

Tuomo Nieminen

List of Publications by Year in descending order

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Version: 2024-02-01

115
papers

12,196
citations

66250

44
h-index

40945

97
g-index

203
all docs

203
docs citations

203
times ranked

6261
citing authors

#	ARTICLE	IF	CITATIONS
1	Observations on nocturnal growth of atmospheric clusters. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 60, 365.	0.8	51
2	New particle formation event detection with Mask R-CNN. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 1293-1309.	1.9	11
3	Technical note: Incorporating expert domain knowledge into causal structure discovery workflows. <i>Biogeosciences</i> , 2022, 19, 2095-2099.	1.3	1
4	Exploring Non-Linear Dependencies in Atmospheric Data with Mutual Information. <i>Atmosphere</i> , 2022, 13, 1046.	1.0	3
5	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.	1.5	18
6	Late-spring and summertime tropospheric ozone and NO ₂ in western Siberia and the Russian Arctic: regional model evaluation and sensitivities. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 4677-4697.	1.9	11
7	enemi: Non-linear correlation detection with mutual information. <i>SoftwareX</i> , 2021, 14, 100686.	1.2	18
8	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.	1.9	9
9	Emerging Investigator Series: COVID-19 lockdown effects on aerosol particle size distributions in northern Italy. <i>Environmental Science Atmospheres</i> , 2021, 1, 214-227.	0.9	12
10	A modelling study of OH, NO ₃ and H ₂ SO ₄ in 2007–2018 at SMEAR II, Finland: analysis of long-term trends. <i>Environmental Science Atmospheres</i> , 2021, 1, 449-472.	0.9	1
11	Significance of the organic aerosol driven climate feedback in the boreal area. <i>Nature Communications</i> , 2021, 12, 5637.	5.8	38
12	Size-dependent influence of NO _x on the growth rates of organic aerosol particles. <i>Science Advances</i> , 2020, 6, eaay4945.	4.7	61
13	Enhanced growth rate of atmospheric particles from sulfuric acid. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 7359-7372.	1.9	58
14	Formation and growth of sub-3-nm aerosol particles in experimental chambers. <i>Nature Protocols</i> , 2020, 15, 1013-1040.	5.5	49
15	Sources and sinks driving sulfuric acid concentrations in contrasting environments: implications on proxy calculations. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 11747-11766.	1.9	42
16	Molecular understanding of the suppression of new-particle formation by isoprene. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 11809-11821.	1.9	49
17	Roll vortices induce new particle formation bursts in the planetary boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 11841-11854.	1.9	9
18	Technical note: Effects of uncertainties and number of data points on line fitting – a case study on new particle formation. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 12531-12543.	1.9	14

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19	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.	1.9	21
20	Atmospheric new particle formation at the research station Melpitz, Germany: connection with gaseous precursors and meteorological parameters. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 1835-1861.	1.9	25
21	Two new submodels for the Modular Earth Submodel System (MESSy): New Aerosol Nucleation (NAN) and small ions (IONS) version 1.0. <i>Geoscientific Model Development</i> , 2018, 11, 4987-5001.	1.3	3
22	Identification of new particle formation events with deep learning. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 9597-9615.	1.9	17
23	Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors. <i>Science Advances</i> , 2018, 4, eaau5363.	4.7	164
24	Global analysis of continental boundary layer new particle formation based on long-term measurements. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 14737-14756.	1.9	113
25	Ground-based observation of clusters and nucleation-mode particles in the Amazon. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 13245-13264.	1.9	26
26	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.	3.3	118
27	Solar eclipse demonstrating the importance of photochemistry in new particle formation. <i>Scientific Reports</i> , 2017, 7, 45707.	1.6	29
28	The role of ions in new particle formation in the CLOUD chamber. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 15181-15197.	1.9	50
29	Estimation of atmospheric particle formation rates through an analytical formula: validation and application in Hyytiälä and Puijo, Finland. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 13361-13371.	1.9	1
30	Long-term analysis of clear-sky new particle formation events and nonevents in Hyytiälä. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 6227-6241.	1.9	84
31	A new high-transmission inlet for the Caltech nano-RDMA for size distribution measurements of sub-3-nm ions at ambient concentrations. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 2709-2720.	1.2	14
32	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.	1.2	99
33	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.	1.2	16
34	The role of low-volatility organic compounds in initial particle growth in the atmosphere. <i>Nature</i> , 2016, 533, 527-531.	13.7	540
35	Ion-induced nucleation of pure biogenic particles. <i>Nature</i> , 2016, 533, 521-526.	13.7	528
36	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.	3.3	107

