Benjamin J Murray

List of Publications by Year
in descending order

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114 papers	9,843 citations	36203 51 h-index	42291 92 g-index
194 all docs	194 docs citations	194 times ranked	5958 citing authors

#	Article	IF	Citations
1	Volcanic ash ice nucleation activity is variably reduced by aging in water and sulfuric acid: the effects of leaching, dissolution, and precipitation. Environmental Science Atmospheres, 2022, 2, 85-99.	0.9	5
2	Highly Active Iceâ€Nucleating Particles at the Summer North Pole. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	22
3	Measurement report: Introduction to the HyICE-2018 campaign for measurements of ice-nucleating particles and instrument inter-comparison in the HyytiÃlÃ boreal forest. Atmospheric Chemistry and Physics, 2022, 22, 5117-5145.	1.9	4
4	An evaluation of the heat test for the ice-nucleating ability of minerals and biological material. Atmospheric Measurement Techniques, 2022, 15, 2635-2665.	1.2	13
5	The development of a miniaturised balloon-borne cloud water sampler and its first deployment in the high Arctic. Tellus, Series B: Chemical and Physical Meteorology, 2021, 73, 1-12.	0.8	7
6	The Portable Ice Nucleation Experiment (PINE): a new online instrument for laboratory studies and automated long-term field observations of ice-nucleating particles. Atmospheric Measurement Techniques, 2021, 14, 1143-1166.	1.2	18
7	Homogeneous Freezing of Water Using Microfluidics. Micromachines, 2021, 12, 223.	1.4	9
8	The Phase of Water Ice Which Forms in Cold Clouds in the Mesospheres of Mars, Venus, and Earth. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006796.	1.5	7
9	The seasonal cycle of ice-nucleating particles linked to the abundance of biogenic aerosol in boreal forests. Atmospheric Chemistry and Physics, 2021, 21, 3899-3918.	1.9	31
10	The temperature dependence of ice-nucleating particle concentrations affects the radiative properties of tropical convective cloud systems. Atmospheric Chemistry and Physics, 2021, 21, 5439-5461.	1.9	26
11	Active sites for ice nucleation differ depending on nucleation mode. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	22
12	Modest effects of dietary supplements during the COVID-19 pandemic: insights from 445 850 users of the COVID-19 Symptom Study app. BMJ Nutrition, Prevention and Health, 2021, 4, 149-157.	1.9	91
13	Ice nucleation by viruses and their potential for cloud glaciation. Biogeosciences, 2021, 18, 4431-4444.	1.3	10
14	Diet quality and risk and severity of COVID-19: a prospective cohort study. Gut, 2021, 70, 2096-2104.	6.1	130
15	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.	1.9	11
16	Mineral and biological ice-nucleating particles above the South East of the British Isles. Environmental Science Atmospheres, 2021, 1, 176-191.	0.9	9
17	Opinion: Cloud-phase climate feedback and the importance of ice-nucleating particles. Atmospheric Chemistry and Physics, 2021, 21, 665-679.	1.9	78
18	Controls on surface aerosol particle number concentrations and aerosol-limited cloud regimes over the central Greenland Ice Sheet. Atmospheric Chemistry and Physics, 2021, 21, 15351-15374.	1.9	4

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19	Model emulation to understand the joint effects of ice-nucleating particles and secondary ice production on deep convective anvil cirrus. Atmospheric Chemistry and Physics, 2021, 21, 17315-17343.	1.9	4
20	Volcanic ash ice-nucleating activity can be enhanced or depressed by ash-gas interaction in the eruption plume. Earth and Planetary Science Letters, 2020, 551, 116587.	1.8	14
21	On-chip analysis of atmospheric ice-nucleating particles in continuous flow. Lab on A Chip, 2020, 20, 2889-2910.	3.1	24
22	Iceland is an episodic source of atmospheric ice-nucleating particles relevant for mixed-phase clouds. Science Advances, 2020, 6, eaba8137.	4.7	33
23	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.	1.2	14
24	On-chip density-based sorting of supercooled droplets and frozen droplets in continuous flow. Lab on A Chip, 2020, 20, 3876-3887.	3.1	5
25	Ice goes fully cubic. Nature Materials, 2020, 19, 586-587.	13.3	21
26	Resolving the size of ice-nucleating particles with a balloon deployable aerosol sampler: the SHARK. Atmospheric Measurement Techniques, 2020, 13, 2905-2921.	1.2	16
27	Cryopreservation of primary cultures of mammalian somatic cells in 96-well plates benefits from control of ice nucleation. Cryobiology, 2020, 93, 62-69.	0.3	28
28	The ice-nucleating activity of Arctic sea surface microlayer samples and marine algal cultures. Atmospheric Chemistry and Physics, 2020, 20, 11089-11117.	1.9	35
29	A Major Combustion Aerosol Event Had a Negligible Impact on the Atmospheric Iceâ€Nucleating Particle Population. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032938.	1.2	14
30	The ice-nucleating ability of quartz immersed in water and its atmospheric importance compared to K-feldspar. Atmospheric Chemistry and Physics, 2019, 19, 11343-11361.	1.9	50
31	High-speed imaging of ice nucleation in water proves the existence of active sites. Science Advances, 2019, 5, eaav4316.	4.7	87
32	A comprehensive characterization of ice nucleation by three different types of cellulose particles immersed in water. Atmospheric Chemistry and Physics, 2019, 19, 4823-4849.	1.9	48
33	The importance of crystalline phases in ice nucleation by volcanic ash. Atmospheric Chemistry and Physics, 2019, 19, 5451-5465.	1.9	21
34	Characterisation of the filter inlet system on the FAAM BAe-146 research aircraft and its use for size-resolved aerosol composition measurements. Atmospheric Measurement Techniques, 2019, 12, 5741-5763.	1.2	14
35	Strong control of Southern Ocean cloud reflectivity by ice-nucleating particles. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2687-2692.	3.3	156
36	The study of atmospheric ice-nucleating particles via microfluidically generated droplets. Microfluidics and Nanofluidics, 2018, 22, 52.	1.0	32

