

Jonathan Duplissy

List of Publications by Year in descending order

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120
papers

15,733
citations

50276

46
h-index

29157

104
g-index

171
all docs

171
docs citations

171
times ranked

7418
citing authors

#	ARTICLE	IF	CITATIONS
1	Evolution of Organic Aerosols in the Atmosphere. <i>Science</i> , 2009, 326, 1525-1529.	12.6	3,374
2	O/C and OM/OC Ratios of Primary, Secondary, and Ambient Organic Aerosols with High-Resolution Time-of-Flight Aerosol Mass Spectrometry. <i>Environmental Science & Technology</i> , 2008, 42, 4478-4485.	10.0	1,524
3	Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation. <i>Nature</i> , 2011, 476, 429-433.	27.8	1,114
4	Direct Observations of Atmospheric Aerosol Nucleation. <i>Science</i> , 2013, 339, 943-946.	12.6	876
5	Molecular understanding of sulphuric acid–amine particle nucleation in the atmosphere. <i>Nature</i> , 2013, 502, 359-363.	27.8	774
6	The role of low-volatility organic compounds in initial particle growth in the atmosphere. <i>Nature</i> , 2016, 533, 527-531.	27.8	540
7	Ion-induced nucleation of pure biogenic particles. <i>Nature</i> , 2016, 533, 521-526.	27.8	528
8	Oxidation Products of Biogenic Emissions Contribute to Nucleation of Atmospheric Particles. <i>Science</i> , 2014, 344, 717-721.	12.6	456
9	Evidence for the role of organics in aerosol particle formation under atmospheric conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 6646-6651.	7.1	403
10	New particle formation in the free troposphere: A question of chemistry and timing. <i>Science</i> , 2016, 352, 1109-1112.	12.6	348
11	Relating hygroscopicity and composition of organic aerosol particulate matter. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1155-1165.	4.9	326
12	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
13	Global atmospheric particle formation from CERN CLOUD measurements. <i>Science</i> , 2016, 354, 1119-1124.	12.6	289
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	Rapid growth of new atmospheric particles by nitric acid and ammonia condensation. <i>Nature</i> , 2020, 581, 184-189.	27.8	169
17	Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors. <i>Science Advances</i> , 2018, 4, eaau5363.	10.3	164
18	Laboratory observation of oligomers in the aerosol from isoprene/NO _x photooxidation. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	152

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19	Cloud forming potential of secondary organic aerosol under near atmospheric conditions. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	145
20	Intercomparison study of six HTDMAs: results and recommendations. <i>Atmospheric Measurement Techniques</i> , 2009, 2, 363-378.	3.1	125
21	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
22	Analysis of the hygroscopic and volatile properties of ammonium sulphate seeded and unseeded SOA particles. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 721-732.	4.9	118
23	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
24	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
25	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
26	Gas/particle partitioning of carbonyls in the photooxidation of isoprene and 1,3,5-trimethylbenzene. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 3215-3230.	4.9	101
27	Hygroscopicity of the submicrometer aerosol at the high-alpine site Jungfrauoch, 3580 m a.s.l., Switzerland. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 5715-5729.	4.9	100
28	Real-Time Measurement of Oligomeric Species in Secondary Organic Aerosol with the Aerosol Time-of-Flight Mass Spectrometer. <i>Analytical Chemistry</i> , 2006, 78, 2130-2137.	6.5	99
29	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
30	Results from the CERN pilot CLOUD experiment. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 1635-1647.	4.9	96
31	Combined Determination of the Chemical Composition and of Health Effects of Secondary Organic Aerosols: The POLYSOA Project. <i>Journal of Aerosol Medicine and Pulmonary Drug Delivery</i> , 2008, 21, 145-154.	1.4	95
32	Role of iodine oxoacids in atmospheric aerosol nucleation. <i>Science</i> , 2021, 371, 589-595.	12.6	94
33	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
34	Gas phase precursors to anthropogenic secondary organic aerosol: detailed observations of 1,3,5-trimethylbenzene photooxidation. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 635-665.	4.9	88
35	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
36	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

