Robert Wagner

List of Publications by Year
in descending order

66 papers	4,373 citations	136950 32 h-index	118850 62 g-index
88 all docs	88 docs citations	88 times ranked	3944 citing authors

#	Article	IF	Citations
1	Synergistic HNO3â€“H2SO4â€“NH3 upper tropospheric particle formation. Nature, 2022, 605, 483-489.	27.8	26
2	High-resolution optical constants of crystalline ammonium nitrate for infrared remote sensing of the Asian Tropopause Aerosol Layer. Atmospheric Measurement Techniques, 2021, 14, 1977-1991.	3.1	3
3	Ice nucleation ability of ammonium sulfate aerosol particles internally mixed with secondary organics. Atmospheric Chemistry and Physics, 2021, 21, 10779-10798.	4.9	9
4	The Influence of Chemical and Mineral Compositions on the Parameterization of Immersion Freezing by Volcanic Ash Particles. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033356.	3.3	6
5	High homogeneous freezing onsets of sulfuric acid aerosol at cirrus temperatures. Atmospheric Chemistry and Physics, 2021, 21, 14403-14425.	4.9	16
6	Heterogeneous ice nucleation ability of aerosol particles generated from Arctic sea surface microlayer and surface seawater samples at cirrus temperatures. Atmospheric Chemistry and Physics, 2021, 21, 13903-13930.	4.9	11
7	Influence of Arctic Microlayers and Algal Cultures on Sea Spray Hygroscopicity and the Possible Implications for Mixedâ€Phase Clouds. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032808.	3.3	14
8	Solid Ammonium Nitrate Aerosols as Efficient Ice Nucleating Particles at Cirrus Temperatures. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032248.	3.3	15
9	The ice-nucleating activity of Arctic sea surface microlayer samples and marine algal cultures. Atmospheric Chemistry and Physics, 2020, 20, 11089-11117.	4.9	35
10	Ammonium nitrate particles formed in upper troposphere from ground ammonia sources during Asian monsoons. Nature Geoscience, 2019, 12, 608-612.	12.9	95
11	Enhanced ice nucleation activity of coal fly ash aerosol particles initiated by ice-filled pores. Atmospheric Chemistry and Physics, 2019, 19, 8783-8800.	4.9	29
12	Heterogeneous Ice Nucleation Ability of NaCl and Sea Salt Aerosol Particles at Cirrus Temperatures. Journal of Geophysical Research D: Atmospheres, 2018, 123, 2841-2860.	3.3	21
13	<i>Î±</i>-Pinene secondary organic aerosol at low temperature: chemical composition and implications for particle viscosity. Atmospheric Chemistry and Physics, 2018, 18, 2883-2898.	4.9	71
14	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
15	The Fifth International Workshop on Ice Nucleation phase 2 (FIN-02): laboratory intercomparison of ice nucleation measurements. Atmospheric Measurement Techniques, 2018, 11, 6231-6257.	3.1	82
16	A New Ice Nucleation Active Site Parameterization for Desert Dust and Soot. Journals of the Atmospheric Sciences, 2017, 74, 699-717.	1.7	153
17	Heterogeneous ice nucleation of Î±â€pinene SOA particles before and after ice cloud processing. Journal of Geophysical Research D: Atmospheres, 2017, 122, 4924-4943.	3.3	30
18	In situ characterization of mixed phase clouds using the Small Ice Detector and the Particle Phase Discriminator. Atmospheric Measurement Techniques, 2016, 9, 159-177.	3.1	28

