Transition in Binary Heterogeneous Nucleation. Physical Review Letters, 2001, 87, 225703.	2.9	16
183	KÃ¶hler theory for a polydisperse droplet population in the presence of a soluble trace gas, and an application to stratospheric STS droplet growth. Atmospheric Chemistry and Physics, 2003, 3, 2139-2146.	1.9	16
184	Density-functional studies of amphiphilic binary mixtures. II. Gasâ€“liquid nucleation. Journal of Chemical Physics, 2000, 113, 4480-4487.	1.2	15
185	Condensation and evaporation of water vapor in mixed aerosols of liquid droplets and ice: numerical comparison of growth rate expressions. Journal of Aerosol Science, 2001, 32, 351-374.	1.8	15
186	On the closure conjectures for the Gibbsian approximation model of a binary droplet. Journal of Chemical Physics, 2004, 120, 9752-9762.	1.2	15
187	Representing situational knowledge acquired from sensor data for atmospheric phenomena. Environmental Modelling and Software, 2014, 58, 27-47.	1.9	15
188	The effect of local sources on particle size and chemical composition and their role in aerosolâ€“cloud interactions at Puijo measurement station. Atmospheric Chemistry and Physics, 2014, 14, 6021-6034.	1.9	15
189	Gasâ€“liquid nucleation of nonideal binary mixtures. II. Examination of classical predictions. Journal of Chemical Physics, 1997, 106, 7268-7274.	1.2	14
190	Evaluation of Surface Composition of Surface Active Waterâˆ'Alcohol Type Mixtures:Â A Comparison of Semiempirical Models. Journal of Physical Chemistry B, 2005, 109, 3472-3479.	1.2	14
191	Effect of aerosol size distribution changes on AOD, CCN and cloud droplet concentration: Case studies from Erfurt and Melpitz, Germany. Journal of Geophysical Research, 2012, 117, .	3.3	14
192	In-situ observations of EyjafjallajÃ¶kull ash particles by hot-air balloon. Atmospheric Environment, 2012, 48, 104-112.	1.9	14
193	Ammonium nitrate evaporation and nitric acid condensation in DMT CCN counters. Atmospheric Measurement Techniques, 2014, 7, 1377-1384.	1.2	14
194	Real-Time Chemical Composition Analysis of Particulate Emissions from Woodchip Combustion. Energy & Fuels, 2015, 29, 1143-1150.	2.5	14
195	Heterogeneous nucleation of water vapor on different types of black carbon particles. Atmospheric Chemistry and Physics, 2020, 20, 13579-13589.	1.9	14
196	Solar Variability and Clouds â€“ Discussion Session 3c. Space Science Reviews, 2000, 94, 397-409.	3.7	13
197	Quasiperiodic climate variability with a period of 50â€“80Âyears: Fourier analysis of measurements and Earth System Model simulations. Climate Dynamics, 2012, 39, 1999-2011.	1.7	13
198	Communication: Kinetics of scavenging of small, nucleating clusters: First nucleation theorem and sum rules. Journal of Chemical Physics, 2015, 142, 011102.	1.2	13

#	Article	IF	Citations
199	Implementation of state-of-the-art ternary new-particle formation scheme to the regional chemical transport model PMCAMx-UF in Europe. Geoscientific Model Development, 2016, 9, 2741-2754.	1.3	13
200	Modeling the thermodynamics and kinetics of sulfuric acid-dimethylamine-water nanoparticle growth in the CLOUD chamber. Aerosol Science and Technology, 2016, 50, 1017-1032.	1.5	13
201	Evaporation and Condensational Growth of Liquid Droplets in Nonisothermal Gas Mixtures. Aerosol Science and Technology, 2003, 37, 315-324.	1.5	12
202	Soluble trace gas effect on cloud condensation nuclei activation: Influence of initial equilibration on cloud model results. Journal of Geophysical Research, 2005, 110, .	3.3	12
203	Overview of the biosphere-aerosol-cloud-climate interactions (BACCI) studies. Tellus, Series B: Chemical and Physical Meteorology, 2008, 60, 300-317.	0.8	12
204	Spatial distributions and seasonal cycles of aerosol climate effects in India seen in a global climateâ€“aerosol model. Atmospheric Chemistry and Physics, 2014, 14, 10177-10192.	1.9	12
205	Analysis of nucleation events in the European boundary layer using the regional aerosolâ€“climate model REMO-HAM with a solar radiation-driven OH-proxy. Atmospheric Chemistry and Physics, 2014, 14, 11711-11729.	1.9	12
206	Evaluation of aerosol and cloud properties in three climate models using MODIS observations and its corresponding COSP simulator, as well as their application in aerosolâ€“cloud interactions. Atmospheric Chemistry and Physics, 2020, 20, 1607-1626.	1.9	12