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37	Heterogeneous ice nucleation of viscous secondary organic aerosol produced from ozonolysis of α -pinene. Atmospheric Chemistry and Physics, 2016, 16, 6495-6509.	4.9	71
38	Molecular understanding of new-particle formation from α -pinene between -50 and $+25$ °C. Atmospheric Chemistry and Physics, 2020, 20, 9183-9207.	4.9	68
39	Photo-oxidation of Aromatic Hydrocarbons Produces Low-Volatility Organic Compounds. Environmental Science & Technology, 2020, 54, 7911-7921.	10.0	66
40	Size-dependent influence of NO _x on the growth rates of organic aerosol particles. Science Advances, 2020, 6, eaay4945.	10.3	61
41	Widening the gap between measurement and modelling of secondary organic aerosol properties?. Atmospheric Chemistry and Physics, 2010, 10, 2577-2593.	4.9	60
42	Influence of gas-to-particle partitioning on the hygroscopic and droplet activation behaviour of α -pinene secondary organic aerosol. Physical Chemistry Chemical Physics, 2009, 11, 8091.	2.8	59
43	Enhanced growth rate of atmospheric particles from sulfuric acid. Atmospheric Chemistry and Physics, 2020, 20, 7359-7372.	4.9	58
44	Evaluation of 1,3,5 trimethylbenzene degradation in the detailed tropospheric chemistry mechanism, MCMv3.1, using environmental chamber data. Atmospheric Chemistry and Physics, 2008, 8, 6453-6468.	4.9	57
45	Influence of temperature on the molecular composition of ions and charged clusters during pure biogenic nucleation. Atmospheric Chemistry and Physics, 2018, 18, 65-79.	4.9	56
46	Observation of viscosity transition in α -pinene secondary organic aerosol. Atmospheric Chemistry and Physics, 2016, 16, 4423-4438.	4.9	55
47	Formation of Highly Oxygenated Organic Molecules from α -Pinene Ozonolysis: Chemical Characteristics, Mechanism, and Kinetic Model Development. ACS Earth and Space Chemistry, 2019, 3, 873-883.	2.7	52
48	Insight into Acid-Base Nucleation Experiments by Comparison of the Chemical Composition of Positive, Negative, and Neutral Clusters. Environmental Science & Technology, 2014, 48, 13675-13684.	10.0	51
49	The role of ions in new particle formation in the CLOUD chamber. Atmospheric Chemistry and Physics, 2017, 17, 15181-15197.	4.9	50
50	Formation and growth of sub-3-nm aerosol particles in experimental chambers. Nature Protocols, 2020, 15, 1013-1040.	12.0	49
51	Molecular understanding of the suppression of new-particle formation by isoprene. Atmospheric Chemistry and Physics, 2020, 20, 11809-11821.	4.9	49
52	Aqueous phase oxidation of sulphur dioxide by ozone in cloud droplets. Atmospheric Chemistry and Physics, 2016, 16, 1693-1712.	4.9	47
53	Experimental investigation of ion-ion recombination under atmospheric conditions. Atmospheric Chemistry and Physics, 2015, 15, 7203-7216.	4.9	46
54	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

