Michael Boy

List of Publications by Year
in descending order

85 papers	6,262 citations	87888 38 h-index	85541 71 g-index
91 all docs	91 docs citations	91 times ranked	4812 citing authors

#	Article	IF	Citations
1	Critical assessment of the current state of scientific knowledge, terminology, and research needs concerning the role of organic aerosols in the atmosphere, climate, and global change. Atmospheric Chemistry and Physics, 2006, 6, 2017-2038.	4.9	447
2	Atmospheric sulphuric acid and aerosol formation: implications from atmospheric measurements for nucleation and early growth mechanisms. Atmospheric Chemistry and Physics, 2006, 6, 4079-4091.	4.9	444
3	Sulfuric acid and OH concentrations in a boreal forest site. Atmospheric Chemistry and Physics, 2009, 9, 7435-7448.	4.9	348
4	A new feedback mechanism linking forests, aerosols, and climate. Atmospheric Chemistry and Physics, 2004, 4, 557-562.	4.9	337
5	A review of the anthropogenic influence on biogenic secondary organic aerosol. Atmospheric Chemistry and Physics, 2011, 11, 321-343.	4.9	297
6	A review of operational, regional-scale, chemical weather forecasting models in Europe. Atmospheric Chemistry and Physics, 2012, 12, 1-87.	4.9	265
7	Explaining global surface aerosol number concentrations in terms of primary emissions and particle formation. Atmospheric Chemistry and Physics, 2010, 10, 4775-4793.	4.9	212
8	Sulphuric acid closure and contribution to nucleation mode particle growth. Atmospheric Chemistry and Physics, 2005, 5, 863-878.	4.9	178
9	Nucleation events in the continental boundary layer: Influence of physical and meteorological parameters. Atmospheric Chemistry and Physics, 2002, 2, 1-16.	4.9	169
10	Air pollution control and decreasing new particle formation lead to strong climate warming. Atmospheric Chemistry and Physics, 2012, 12, 1515-1524.	4.9	150
11	Chemodiversity of a Scots pine stand and implications for terpene air concentrations. Biogeosciences, 2012, 9, 689-702.	3.3	137
12	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.	4.9	131
13	The contribution of sulphuric acid to atmospheric particle formation and growth: a comparison between boundary layers in Northern and Central Europe. Atmospheric Chemistry and Physics, 2005, 5, 1773-1785.	4.9	127
14	OH Reactivity Measurements within a Boreal Forest: Evidence for Unknown Reactive Emissions. Environmental Science & Technology, 2010, 44, 6614-6620.	10.0	127
15	A statistical proxy for sulphuric acid concentration. Atmospheric Chemistry and Physics, 2011, 11, 11319-11334.	4.9	124
16	Enhanced sulfate formation by nitrogen dioxide: Implications from in situ observations at the SORPES station. Journal of Geophysical Research D: Atmospheres, 2015, 120, 12679-12694.	3.3	122
17	Seasonal variation of CCN concentrations and aerosol activation properties in boreal forest. Atmospheric Chemistry and Physics, 2011, 11, 13269-13285.	4.9	121
18	The contribution of sulfuric acid and non-volatile compounds on the growth of freshly formed atmospheric aerosols. Geophysical Research Letters, 2005, 32, .	4.0	113