207	Reallocation in modal aerosol models: impacts on predicting aerosol radiative effects. Geoscientific Model Development, 2014, 7, 161-174.	1.3	11
208	Hygroscopic and chemical characterisation of Po Valley aerosol. Atmospheric Chemistry and Physics, 2014, 14, 1557-1570.	1.9	11
209	Surface tension and scaling of critical nuclei in diatomic and triatomic fluids. Journal of Chemical Physics, 2007, 126, 134503.	1.2	10
210	Brightening of the global cloud field by nitric acid and the associated radiative forcing. Atmospheric Chemistry and Physics, 2012, 12, 7625-7633.	1.9	10
211	Technical note: Analytical formulae for the critical supersaturations and droplet diameters of CCN containing insoluble material. Atmospheric Chemistry and Physics, 2008, 8, 1985-1988.	1.9	9
212	Study of finely divided aqueous systems as an aid to understanding the surface chemistry of polar stratospheric clouds: Case of HCl/H2O and HNO3/HCl/H2O systems. Journal of Geophysical Research, 2003, 108, .	3.3	8
213	The influence of nitric acid on the cloud processing of aerosol particles. Atmospheric Chemistry and Physics, 2006, 6, 1627-1634.	1.9	8
214	CCN activation of fumed silica aerosols mixed with soluble pollutants. Atmospheric Chemistry and Physics, 2015, 15, 3815-3829.	1.9	8
215	Improved power-law estimates from multiple samples provided by millennium climate simulations. Theoretical and Applied Climatology, 2015, 119, 667-677.	1.3	8
216	Numerical simulation of binary nucleation of hydrogen iodide and water vapours. Journal of Aerosol Science, 1991, 22, 149-157.	1.8	7

#	Article	IF	Citations
217	Impacts of emission reductions on aerosol radiative effects. Atmospheric Chemistry and Physics, 2015, 15, 5501-5519.	1.9	7
218	Ice nucleation on surrogates of boreal forest SOA particles: effect of water content and oxidative age. Atmospheric Chemistry and Physics, 2021, 21, 11069-11078.	1.9	7
219	Displacement barrier heights from experimental nucleation rate data. Atmospheric Research, 2008, 90, 303-312.	1.8	6
220	Stratospheric passenger flights are likely an inefficient geoengineering strategy. Environmental Research Letters, 2012, 7, 034021.	2.2	6
221	Activation and growth of cloud condensation nuclei by binary nucleation and condensation processes. Journal of Aerosol Science, 1992, 23, 113-116.	1.8	5
222	Applicability and limitations of the capillarity approximation for modeling heterogeneous nucleation in binary vapor mixtures. Journal of Aerosol Science, 1999, 30, S35-S36.	1.8	5
223	Application of nucleation theories to atmospheric aerosol formation. AIP Conference Proceedings, 2000, , .	0.3	5
224	Correction to â€œRelationship between aerosol oxidation level and hygroscopic properties of laboratory generated secondary organic aerosol (SOA) particlesâ€. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	5
225	Climate effects of northern hemisphere volcanic eruptions in an Earth System Model. Atmospheric Research, 2012, 114-115, 107-118.	1.8	5
226	Evaluation of North Eurasian snow-off dates in the ECHAM5.4 atmospheric general circulation model. Geoscientific Model Development, 2014, 7, 3037-3057.	1.3	5
227	The road weather model RoadSurf (v6.60b) driven by the regional climate model HCLIM38: evaluation over Finland. Geoscientific Model Development, 2019, 12, 3481-3501.	1.3	5
228	On the Dillmann-Meier theory of nucleation. Journal of Aerosol Science, 1992, 23, 125-128.	1.8	4
229	Surface Tensions of Multicomponent Aqueous Electrolyte Solutions: Predictive Models Based on Binary Limits. Journal of Physical Chemistry C, 2008, 112, 10428-10434.	1.5	4
230	Comment on "Using multiple observationally-based constraints to estimate climate sensitivity" by J. D. Annan and J. C. Hargreaves, Geophys. Res. Lett., 2006. Climate of the Past, 2010, 6, 411-414.	1.3	4
231	Comment on â€œChanges in Droplet Surface Tension Affect the Observed Hygroscopicity of Photochemically Aged Biomass Burning Aerosolâ€. Environmental Science & Technology, 2014, 48, 2082-2083.	4.6	4
232	The radiative impact of Nordic anthropogenic black carbon. Tellus, Series B: Chemical and Physical Meteorology, 2016, 68, 27428.	0.8	4
233	SPIN modification for low-temperature experiments. Atmospheric Measurement Techniques, 2020, 13, 7059-7067.	1.2	4