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55	A fibre-optic UV system for H ₂ SO ₄ production in aerosol chambers causing minimal thermal effects. <i>Journal of Aerosol Science</i> , 2011, 42, 532-543.	3.8	44
56	Numerical simulations of mixing conditions and aerosol dynamics in the CERN CLOUD chamber. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 2205-2214.	4.9	44
57	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
58	Interactions between the atmosphere, cryosphere, and ecosystems at northern high latitudes. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 2015-2061.	4.9	42
59	Characterisation of organic contaminants in the CLOUD chamber at CERN. <i>Atmospheric Measurement Techniques</i> , 2014, 7, 2159-2168.	3.1	41
60	Estimates of global dew collection potential on artificial surfaces. <i>Hydrology and Earth System Sciences</i> , 2015, 19, 601-613.	4.9	40
61	Using Proton Transfer Reaction Mass Spectrometry for Online Analysis of Secondary Organic Aerosols. <i>Environmental Science & Technology</i> , 2008, 42, 7347-7353.	10.0	38
62	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
63	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
64	Effect of ions on sulfuric acid-water binary particle formation: 1. Theory for kinetic and nucleation-type particle formation and atmospheric implications. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 1736-1751.	3.3	34
65	Evolution of particle composition in CLOUD nucleation experiments. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 5587-5600.	4.9	33
66	Molecular Composition and Volatility of Nucleated Particles from α -Pinene Oxidation between ~ 50 $^{\circ}\text{C}$ and $+25$ $^{\circ}\text{C}$. <i>Environmental Science & Technology</i> , 2019, 53, 12357-12365.	10.0	32
67	The seasonal cycle of ice-nucleating particles linked to the abundance of biogenic aerosol in boreal forests. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 3899-3918.	4.9	31
68	Determination of the Aerosol Yield of Isoprene in the Presence of an Organic Seed with Carbon Isotope Analysis. <i>Environmental Science & Technology</i> , 2009, 43, 6697-6702.	10.0	30
69	Hygroscopicity of nanoparticles produced from homogeneous nucleation in the CLOUD experiments. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 293-304.	4.9	29
70	Solar eclipse demonstrating the importance of photochemistry in new particle formation. <i>Scientific Reports</i> , 2017, 7, 45707.	3.3	29
71	Thermodynamics of the formation of sulfuric acid dimers in the binary (H ₂ O) ₂ /SO ₂ and ternary (H ₂ O) ₂ /SO ₂ /H ₂ O system. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 10701-10721.	4.9	27
72	New Parameterizations for Neutral and Ion-Induced Sulfuric Acid-Water Particle Formation in Nucleation and Kinetic Regimes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 1269-1296.	3.3	26

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73	Synergistic HNO ₃ -H ₂ SO ₄ -NH ₃ upper tropospheric particle formation. <i>Nature</i> , 2022, 605, 483-489.	27.8	26
74	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
75	Measurement-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
76	Aerosol distribution in the northern Gulf of Guinea: local anthropogenic sources, long-range transport, and the role of coastal shallow circulations. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 12363-12389.	4.9	21
77	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.	4.9	18
78	Evidence of New Particle Formation Within Etna and Stromboli Volcanic Plumes and Its Parameterization From Airborne In Situ Measurements. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 5650-5668.	3.3	18
79	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
80	Elemental composition and clustering behaviour of α -pinene oxidation products for different oxidation conditions. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 4145-4159.	4.9	17
81	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
82	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
83	Estimates of the organic aerosol volatility in a boreal forest using two independent methods. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 4387-4399.	4.9	14
84	Combined Determination of the Chemical Composition and of Health Effects of Secondary Organic Aerosols: The POLYSOA Project. <i>Journal of Aerosol Medicine and Pulmonary Drug Delivery</i> , 2008, .	1.2	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	Comparison of surface foil materials and dew collectors location in an arid area: a one-year field experiment in Kenya. <i>Agricultural and Forest Meteorology</i> , 2019, 276-277, 107613.	4.8	13
87	Chemical composition of nanoparticles from α -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
88	Technical Note: Using DEG-CPCs at upper tropospheric temperatures. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 7547-7555.	4.9	11
89	Phase transition observations and discrimination of small cloud particles by light polarization in expansion chamber experiments. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 3651-3664.	4.9	11
90	Chemical investigation and quality of urban dew collections with dust precipitates. <i>Environmental Science and Pollution Research</i> , 2017, 24, 12312-12318.	5.3	11