#	Article	IF	Citations
19	Aerosol size distribution and new particle formation in the western Yangtze River Delta of China: 2 years of measurements at the SORPES station. Atmospheric Chemistry and Physics, 2015, 15, 12445-12464.	4.9	112
20	The summertime Boreal forest field measurement intensive (HUMPPA-COPEC-2010): an overview of meteorological and chemical influences. Atmospheric Chemistry and Physics, 2011, 11, 10599-10618.	4.9	108
21	Modelling non-equilibrium secondary organic aerosol formation and evaporation with the aerosol dynamics, gas- and particle-phase chemistry kinetic multilayer model ADCHAM. Atmospheric Chemistry and Physics, 2014, 14, 7953-7993.	4.9	100
22	Î±-Pinene Autoxidation Products May Not Have Extremely Low Saturation Vapor Pressures Despite High O:C Ratios. Journal of Physical Chemistry A, 2016, 120, 2569-2582.	2.5	95
23	The role of highly oxygenated organic molecules in the Boreal aerosol-cloud-climate system. Nature Communications, 2019, 10, 4370.	12.8	91
24	SOSA â€“ a new model to simulate the concentrations of organic vapours and sulphuric acid inside the ABL â€“ Part 1: Model description and initial evaluation. Atmospheric Chemistry and Physics, 2011, 11, 43-51.	4.9	86
25	New particle formation in the Front Range of the Colorado Rocky Mountains. Atmospheric Chemistry and Physics, 2008, 8, 1577-1590.	4.9	83
26	Evaluation on the role of sulfuric acid in the mechanisms of new particle formation for Beijing case. Atmospheric Chemistry and Physics, 2011, 11, 12663-12671.	4.9	75
27	MALTE â€“ model to predict new aerosol formation in the lower troposphere. Atmospheric Chemistry and Physics, 2006, 6, 4499-4517.	4.9	73
28	BVOC-aerosol-climate interactions in the global aerosol-climate model ECHAM5.5-HAM2. Atmospheric Chemistry and Physics, 2012, 12, 10077-10096.	4.9	73
29	Modelling atmospheric OH-reactivity in a boreal forest ecosystem. Atmospheric Chemistry and Physics, 2011, 11, 9709-9719.	4.9	69
30	Nucleation events in the continental boundary layer: Long-term statistical analyses of aerosol relevant characteristics. Journal of Geophysical Research, 2003, 108, .	3.3	61
31	Simulations of atmospheric OH, O₃ and NO₃ reactivities within and above the boreal forest. Atmospheric Chemistry and Physics, 2015, 15, 3909-3932.	4.9	57
32	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.	4.9	56
33	Applying the Condensation Particle Counter Battery (CPCB) to study the water-affinity of freshly-formed 2â€“9 nm particles in boreal forest. Atmospheric Chemistry and Physics, 2009, 9, 3317-3330.	4.9	56
34	Connection of organics to atmospheric new particle formation and growth at an urban site of Beijing. Atmospheric Environment, 2015, 103, 7-17.	4.1	53
35	Observations on nocturnal growth of atmospheric clusters. Tellus, Series B: Chemical and Physical Meteorology, 2022, 60, 365.	1.6	51
36	Interaction between SO2 and submicron atmospheric particles. Atmospheric Research, 2000, 54, 41-57.	4.1	49

