Paul Martin Winkler

List of Publications by Year
in descending order

68 papers	5,821 citations	147566 31 h-index	118652 62 g-index
74 all docs	74 docs citations	74 times ranked	4512 citing authors

#	Article	IF	Citations
1	Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation. Nature, 2011, 476, 429-433.	13.7	1,114
2	The role of low-volatility organic compounds in initial particle growth in the atmosphere. Nature, 2016, 533, 527-531.	13.7	540
3	Ion-induced nucleation of pure biogenic particles. Nature, 2016, 533, 521-526.	13.7	528
4	Global atmospheric particle formation from CERN CLOUD measurements. Science, 2016, 354, 1119-1124.	6.0	289
5	On Quantitative Determination of Volatile Organic Compound Concentrations Using Proton Transfer Reaction Time-of-Flight Mass Spectrometry. Environmental Science & Technology, 2012, 46, 2283-2290.	4.6	264
6	Heterogeneous Nucleation Experiments Bridging the Scale from Molecular Ion Clusters to Nanoparticles. Science, 2008, 319, 1374-1377.	6.0	232
7	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
8	Causes and importance of new particle formation in the presentâ€day and preindustrial atmospheres. Journal of Geophysical Research D: Atmospheres, 2017, 122, 8739-8760.	1.2	198
9	Secondary Organic Aerosol Formation and Organic Nitrate Yield from NO₃ Oxidation of Biogenic Hydrocarbons. Environmental Science & Technology, 2014, 48, 11944-11953.	4.6	178
10	Rapid growth of new atmospheric particles by nitric acid and ammonia condensation. Nature, 2020, 581, 184-189.	13.7	169
11	Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors. Science Advances, 2018, 4, eaau5363.	4.7	164
12	The condensation particle counter battery (CPCB): A new tool to investigate the activation properties of nanoparticles. Journal of Aerosol Science, 2007, 38, 289-304.	1.8	145
13	Rapid growth of organic aerosol nanoparticles over a wide tropospheric temperature range. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9122-9127.	3.3	118
14	The effect of acidâ€“base clustering and ions on the growth of atmospheric nano-particles. Nature Communications, 2016, 7, 11594.	5.8	116
15	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
16	Mass and Thermal Accommodation during Gas-Liquid Condensation of Water. Physical Review Letters, 2004, 93, 075701.	2.9	105
17	Role of iodine oxoacids in atmospheric aerosol nucleation. Science, 2021, 371, 589-595.	6.0	94
18	Near-Unity Mass Accommodation Coefficient of Organic Molecules of Varying Structure. Environmental Science & Technology, 2014, 48, 12083-12089.	4.6	75

#	Article	IF	Citations
19	BAECC: A Field Campaign to Elucidate the Impact of Biogenic Aerosols on Clouds and Climate. Bulletin of the American Meteorological Society, 2016, 97, 1909-1928.	1.7	71
20	Molecular understanding of new-particle formation from <i>Î±</i>-pinene between âˆ’50 and +25â€‰Â°C. Atmospheric Chemistry and Physics, 2020, 20, 9183-9207.	1.9	68
21	Photo-oxidation of Aromatic Hydrocarbons Produces Low-Volatility Organic Compounds. Environmental Science & Technology, 2020, 54, 7911-7921.	4.6	66
22	Identification of the biogenic compounds responsible for sizeâ€dependent nanoparticle growth. Geophysical Research Letters, 2012, 39, .	1.5	61
23	Enhanced growth rate of atmospheric particles from sulfuric acid. Atmospheric Chemistry and Physics, 2020, 20, 7359-7372.	1.9	58
24	Influence of temperature on the molecular composition of ions and charged clusters during pure biogenic nucleation. Atmospheric Chemistry and Physics, 2018, 18, 65-79.	1.9	56
25	Observation of viscosity transition in <i>Î±</i>-pinene secondary organic aerosol. Atmospheric Chemistry and Physics, 2016, 16, 4423-4438.	1.9	55
26	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
27	The role of ions in new particle formation in the CLOUD chamber. Atmospheric Chemistry and Physics, 2017, 17, 15181-15197.	1.9	50
28	Molecular understanding of the suppression of new-particle formation by isoprene. Atmospheric Chemistry and Physics, 2020, 20, 11809-11821.	1.9	49
29	A DMA-train for precision measurement of sub-10â€¯nm aerosol dynamics. Atmospheric Measurement Techniques, 2017, 10, 1639-1651.	1.2	46
30	The driving factors of new particle formation and growth in the polluted boundary layer. Atmospheric Chemistry and Physics, 2021, 21, 14275-14291.	1.9	38
31	Molecular Composition and Volatility of Nucleated Particles from Î±-Pinene Oxidation between âˆ’50 Â°C and +25 Â°C. Environmental Science & Technology, 2019, 53, 12357-12365.	4.6	32
32	In-situ aerosol nanoparticle characterization by small angle X-ray scattering at ultra-low volume fraction. Nature Communications, 2019, 10, 1122.	5.8	29
33	Resolving nanoparticle growth mechanisms from size- and time-dependent growth rate analysis. Atmospheric Chemistry and Physics, 2018, 18, 1307-1323.	1.9	28
34	Heterogeneous Nucleation onto Monoatomic Ions: Support for the Kelvinâ€Thomson Theory. ChemPhysChem, 2018, 19, 3144-3149.	1.0	27
35	Heterogeneous multicomponent nucleation theorems for the analysis of nanoclusters. Journal of Chemical Physics, 2007, 126, 174707.	1.2	26
36	Quantitative Characterization of Critical Nanoclusters Nucleated on Large Single Molecules. Physical Review Letters, 2012, 108, 085701.	2.9	26