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19	Development and characterization of an ice-selecting pumped counterflow virtual impactor (IS-PCVI) to study ice crystal residuals. Atmospheric Measurement Techniques, 2016, 9, 3817-3836.	3.1	12
20	Temperature-dependent formation of NaCl dihydrate in levitated NaCl and sea salt aerosol particles. Journal of Chemical Physics, 2016, 145, 244503.	3.0	21
21	The role of low-volatility organic compounds in initial particle growth in the atmosphere. Nature, 2016, 533, 527-531.	27.8	540
22	Heterogeneous ice nucleation of viscous secondary organic aerosol produced from ozonolysis of <i>Î±</i>-pinene. Atmospheric Chemistry and Physics, 2016, 16, 6495-6509.	4.9	71
23	Aqueous phase oxidation of sulphur dioxide by ozone in cloud droplets. Atmospheric Chemistry and Physics, 2016, 16, 1693-1712.	4.9	47
24	Pre-activation of ice-nucleating particles by the pore condensation and freezing mechanism. Atmospheric Chemistry and Physics, 2016, 16, 2025-2042.	4.9	39
25	Phase transition observations and discrimination of small cloud particles by light polarization in expansion chamber experiments. Atmospheric Chemistry and Physics, 2016, 16, 3651-3664.	4.9	11
26	Observation of viscosity transition in <i>Î±</i>-pinene secondary organic aerosol. Atmospheric Chemistry and Physics, 2016, 16, 4423-4438.	4.9	55
27	Cloud chamber experiments on the origin of ice crystal complexity in cirrus clouds. Atmospheric Chemistry and Physics, 2016, 16, 5091-5110.	4.9	56
28	Crystallization and immersion freezing ability of oxalic and succinic acid in multicomponent aqueous organic aerosol particles. Geophysical Research Letters, 2015, 42, 2464-2472.	4.0	12
29	Micro-Channel Catalytic Reactor Integration in Caper and R&D on Highly Tritiated Water Handling and Processing. Fusion Science and Technology, 2015, 67, 312-315.	1.1	1
30	Dismantling of the PETRA Glove Box: Tritium Contamination and Inventory Assessment. Fusion Science and Technology, 2015, 67, 631-634.	1.1	3
31	Tritium management and anti-permeation strategies for three different breeding blanket options foreseen for the European Power Plant Physics and Technology Demonstration reactor study. Fusion Engineering and Design, 2014, 89, 1219-1222.	1.9	29
32	Enhanced high-temperature ice nucleation ability of crystallized aerosol particles after preactivation at low temperature. Journal of Geophysical Research D: Atmospheres, 2014, 119, 8212-8230.	3.3	16
33	Zeolite membranes and palladium membrane reactor for tritium extraction from the breeder blankets of ITER and DEMO. Fusion Engineering and Design, 2013, 88, 2396-2399.	1.9	14
34	Parameterizations of ice formation derived from AIDA cloud simulation experiments. , 2013, , .		0
35	The accommodation coefficient of water molecules on ice â€“ cirrus cloud studies at the AIDA simulation chamber. Atmospheric Chemistry and Physics, 2013, 13, 4451-4466.	4.9	62
36	Heterogeneous ice nucleation ability of crystalline sodium chloride dihydrate particles. Journal of Geophysical Research D: Atmospheres, 2013, 118, 4610-4622.	3.3	31