#	Article	IF	Citations
37	Factors influencing the contribution of ion-induced nucleation in a boreal forest, Finland. Atmospheric Chemistry and Physics, 2010, 10, 3743-3757.	4.9	48
38	Comprehensive modelling study on observed new particle formation at the SORPES station in Nanjing, China. Atmospheric Chemistry and Physics, 2016, 16, 2477-2492.	4.9	47
39	The role of sulphates and organic vapours in growth of newly formed particles in a eucalypt forest. Atmospheric Chemistry and Physics, 2010, 10, 2919-2926.	4.9	45
40	New insights into nocturnal nucleation. Atmospheric Chemistry and Physics, 2012, 12, 4297-4312.	4.9	45
41	Simulating ozone dry deposition at a boreal forest with a multi-layer canopy deposition model. Atmospheric Chemistry and Physics, 2017, 17, 1361-1379.	4.9	42
42	Interactions between the atmosphere, cryosphere, and ecosystems at northern high latitudes. Atmospheric Chemistry and Physics, 2019, 19, 2015-2061.	4.9	42
43	The simulations of sulfuric acid concentration and new particle formation in an urban atmosphere in China. Atmospheric Chemistry and Physics, 2013, 13, 11157-11167.	4.9	39
44	Semi-volatile and highly oxygenated gaseous and particulate organic compounds observed above a boreal forest canopy. Atmospheric Chemistry and Physics, 2018, 18, 11547-11562.	4.9	39
45	Effects of air masses and synoptic weather on aerosol formation in the continental boundary layer. Tellus, Series B: Chemical and Physical Meteorology, 2001, 53, 462-478.	1.6	38
46	Global stratospheric distribution of halocarbons. Atmospheric Environment, 1996, 30, 1787-1796.	4.1	36
47	High upward fluxes of formic acid from a boreal forest canopy. Geophysical Research Letters, 2016, 43, 9342-9351.	4.0	36
48	Relevance of ion-induced nucleation of sulfuric acid and water in the lower troposphere over the boreal forest at northern latitudes. Atmospheric Research, 2008, 90, 151-158.	4.1	35
49	Development and evaluation of the aerosol dynamics and gas phase chemistry model ADCHEM. Atmospheric Chemistry and Physics, 2011, 11, 5867-5896.	4.9	35
50	Mitigation Impact of Different Harvest Scenarios of Finnish Forests That Account for Albedo, Aerosols, and Trade-Offs of Carbon Sequestration and Avoided Emissions. Frontiers in Forests and Global Change, 2020, 3, .	2.3	32
51	Particle concentration and flux dynamics in the atmospheric boundary layer as the indicator of formation mechanism. Atmospheric Chemistry and Physics, 2011, 11, 5591-5601.	4.9	31
52	Comparing three vegetation monoterpene emission models to measured gas concentrations with a model of meteorology, air chemistry and chemical transport. Biogeosciences, 2014, 11, 5425-5443.	3.3	30
53	Formation and growth of atmospheric nanoparticles in the eastern Mediterranean: results from long-term measurements and process simulations. Atmospheric Chemistry and Physics, 2019, 19, 2671-2686.	4.9	30
54	Modeling the role of highly oxidized multifunctional organicÂmolecules for the growth of new particles overÂtheÂborealÂforestÂregion. Atmospheric Chemistry and Physics, 2017, 17, 8887-8901.	4.9	29

#	Article	IF	Citations
55	Modelling studies of HOMs and their contributions to new particle formation and growth: comparison of boreal forest in Finland and a polluted environment in China. Atmospheric Chemistry and Physics, 2018, 18, 11779-11791.	4.9	29
56	Ambient sesquiterpene concentration and its link to air ion measurements. Atmospheric Chemistry and Physics, 2007, 7, 2893-2916.	4.9	27
57	The part of the solar spectrum with the highest influence on the formation of SOA in the continental boundary layer. Atmospheric Chemistry and Physics, 2002, 2, 375-386.	4.9	25
58	A new parametrization for ambient particle formation over coniferous forests and its potential implications for the future. Atmospheric Chemistry and Physics, 2009, 9, 8079-8090.	4.9	25
59	Aerosol dynamics simulations on the connection of sulphuric acid and new particle formation. Atmospheric Chemistry and Physics, 2009, 9, 2933-2947.	4.9	25
60	Aerosol mass yields of selected biogenic volatile organic compounds â€" a theoretical study with nearly explicit gas-phase chemistry. Atmospheric Chemistry and Physics, 2019, 19, 13741-13758.	4.9	21
61	Modelling the contribution of biogenic volatile organic compounds to new particle formation in the JÃ¼lich plant atmosphere chamber. Atmospheric Chemistry and Physics, 2015, 15, 10777-10798.	4.9	19
62	Temperature influence on the natural aerosol budget over boreal forests. Atmospheric Chemistry and Physics, 2014, 14, 8295-8308.	4.9	18
63	Boreal forest BVOC exchange: emissions versus in-canopy sinks. Atmospheric Chemistry and Physics, 2017, 17, 14309-14332.	4.9	18
64	Atmospheric nucleation and initial steps of particle growth: Numerical comparison of different theories and hypotheses. Atmospheric Research, 2010, 98, 229-236.	4.1	17
65	Long-term total OH reactivity measurements in a boreal forest. Atmospheric Chemistry and Physics, 2019, 19, 14431-14453.	4.9	16
66	Chemistry of new particle formation and growth events during wintertime in suburban area of Beijing: Insights from highly polluted atmosphere. Atmospheric Research, 2021, 255, 105553.	4.1	16
67	Molecular Composition of Oxygenated Organic Molecules and Their Contributions to Organic Aerosol in Beijing. Environmental Science & Technology, 2022, 56, 770-778.	10.0	16
68	Contribution from biogenic organic compounds to particle growth during the 2010 BEACHON-ROCS campaign in a Colorado temperate needleleaf forest. Atmospheric Chemistry and Physics, 2015, 15, 8643-8656.	4.9	15
69	Large methane releases lead to strong aerosol forcing and reduced cloudiness. Atmospheric Chemistry and Physics, 2011, 11, 6961-6969.	4.9	14
70	Aerosol dynamics within and above forest in relation to turbulent transport and dry deposition. Atmospheric Chemistry and Physics, 2016, 16, 3145-3160.	4.9	14
71	Biogenic SOA formation through gas-phase oxidation and gas-to-particle partitioning â€" a comparison between process models of varying complexity. Atmospheric Chemistry and Physics, 2014, 14, 11853-11869.	4.9	12
72	Evaporation of sulfate aerosols at low relative humidity. Atmospheric Chemistry and Physics, 2017, 17, 8923-8938.	4.9	11