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37	The enhancement and suppression of immersion mode heterogeneous ice-nucleation by solutes. Chemical Science, 2018, 9, 4142-4151.	3.7	66
38	Nucleation of nitric acid hydrates in polar stratospheric clouds by meteoric material. Atmospheric Chemistry and Physics, 2018, 18, 4519-4531.	1.9	18
39	Is Black Carbon an Unimportant Iceâ€Nucleating Particle in Mixedâ€Phase Clouds?. Journal of Geophysical Research D: Atmospheres, 2018, 123, 4273-4283.	1.2	34
40	Atmospheric Iceâ€Nucleating Particles in the Dusty Tropical Atlantic. Journal of Geophysical Research D: Atmospheres, 2018, 123, 2175-2193.	1.2	66
41	Coarse-mode mineral dust size distributions, composition and optical properties from AER-D aircraft measurements over the tropical eastern Atlantic. Atmospheric Chemistry and Physics, 2018, 18, 17225-17257.	1.9	80
42	An instrument for quantifying heterogeneous ice nucleation in multiwell plates using infrared emissions to detect freezing. Atmospheric Measurement Techniques, 2018, 11, 5629-5641.	1.2	22
43	Ice-nucleating ability of aerosol particles and possible sources at three coastal marine sites. Atmospheric Chemistry and Physics, 2018, 18, 15669-15685.	1.9	37
44	The Fifth International Workshop on Ice Nucleation phase 2 (FIN-02): laboratory intercomparison of ice nucleation measurements. Atmospheric Measurement Techniques, 2018, 11, 6231-6257.	1.2	82
45	Contributions of biogenic material to the atmospheric ice-nucleating particle population in North Western Europe. Scientific Reports, 2018, 8, 13821.	1.6	56
46	Analysis of stacking disorder in ice I using pair distribution functions. Journal of Applied Crystallography, 2018, 51, 1211-1220.	1.9	17
47	Unravelling the origins of ice nucleation on organic crystals. Chemical Science, 2018, 9, 8077-8088.	3.7	43
48	Cracking the problem of ice nucleation. Science, 2017, 355, 346-347.	6.0	9
49	Size-resolved characterization of the polysaccharidic and proteinaceous components of sea spray aerosol. Atmospheric Environment, 2017, 154, 331-347.	1.9	81
50	CO2 ice structure and density under Martian atmospheric conditions. Icarus, 2017, 294, 201-208.	1.1	45
51	The fate of meteoric metals in ice particles: Effects of sublimation and energetic particle bombardment. Journal of Atmospheric and Solar-Terrestrial Physics, 2017, 161, 143-149.	0.6	4
52	The role of phase separation and related topography in the exceptional ice-nucleating ability of alkali feldspars. Physical Chemistry Chemical Physics, 2017, 19, 31186-31193.	1.3	63
53	Contribution of feldspar and marine organic aerosols to global ice nucleating particle concentrations. Atmospheric Chemistry and Physics, 2017, 17, 3637-3658.	1.9	144
54	Ice-nucleating particles in Canadian Arctic sea-surface microlayer and bulk seawater. Atmospheric Chemistry and Physics, 2017, 17, 10583-10595.	1.9	78