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37	The effect of acid–base clustering and ions on the growth of atmospheric nano-particles. <i>Nature Communications</i> , 2016, 7, 11594.	5.8	116
38	How do air ions reflect variations in ionising radiation in the lower atmosphere in a boreal forest?. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 14297-14315.	1.9	14
39	Regional effect on urban atmospheric nucleation. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 8715-8728.	1.9	60
40	Characterization of satellite-based proxies for estimating nucleation mode particles over South Africa. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 4983-4996.	1.9	15
41	Experimental investigation of ion–ion recombination under atmospheric conditions. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 7203-7216.	1.9	46
42	Relating the hygroscopic properties of submicron aerosol to both gas- and particle-phase chemical composition in a boreal forest environment. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 11999-12009.	1.9	18
43	Technical note: New particle formation event forecasts during PEGASOS–Zeppelin Northern mission 2013 in Hyytiälä, Finland. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 12385-12396.	1.9	27
44	Sources of long-lived atmospheric VOCs at the rural boreal forest site, SMEAR II. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 13413-13432.	1.9	18
45	Variability of air ion concentrations in urban Paris. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 13717-13737.	1.9	19
46	Technical Note: Using DEG-CPCs at upper tropospheric temperatures. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 7547-7555.	1.9	11
47	Sulphuric acid and aerosol particle production in the vicinity of an oil refinery. <i>Atmospheric Environment</i> , 2015, 119, 156-166.	1.9	29
48	Oxidation Products of Biogenic Emissions Contribute to Nucleation of Atmospheric Particles. <i>Science</i> , 2014, 344, 717-721.	6.0	456
49	A large source of low-volatility secondary organic aerosol. <i>Nature</i> , 2014, 506, 476-479.	13.7	1,448
50	Prescribed burning of logging slash in the boreal forest of Finland: emissions and effects on meteorological quantities and soil properties. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 4473-4502.	1.9	17
51	Acidic reaction products of monoterpenes and sesquiterpenes in atmospheric fine particles in a boreal forest. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 7883-7893.	1.9	48
52	Aerosols and nucleation in eastern China: first insights from the new SORPES-NJU station. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 2169-2183.	1.9	72
53	Hygroscopicity, CCN and volatility properties of submicron atmospheric aerosol in a boreal forest environment during the summer of 2010. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 4733-4748.	1.9	54
54	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.	1.9	36

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55	Molecular understanding of sulphuric acid-amine particle nucleation in the atmosphere. <i>Nature</i> , 2013, 502, 359-363.	13.7	774
56	Direct Observations of Atmospheric Aerosol Nucleation. <i>Science</i> , 2013, 339, 943-946.	6.0	876
57	Gas-phase alkylamines in a boreal Scots pine forest air. <i>Atmospheric Environment</i> , 2013, 80, 369-377.	1.9	51
58	Analysis of particle size distribution changes between three measurement sites in Northern Scandinavia. , 2013, , .		0
59	Contribution of oxidized organic compounds to nanoparticle growth. , 2013, , .		0
60	Atmospheric electricity and aerosol-cloud interactions in earth's atmosphere. , 2013, , .		0
61	On atmospheric neutral and ion clusters observed in Hyytiälä spring 2011. , 2013, , .		0
62	Determination of the size distribution of recombination products from atmospheric measurements. , 2013, , .		0
63	Measurements of cluster ions using a nano radial DMA and a particle size magnifier in CLOUD. , 2013, , .		0
64	Evolution of nanoparticle composition in CLOUD in presence of sulphuric acid, ammonia and organics. , 2013, , .		1
65	How do amines affect the growth of recently formed aerosol particles. , 2013, , .		0
66	Nucleation of H ₂ SO ₄ and oxidized organics in CLOUD experiment. , 2013, , .		0
67	Evolution of alpha-pinene oxidation products in the presence of varying oxidizers: CI-API-TOF point of view. , 2013, , .		0
68	Modeling new particle formation with detailed chemistry and aerosol dynamics in a boreal forest environment. , 2013, , .		0
69	Long-term aerosol and trace gas measurements in Eastern Lapland, Finland: The impact of Kola air pollution to new particle formation. , 2013, , .		0
70	New particle formation events observed at a high altitude site Pico Espejo, Venezuela. , 2013, , .		0
71	Estimating the concentration of nucleation mode aerosol particles over South Africa using satellite remote sensing measurements. , 2013, , .		0
72	Does the onset of new particle formation occur in the planetary boundary layer?. , 2013, , .		1