#	Article	IF	Citations
73	Aerosol dynamics simulations of the anatomical variability of e-cigarette particle and vapor deposition in a stochastic lung. Journal of Aerosol Science, 2021, 158, 105706.	3.8	9
74	Overview: Recent advances in the understanding of the northern Eurasian environments and of the urban air quality in China â€“ a Pan-Eurasian Experiment (PEEX) programme perspective. Atmospheric Chemistry and Physics, 2022, 22, 4413-4469.	4.9	9
75	Newâ€particle formation in connection with a nocturnal lowâ€level jet: Observations and modeling results. Geophysical Research Letters, 2007, 34, .	4.0	7
76	Modelling new particle formation events in the South African savannah. South African Journal of Science, 2014, 110, 12.	0.7	4
77	A study of aerosol activation at the cloud edge with high resolution numerical simulations. Atmospheric Research, 2015, 153, 49-58.	4.1	4
78	Relevance of Several Nucleation Theories in Different Environments. , 2007, , 87-91.		4
79	MECCO: A method to estimate concentrations of condensing organicsâ€"Description and evaluation of a Markov chain Monte Carlo application. Journal of Aerosol Science, 2010, 41, 1080-1089.	3.8	3
80	Comparison of formation conditions of secondary aerosol particles in boreal forests of Southern Finland and Siberia. Russian Journal of Earth Sciences, 2010, 11, 1-11.	0.7	2
81	A modelling study of OH, NO₃ and H₂SO₄ in 2007â€“2018 at SMEAR II, Finland: analysis of long-term trends. Environmental Science Atmospheres, 2021, 1, 449-472.	2.4	1
82	PHOTO STATIONARY CALCULATIONS OF SULPHURIC ACID AND ITS CONTRIBUTION TO NUCLEATION MODE PARTICLE GROWTH. Journal of Aerosol Science, 2004, 35, S1231-S1232.	3.8	0
83	Modelling new particle formation from JuÌˆlich plant atmosphere chamber and CERN CLOUD chamber measurements. , 2013, , .		0
84	Comment on "Observation and modelling of HO_x radicals in a boreal forest" by Hens et al. (2014). Atmospheric Chemistry and Physics, 2015, 15, 3109-3110.	4.9	0
85	A DNS study of aerosol and small-scale cloud turbulence interaction. Atmospheric Chemistry and Physics, 2016, 16, 7889-7898.	4.9	0