234	Growth of upper tropospheric aerosols due to uptake of HNO₃. Atmospheric Chemistry and Physics, 2004, 4, 549-556.	1.9	3

#	Article	IF	Citations
235	Repairing the first nucleation theorem: Precritical cluster losses. , 2013, , .		3
236	Experiments on combustion flue gas cleaning with electron beam. Journal of Aerosol Science, 1988, 19, 1401-1404.	1.8	2
237	The effect of HCl on cloud droplet formation. Journal of Aerosol Science, 1995, 26, S413-S414.	1.8	2
238	Acquisition and Representation of Knowledge for Atmospheric New Particle Formation. IFIP Advances in Information and Communication Technology, 2013, , 98-108.	0.5	2
239	Physical Chemistry of Aerosol Formation. , 2000, , 23-46.		2
240	Ice nucleation. , 2022, , 209-248.		2
241	Capillary Impactor with Optical Detection in Collection of Carbonaceous Particles. Aerosol Science and Technology, 1989, 10, 386-389.	1.5	1
242	Formation and growth of water â€" nitric acid aerosols. Journal of Aerosol Science, 1991, 22, S93-S96.	1.8	1
243	Phenomenology for binary nucleation. Journal of Aerosol Science, 1995, 26, S623-S624.	1.8	1
244	Model studies on the effect of nitric acid vapor on cirrus cloud formation. AIP Conference Proceedings, 2000, , .	0.3	1
245	QUANTIFICATION OF AEROSOL NUCLEATION IN THE EUROPEAN BOUNDARY LAYER (QUEST): RESULTS FROM AN INTENSIVE FIELD CAMPAIGN IN BOREAL FOREST. Journal of Aerosol Science, 2004, 35, S1225-S1226.	1.8	1
246	A combined theory of heterogeneous nucleation and adsorption of vapors on solid surfaces. , 2013, , .		1
247	Estimation of atmospheric particle formation rates through an analytical formula: validation and application in HyytiÃlÃ and Puijo, Finland. Atmospheric Chemistry and Physics, 2017, 17, 13361-13371.	1.9	1
248	Scaling properties of the critical nucleus in classical and density functional nucleation theories. , 1996, , 85-88.		1
249	Particle emissions from a modern heavy-duty diesel engine as ice nuclei in immersion freezing mode: a laboratory study on fossil and renewable fuels. Atmospheric Chemistry and Physics, 2022, 22, 1615-1631.	1.9	1
250	Hydration of acid vapours in stratospheric conditions. Journal of Aerosol Science, 1991, 22, S133-S136.	1.8	0
251	16 O 02 Formation of polar stratospheric clouds: Nucleation and freezing mechanisms of nitric acid and sulphuric acid aerosols. Journal of Aerosol Science, 1993, 24, S111-S112.	1.8	0
252	16 O 03 The radiative properties of convective clouds: The relationship between nitric acid vapour and cloud droplet concentration. Journal of Aerosol Science, 1993, 24, S113-S114.	1.8	0

#	Article	IF	Citations
253	Arctic aerosols: a lagrangian model to study new sulphate particle formation. Journal of Aerosol Science, 1997, 28, S721-S722.	1.8	0
254	Supercooled and frozen cirrus cloud properties affected by gaseous nitric acid. Journal of Aerosol Science, 1998, 29, S993-S994.	1.8	0
255	A density functional approach to nucleation in partially miscible binary mixtures. Journal of Aerosol Science, 1999, 30, S33-S34.	1.8	0
256	Mutual nucleation enhancement in phase-separating amphiphilic systems. Journal of Aerosol Science, 2000, 31, 252-253.	1.8	0
257	Model studies on the effect of nitric acid vapour on cirrus cloud activation. Atmospheric Research, 2003, 65, 235-250.	1.8	0
258	Nucleation. , 0, , 31-48.		0
259	Scaling of Critical Nuclei Composed of Diatomic and Triatomic Molecules. , 2007, , 177-180.		0
260	Conditions Favouring New Particle Formation in A Polluted Environment: Results of the QUEST-Po Valley Experiment 2004. , 2007, , 966-968.		0
261	Effect of Nucleation and Secondary Organic Aerosol Formation on Cloud Droplet Number Concentrations. , 2007, , 580-584.		0
262	Displacement Barrier Heights from Experimental Nucleation Rate Data: Scaling and Universality. , 2007, , 139-143.		0
263	Density functional theory for binary nucleation. , 1996, , 21-29.		0
264	Thermodynamics and phenomenological nucleation theories. , 1996, , 89-92.		0
265	Heterogeneous nucleation of water vapor. , 2022, , 139-169.		0
266	Homogeneous gasâ€“liquid nucleation theory. , 2022, , 45-70.		0
267	Cloud drop nucleation. , 2022, , 171-207.		0
268	Homogeneous gasâ€“liquid nucleation experiments. , 2022, , 71-82.		0
269	Simulations and molecular-based theories. , 2022, , 83-105.		0
270	Binary and multicomponent gasâ€“liquid nucleation. , 2022, , 107-137.		0