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37	Synergistic HNO3â€"H2SO4â€"NH3 upper tropospheric particle formation. Nature, 2022, 605, 483-489.	13.7	26
38	Unexpectedly acidic nanoparticles formed in dimethylamineâ€"ammoniaâ€"sulfuric-acid nucleation experiments at CLOUD. Atmospheric Chemistry and Physics, 2016, 16, 13601-13618.	1.9	24
39	Counting on chemistry: laboratory evaluation of seed-material-dependent detection efficiencies of ultrafine condensation particle counters. Atmospheric Measurement Techniques, 2020, 13, 3787-3798.	1.2	23
40	Condensation particle counting below 2Ânm seed particle diameter and the transition from heterogeneous to homogeneous nucleation. Atmospheric Research, 2008, 90, 125-131.	1.8	21
41	Effects of seed particle size and composition on heterogeneous nucleation of n-nonane. Atmospheric Research, 2008, 90, 187-194.	1.8	21
42	Unusual Temperature Dependence of Heterogeneous Nucleation of Water Vapor on Ag Particles. Aerosol Science and Technology, 2013, 47, i-iv.	1.5	18
43	Determination of the collision rate coefficient between charged iodic acid clusters and iodic acid using the appearance time method. Aerosol Science and Technology, 2021, 55, 231-242.	1.5	18
44	Robust metric for quantifying the importance of stochastic effects on nanoparticle growth. Scientific Reports, 2018, 8, 14160.	1.6	17
45	Experiments on the Temperature Dependence of Heterogeneous Nucleation on Nanometerâ€Sized NaCl and Ag Particles. ChemPhysChem, 2010, 11, 3874-3882.	1.0	15
46	Humidity effects on the detection of soluble and insoluble nanoparticles in butanol operated condensation particle counters. Atmospheric Measurement Techniques, 2019, 12, 3659-3671.	1.2	14
47	Precision characterization of three ultrafine condensation particle counters using singly charged salt clusters in the 1â€"4â€‰nm size range generated by a bipolar electrospray source. Aerosol Science and Technology, 2020, 54, 396-409.	1.5	13
48	Overview of the biosphere-aerosol-cloud-climate interactions (BACCI) studies. Tellus, Series B: Chemical and Physical Meteorology, 2008, 60, 300-317.	0.8	12
49	New particle formation and sub-10â€‰nm size distribution measurements during the A-LIFE field experiment in Paphos, Cyprus. Atmospheric Chemistry and Physics, 2020, 20, 5645-5656.	1.9	12
50	Chemical composition of nanoparticles from <i>Î±</i>-pinene nucleation and the influence of isoprene and relative humidity at low temperature. Atmospheric Chemistry and Physics, 2021, 21, 17099-17114.	1.9	12
51	Light scattering from droplets with inclusions and the impact on optical measurement of aerosols. Journal of Aerosol Science, 2004, 35, 1173-1188.	1.8	10
52	Molecular characterization of ultrafine particles using extractive electrospray time-of-flight mass spectrometry. Environmental Science Atmospheres, 2021, 1, 434-448.	0.9	10
53	Characterization techniques for heterogeneous nucleation from the gas phase. Journal of Aerosol Science, 2022, 159, 105875.	1.8	10
54	Towards a concentration closure of sub-6 nm aerosol particles and sub-3 nm atmospheric clusters. Journal of Aerosol Science, 2022, 159, 105878.	1.8	9

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55	Temperature Dependence in Heterogeneous Nucleation with Application to the Direct Determination of Cluster Energy on Nearly Molecular Scale. Scientific Reports, 2017, 7, 16896.	1.6	8
56	Survival of newly formed particles in haze conditions. Environmental Science Atmospheres, 2022, 2, 491-499.	0.9	8
57	The versatile size analyzing nuclei counter (vSANC). Aerosol Science and Technology, 2016, 50, 947-958.	1.5	7
58	Unary and Binary Heterogeneous Nucleation of Organic Vapors on Monodisperse WO_xSeed Particles with Diameters Down to 1.4 nm. Aerosol Science and Technology, 2011, 45, 493-498.	1.5	5
59	A unifying identity for the work of cluster formation in heterogeneous and homogeneous nucleation theory. Journal of Chemical Physics, 2018, 149, 084702.	1.2	4
60	Development of an ultraviolet constant angle Mie scattering detector toward the determination of aerosol growth kinetics in the transition and free molecular regime. Aerosol Science and Technology, 2020, 54, 917-928.	1.5	4
61	Size characterization and detection of aerosolized nanoplastics originating from evaporated thermoplastics. Aerosol Science and Technology, 2022, 56, 176-185.	1.5	4
62	A fast-scanning DMA train for precision quantification of early nanoparticle growth. , 2013, , .		3
63	Characterization of a non-thermal plasma source for use as a mass specrometric calibration tool and non-radioactive aerosol charger. Atmospheric Measurement Techniques, 2020, 13, 5993-6006.	1.2	3
64	Temperature dependence of heterogeneous nucleation of water vapor on Ag and NaCl particles. , 2013, , .		2
65	The versatile size analyzing nuclei counter-vSANC. , 2013, , .		0
66	Particle composition measurements during CLOUD7. , 2013, , .		0
67	Condensational Growth of n-Propanol and n-Nonane Droplets: Experiments and Model Calculations. , 2007, , 1028-1032.		0
68	A high-transmission axial ion mobility classifier for massâ€“mobility measurements of atmospheric ions. Atmospheric Measurement Techniques, 2022, 15, 3705-3720.	1.2	0