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37	Influence of particle size and shape on the backscattering linear depolarisation ratio of small ice crystals â€“ cloud chamber measurements in the context of contrail and cirrus microphysics. Atmospheric Chemistry and Physics, 2012, 12, 10465-10484.	4.9	71
38	Complex refractive indices of Saharan dust samples at visible and near UV wavelengths: a laboratory study. Atmospheric Chemistry and Physics, 2012, 12, 2491-2512.	4.9	141
39	Ice cloud processing of ultra-viscous/glassy aerosol particles leads to enhanced ice nucleation ability. Atmospheric Chemistry and Physics, 2012, 12, 8589-8610.	4.9	65
40	Glassy aerosols with a range of compositions nucleate ice heterogeneously at cirrus temperatures. Atmospheric Chemistry and Physics, 2012, 12, 8611-8632.	4.9	94
41	Infrared Optical Constants of Crystalline Sodium Chloride Dihydrate: Application To Study the Crystallization of Aqueous Sodium Chloride Solution Droplets at Low Temperatures. Journal of Physical Chemistry A, 2012, 116, 8557-8571.	2.5	17
42	New cloud chamber experiments on the heterogeneous ice nucleation ability of oxalic acid in the immersion mode. Atmospheric Chemistry and Physics, 2011, 11, 2083-2110.	4.9	48
43	Improvement and Characterization of Small Cross-Piece Ionization Chambers at the Tritium Laboratory Karlsruhe. Fusion Science and Technology, 2011, 60, 968-971.	1.1	9
44	Particle Habit Imaging Using Incoherent Light: A First Step toward a Novel Instrument for Cloud Microphysics. Journal of Atmospheric and Oceanic Technology, 2011, 28, 493-512.	1.3	19
45	Infrared Spectroscopy of Aerosol Particles. , 2011, , 3-24.		2
46	An aerosol chamber investigation of the heterogeneous ice nucleating potential of refractory nanoparticles. Atmospheric Chemistry and Physics, 2010, 10, 1227-1247.	4.9	38
47	High variability of the heterogeneous ice nucleation potential of oxalic acid dihydrate and sodium oxalate. Atmospheric Chemistry and Physics, 2010, 10, 7617-7641.	4.9	27
48	Heterogeneous nucleation of ice particles on glassy aerosols under cirrus conditions. Nature Geoscience, 2010, 3, 233-237.	12.9	302
49	A review of optical measurements at the aerosol and cloud chamber AIDA. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 930-949.	2.3	63
50	Infrared Optical Constants of Highly Diluted Sulfuric Acid Solution Droplets at Cirrus Temperatures. Journal of Physical Chemistry A, 2008, 112, 11661-11676.	2.5	23
51	The effect of organic coating on the heterogeneous ice nucleation efficiency of mineral dust aerosols. Environmental Research Letters, 2008, 3, 025007.	5.2	230
52	Heterogeneous ice nucleation activity of bacteria: new laboratory experiments at simulated cloud conditions. Biogeosciences, 2008, 5, 1425-1435.	3.3	122
53	Influence of Particle Aspect Ratio on the Midinfrared Extinction Spectra of Wavelength-Sized Ice Crystals. Journal of Physical Chemistry A, 2007, 111, 13003-13022.	2.5	18
54	Probing ice clouds by broadband mid-infrared extinction spectroscopy: case studies from ice nucleation experiments in the AIDA aerosol and cloud chamber. Atmospheric Chemistry and Physics, 2006, 6, 4775-4800.	4.9	44

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55	Homogeneous nucleation rates of nitric acid dihydrate (NAD) at simulated stratospheric conditions â€“ Part I: Experimental results. Atmospheric Chemistry and Physics, 2006, 6, 3023-3033.	4.9	33
56	Efficiency of the deposition mode ice nucleation on mineral dust particles. Atmospheric Chemistry and Physics, 2006, 6, 3007-3021.	4.9	328
57	Chamber Simulations of Cloud Chemistry: The AIDA Chamber. , 2006, , 67-82.		18
58	T-dependent rate measurements of homogeneous ice nucleation in cloud droplets using a large atmospheric simulation chamber. Journal of Photochemistry and Photobiology A: Chemistry, 2005, 176, 208-217.	3.9	85
59	Experimental investigation of ice nucleation by different types of aerosols in the aerosol chamber AIDA: implications to microphysics of cirrus clouds. Meteorologische Zeitschrift, 2005, 14, 485-497.	1.0	47
60	Ice nucleation on flame soot aerosol of different organic carbon content. Meteorologische Zeitschrift, 2005, 14, 477-484.	1.0	94
61	Mid-infrared Extinction Spectra and Optical Constants of Supercooled Water Droplets. Journal of Physical Chemistry A, 2005, 109, 7099-7112.	2.5	51
62	Aerosol Chamber Study of Optical Constants and N2O5Uptake on Supercooled H2SO4/H2O/HNO3Solution Droplets at Polar Stratospheric Cloud Temperatures. Journal of Physical Chemistry A, 2005, 109, 8140-8148.	2.5	10
63	Infrared Spectrum of Nitric Acid Dihydrate:Â Influence of Particle Shape. Journal of Physical Chemistry A, 2005, 109, 2572-2581.	2.5	40
64	Effect of sulfuric acid coating on heterogeneous ice nucleation by soot aerosol particles. Journal of Geophysical Research, 2005, 110, .	3.3	191
65	Absorption amplification of black carbon internally mixed with secondary organic aerosol. Journal of Geophysical Research, 2005, 110, .	3.3	350
66	A quantitative test of infrared optical constants for supercooled sulphuric and nitric acid droplet aerosols. Atmospheric Chemistry and Physics, 2003, 3, 1147-1164.	4.9	22