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55	Heterogeneous Ice Nucleation by Soufriere Hills Volcanic Ash Immersed in Water Droplets. PLoS ONE, 2017, 12, e0169720.	1.1	14
56	A physically constrained classical description of the homogeneous nucleation of ice in water. Journal of Chemical Physics, 2016, 145, 211915.	1.2	89
57	Rate of Homogenous Nucleation of Ice in Supercooled Water. Journal of Physical Chemistry A, 2016, 120, 6513-6520.	1.1	28
58	Sucrose diffusion in aqueous solution. Physical Chemistry Chemical Physics, 2016, 18, 19207-19216.	1.3	77
59	Not all feldspars are equal: a survey of ice nucleating properties across the feldspar group of minerals. Atmospheric Chemistry and Physics, 2016, 16, 10927-10940.	1.9	124
60	The adsorption of fungal ice-nucleating proteins on mineral dusts: a terrestrial reservoir of atmospheric ice-nucleating particles. Atmospheric Chemistry and Physics, 2016, 16, 7879-7887.	1.9	81
61	Sensitivity of liquid clouds to homogenous freezing parameterizations. Geophysical Research Letters, 2015, 42, 1599-1605.	1.5	62
62	The relevance of nanoscale biological fragments for ice nucleation in clouds. Scientific Reports, 2015, 5, 8082.	1.6	164
63	Trigonal Ice Crystals in Earthâ€™s Atmosphere. Bulletin of the American Meteorological Society, 2015, 96, 1519-1531.	1.7	39
64	A comprehensive laboratory study on the immersion freezing behavior of illite NX particles: a comparison of 17 ice nucleation measurement techniques. Atmospheric Chemistry and Physics, 2015, 15, 2489-2518.	1.9	200
65	Ice nucleation by combustion ash particles at conditions relevant to mixed-phase clouds. Atmospheric Chemistry and Physics, 2015, 15, 5195-5210.	1.9	55
66	A technique for quantifying heterogeneous ice nucleation in microlitre supercooled water droplets. Atmospheric Measurement Techniques, 2015, 8, 2437-2447.	1.2	106
67	Ice Nucleation Properties of Oxidized Carbon Nanomaterials. Journal of Physical Chemistry Letters, 2015, 6, 3012-3016.	2.1	59
68	The crystal structure of ice under mesospheric conditions. Journal of Atmospheric and Solar-Terrestrial Physics, 2015, 127, 78-82.	0.6	28
69	A marine biogenic source of atmospheric ice-nucleating particles. Nature, 2015, 525, 234-238.	13.7	475
70	Water diffusion in atmospherically relevant Î±-pinene secondary organic material. Chemical Science, 2015, 6, 4876-4883.	3.7	116
71	Extent of stacking disorder in diamond. Diamond and Related Materials, 2015, 59, 69-72.	1.8	56
72	Stacking disorder in ice I. Physical Chemistry Chemical Physics, 2015, 17, 60-76.	1.3	215

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73	Mineral Dust and its Microphysical Interactions with Clouds. , 2014, , 287-325.		16
74	Ice nucleation by fertile soil dusts: relative importance of mineral and biogenic components. Atmospheric Chemistry and Physics, 2014, 14, 1853-1867.	1.9	187
75	Quantifying water diffusion in high-viscosity and glassy aqueous solutions using a Raman isotope tracer method. Atmospheric Chemistry and Physics, 2014, 14, 3817-3830.	1.9	97
76	Representing time-dependent freezing behaviour in immersion mode ice nucleation. Atmospheric Chemistry and Physics, 2014, 14, 8501-8520.	1.9	62
77	The importance of feldspar for ice nucleation by mineral dust in mixed-phase clouds. Nature, 2013, 498, 355-358.	13.7	590
78	Atmospheric ice nucleation by fertile soil dusts particles: Relative importance of mineral and biological components. , 2013, , .		0
79	Ice nucleation efficiency of soot from biomass combustion. , 2013, , .		1
80	Viscosity of <i>Î±</i> -pinene secondary organic material and implications for particle growth and reactivity. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8014-8019.	3.3	388
81	A Low Temperature Limit for Life on Earth. PLoS ONE, 2013, 8, e66207.	1.1	117
82	Glass formation and unusual hygroscopic growth of iodic acid solution droplets with relevance for iodine mediated particle formation in the marine boundary layer. Atmospheric Chemistry and Physics, 2012, 12, 8575-8587.	1.9	64
83	Ice cloud processing of ultra-viscous/glassy aerosol particles leads to enhanced ice nucleation ability. Atmospheric Chemistry and Physics, 2012, 12, 8589-8610.	1.9	65
84	Immersion mode heterogeneous ice nucleation by an illite rich powder representative of atmospheric mineral dust. Atmospheric Chemistry and Physics, 2012, 12, 287-307.	1.9	219
85	Glassy aerosols with a range of compositions nucleate ice heterogeneously at cirrus temperatures. Atmospheric Chemistry and Physics, 2012, 12, 8611-8632.	1.9	94
86	Structure of ice crystallized from supercooled water. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1041-1045.	3.3	274
87	Ice nucleation by particles immersed in supercooled cloud droplets. Chemical Society Reviews, 2012, 41, 6519.	18.7	927
88	Freezing injury: The special case of the sperm cell. Cryobiology, 2012, 64, 71-80.	0.3	136
89	Heterogeneous freezing of water droplets containing kaolinite particles. Atmospheric Chemistry and Physics, 2011, 11, 4191-4207.	1.9	240
90	Supercooling of water droplets in jet aviation fuel. Fuel, 2011, 90, 433-435.	3.4	37