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73	Observations of biomass burning smoke from Russian wild fire episodes in Finland 2010. , 2013, , .		0
74	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
75	Oxidation of SO ₂ 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
76	Semi-empirical parameterization of size-dependent atmospheric nanoparticle growth in continental environments. Atmospheric Chemistry and Physics, 2013, 13, 7665-7682.	1.9	25
77	Estimating the contribution of ion-ion recombination to sub-2 nm cluster concentrations from atmospheric measurements. Atmospheric Chemistry and Physics, 2013, 13, 11391-11401.	1.9	25
78	Analysis of particle size distribution changes between three measurement sites in northern Scandinavia. Atmospheric Chemistry and Physics, 2013, 13, 11887-11903.	1.9	22
79	Seasonal cycle and modal structure of particle number size distribution at Dome C, Antarctica. Atmospheric Chemistry and Physics, 2013, 13, 7473-7487.	1.9	46
80	Evolution of particle composition in CLOUD nucleation experiments. Atmospheric Chemistry and Physics, 2013, 13, 5587-5600.	1.9	33
81	Terpenoid emissions from fully grown east Siberian <i>Larix cajanderi</i> trees. Biogeosciences, 2013, 10, 4705-4719.	1.3	11
82	Climate Feedbacks Linking the Increasing Atmospheric CO ₂ Concentration, BVOC Emissions, Aerosols and Clouds in Forest Ecosystems. Tree Physiology, 2013, , 489-508.	0.9	38
83	Transportable Aerosol Characterization Trailer with Trace Gas Chemistry: Design, Instruments and Verification. Aerosol and Air Quality Research, 2013, 13, 421-435.	0.9	33
84	Long-term volatility measurements of submicron atmospheric aerosol in Hyytiälä, Finland. Atmospheric Chemistry and Physics, 2012, 12, 10771-10786.	1.9	45
85	On the diurnal cycle of urban aerosols, black carbon and the occurrence of new particle formation events in springtime São Paulo, Brazil. Atmospheric Chemistry and Physics, 2012, 12, 11733-11751.	1.9	55
86	New insights into nocturnal nucleation. Atmospheric Chemistry and Physics, 2012, 12, 4297-4312.	1.9	45
87	Measurement of the nucleation of atmospheric aerosol particles. Nature Protocols, 2012, 7, 1651-1667.	5.5	435
88	The role of relative humidity in continental new particle formation. Journal of Geophysical Research, 2011, 116, .	3.3	127
89	Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation. Nature, 2011, 476, 429-433.	13.7	1,114
90	Growth rates of nucleation mode particles in Hyytiälä during 2003~2009: variation with particle size, season, data analysis method and ambient conditions. Atmospheric Chemistry and Physics, 2011, 11, 12865-12886.	1.9	173

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91	The first estimates of global nucleation mode aerosol concentrations based on satellite measurements. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 10791-10801.	1.9	31
92	Evaluation on the role of sulfuric acid in the mechanisms of new particle formation for Beijing case. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 12663-12671.	1.9	75
93	Parameterization of ion-induced nucleation rates based on ambient observations. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 3393-3402.	1.9	18
94	Organic condensation: a vital link connecting aerosol formation to cloud condensation nuclei (CCN) concentrations. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 3865-3878.	1.9	392
95	Estimating seasonal variations in cloud droplet number concentration over the boreal forest from satellite observations. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 7701-7713.	1.9	21
96	Modelling atmospheric OH-reactivity in a boreal forest ecosystem. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 9709-9719.	1.9	69
97	Seasonal cycle, size dependencies, and source analyses of aerosol optical properties at the SMEAR II measurement station in Hyytiälä, Finland. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 4445-4468.	1.9	72
98	Atmospheric ions and nucleation: a review of observations. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 767-798.	1.9	228
99	Experimental Observation of Strongly Bound Dimers of Sulfuric Acid: Application to Nucleation in the Atmosphere. <i>Physical Review Letters</i> , 2011, 106, 228302.	2.9	72
100	Intercomparison of air ion spectrometers: an evaluation of results in varying conditions. <i>Atmospheric Measurement Techniques</i> , 2011, 4, 805-822.	1.2	34
101	On the roles of sulphuric acid and low-volatility organic vapours in the initial steps of atmospheric new particle formation. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 11223-11242.	1.9	262
102	EUCAARI ion spectrometer measurements at 12 European sites – analysis of new particle formation events. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 7907-7927.	1.9	248
103	Atmospheric nucleation: highlights of the EUCAARI project and future directions. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 10829-10848.	1.9	144
104	Atmospheric data over a solar cycle: no connection between galactic cosmic rays and new particle formation. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 1885-1898.	1.9	89
105	Factors influencing the contribution of ion-induced nucleation in a boreal forest, Finland. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 3743-3757.	1.9	48
106	Results from the CERN pilot CLOUD experiment. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 1635-1647.	1.9	96
107	Sub-10 nm particle growth by vapor condensation – effects of vapor molecule size and particle thermal speed. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 9773-9779.	1.9	149
108	Atmospheric nucleation and initial steps of particle growth: Numerical comparison of different theories and hypotheses. <i>Atmospheric Research</i> , 2010, 98, 229-236.	1.8	17

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109	Connection of Sulfuric Acid to Atmospheric Nucleation in Boreal Forest. <i>Environmental Science & Technology</i> , 2009, 43, 4715-4721.	4.6	84
110	Charged and total particle formation and growth rates during EUCAARI 2007 campaign in Hyytiälä. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 4077-4089.	1.9	104
111	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.	1.9	59
112	Sulfuric acid and OH concentrations in a boreal forest site. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 7435-7448.	1.9	348
113	Classifying previously undefined days from eleven years of aerosol-particle-size distribution data from the SMEAR II station, Hyytiälä, Finland. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 667-676.	1.9	40
114	Basic characteristics of atmospheric particles, trace gases and meteorology in a relatively clean Southern African Savannah environment. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 4823-4839.	1.9	86
115	Quiet New Particle Formation in the Atmosphere. <i>Frontiers in Environmental Science</i> , 0, 10, .	1.5	10