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91	Evaporation of sulfate aerosols at low relative humidity. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 8923-8938.	4.9	11
92	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
93	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
94	Ice nucleation by viruses and their potential for cloud glaciation. <i>Biogeosciences</i> , 2021, 18, 4431-4444.	3.3	10
95	Overview: Recent advances in the understanding of the northern Eurasian environments and of the urban air quality in China – a Pan-Eurasian Experiment (PEEX) programme perspective. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 4413-4469.	4.9	9
96	Modelling the gas–particle partitioning and water uptake of isoprene-derived secondary organic aerosol at high and low relative humidity. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 215-244.	4.9	8
97	Survival of newly formed particles in haze conditions. <i>Environmental Science Atmospheres</i> , 2022, 2, 491-499.	2.4	8
98	Measurement report: Atmospheric new particle formation in a coastal agricultural site explained with binPMF analysis of nitrate CI-API-TOF spectra. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 8097-8115.	4.9	8
99	Comparing plastic foils for dew collection: Preparatory laboratory-scale method and field experiment in Kenya. <i>Biosystems Engineering</i> , 2020, 196, 145-158.	4.3	7
100	Spatial and Temporal Investigation of Dew Potential based on Long-Term Model Simulations in Iran. <i>Water (Switzerland)</i> , 2019, 11, 2463.	2.7	5
101	Diurnal evolution of negative atmospheric ions above the boreal forest: from ground level to the free troposphere. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 8547-8577.	4.9	5
102	An ultra-pure gas system for the CLOUD experiment at CERN. , 2012, , .		4
103	Intercomparison study and optical asphericity measurements of small ice particles in the CERN CLOUD experiment. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 3231-3248.	3.1	4
104	Measurement report: Introduction to the HyICE-2018 campaign for measurements of ice-nucleating particles and instrument inter-comparison in the Hyytiälä boreal forest. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 5117-5145.	4.9	4
105	Investigation of several proxies to estimate sulfuric acid concentration under volcanic plume conditions. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 4541-4560.	4.9	3
106	Cluster measurements at CLOUD using a high resolution ion mobility spectrometer-mass spectrometer combination. , 2013, , .		1
107	Evolution of nanoparticle composition in CLOUD in presence of sulphuric acid, ammonia and organics. , 2013, , .		1
108	Molecular steps of neutral sulfuric acid and dimethylamine nucleation in CLOUD. , 2013, , .		1

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109	Ternary H ₂ SO ₄ -H ₂ O-NH ₃ neutral and charged nucleation rates for a wide range of atmospheric conditions. , 2013, , .		0
110	Contribution of oxidized organic compounds to nanoparticle growth. , 2013, , .		0
111	Measuring composition and growth of ion clusters of sulfuric acid, ammonia, amines and oxidized organics as first steps of nucleation in the CLOUD experiment. , 2013, , .		0
112	Charged and neutral binary nucleation of sulfuric acid in free troposphere conditions. , 2013, , .		0
113	Particle nucleation events at the high Alpine station Jungfraujoch. , 2013, , .		0
114	Measurements of cluster ions using a nano radial DMA and a particle size magnifier in CLOUD. , 2013, , .		0
115	How do amines affect the growth of recently formed aerosol particles. , 2013, , .		0
116	Nucleation of H ₂ SO ₄ and oxidized organics in CLOUD experiment. , 2013, , .		0
117	Evolution of α -pinene oxidation products in the presence of varying oxidizers: Negative API-TOF point of view. , 2013, , .		0
118	Evolution of alpha-pinene oxidation products in the presence of varying oxidizers: CI-API-TOF point of view. , 2013, , .		0
119	Development of the gas system for the CLOUD experiment at CERN. , 2013, , .		0
120	Aerosol Formation from Isoprene: Determination of Particle Nucleation and Growth Rates. , 2007, , 989-993.		0