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91	An aerosol chamber investigation of the heterogeneous ice nucleating potential of refractory nanoparticles. Atmospheric Chemistry and Physics, 2010, 10, 1227-1247.	1.9	38
92	Physical properties of iodate solutions and the deliquescence of crystalline I₂O₅ and HIO₃. Atmospheric Chemistry and Physics, 2010, 10, 12251-12260.	1.9	33
93	Homogeneous nucleation of amorphous solid water particles in the upper mesosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2010, 72, 51-61.	0.6	68
94	Heterogeneous nucleation of ice particles on glassy aerosols under cirrus conditions. Nature Geoscience, 2010, 3, 233-237.	5.4	302
95	Studies of the Formation and Growth of Aerosol from Molecular Iodine Precursor. Zeitschrift Fur Physikalische Chemie, 2010, 224, 1095-1117.	1.4	56
96	Kinetics of the homogeneous freezing of water. Physical Chemistry Chemical Physics, 2010, 12, 10380.	1.3	231
97	Effects of sulfuric acid and ammonium sulfate coatings on the ice nucleation properties of kaolinite particles. Geophysical Research Letters, 2009, 36, .	1.5	105
98	Inhibition of solute crystallisation in aqueous H+â€“NH4+â€“SO42âˆ’â€“H2O droplets. Physical Chemistry Chemical Physics, 2008, 10, 3287.	1.3	66
99	Enhanced formation of cubic ice in aqueous organic acid droplets. Environmental Research Letters, 2008, 3, 025008.	2.2	34
100	Inhibition of ice crystallisation in highly viscous aqueous organic acid droplets. Atmospheric Chemistry and Physics, 2008, 8, 5423-5433.	1.9	161
101	Strong dependence of cubic ice formation on droplet ammonium to sulfate ratio. Geophysical Research Letters, 2007, 34, .	1.5	19
102	Strong Dependence of Cubic Ice Formation on Aqueous Droplet Ammonium to Sulphate Ratio. , 2007, , 432-435.		1
103	Deposition ice nucleation on soot at temperatures relevant for the lower troposphere. Journal of Geophysical Research, 2006, 111, .	3.3	157
104	Measurements of the vapor pressure of cubic ice and their implications for atmospheric ice clouds. Geophysical Research Letters, 2006, 33, .	1.5	93
105	Formation and stability of cubic ice in water droplets. Physical Chemistry Chemical Physics, 2006, 8, 186-192.	1.3	113
106	Modelling the impact of noctilucent cloud formation on atomic oxygen and other minor constituents of the summer mesosphere. Atmospheric Chemistry and Physics, 2005, 5, 1027-1038.	1.9	45
107	The formation of cubic ice under conditions relevant to Earth's atmosphere. Nature, 2005, 434, 202-205.	13.7	223
108	Uptake of Fe, Na and K atoms on low-temperature ice: implications for metal atom scavenging in the vicinity of polar mesospheric clouds. Physical Chemistry Chemical Physics, 2005, 7, 3970.	1.3	36

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109	Seasonal variations of the Na and Fe layers at the South Pole and their implications for the chemistry and general circulation of the polar mesosphere. Journal of Geophysical Research, 2005, 110, .	3.3	69
110	Variability of the mesospheric nightglow sodium D2/D1ratio. Journal of Geophysical Research, 2005, 110, .	3.3	31
111	Removal of Meteoric Iron on Polar Mesospheric Clouds. Science, 2004, 304, 426-428.	6.0	67
112	Atomic oxygen depletion in the vicinity of noctilucent clouds. Advances in Space Research, 2003, 31, 2075-2084.	1.2	17
113	The uptake of atomic oxygen on ice films: Implications for noctilucent clouds. Physical Chemistry Chemical Physics, 2003, 5, 4129.	1.3	30
114	Infrared spectroscopic study of the deliquescence and efflorescence of ammonium sulfate aerosol as a function of temperature. Journal of Geophysical Research, 1999, 104, 21317-21326.	3.3	142