Joyce E Penner

List of Publications by Year
in descending order

82 papers	6,757 citations	57758 44 h-index	69250 77 g-index
100 all docs	100 docs citations	100 times ranked	6095 citing authors

#	Article	IF	Citations
1	Brown carbon from biomass burning imposes strong circum-Arctic warming. One Earth, 2022, 5, 293-304.	6.8	23
2	Decreased Aviation Leads to Increased Ice Crystal Number and a Positive Radiative Effect in Cirrus Clouds. AGU Advances, 2022, 3, .	5.4	7
3	Scattering and absorbing aerosols in the climate system. Nature Reviews Earth & Environment, 2022, 3, 363-379.	29.7	93
4	The formation mechanism and radiative effect of secondary organic aerosols. , 2021, , 57-100.		0
5	Indirect Effects of Secondary Organic Aerosol on Cirrus Clouds. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032233.	3.3	8
6	Constraining the Twomey effect from satellite observations: issues and perspectives. Atmospheric Chemistry and Physics, 2020, 20, 15079-15099.	4.9	49
7	Radiative forcing of anthropogenic aerosols on cirrus clouds using a hybrid ice nucleation scheme. Atmospheric Chemistry and Physics, 2020, 20, 7801-7827.	4.9	19
8	Cloudy-sky contributions to the direct aerosol effect. Atmospheric Chemistry and Physics, 2020, 20, 8855-8865.	4.9	8
9	Global Modeling of Secondary Organic Aerosol With Organic Nucleation. Journal of Geophysical Research D: Atmospheres, 2019, 124, 8260-8286.	3.3	15
10	Soot, sulfate, dust and the climate â€" three ways through the fog. Nature, 2019, 570, 158-159.	27.8	18
11	Decrease in radiative forcing by organic aerosol nucleation, climate, and land use change. Nature Communications, 2019, 10, 423.	12.8	47
12	Biomass smoke from southern Africa can significantly enhance the brightness of stratocumulus over the southeastern Atlantic Ocean. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2924-2929.	7.1	81
13	Anthropogenic Aerosol Indirect Effects in Cirrus Clouds. Journal of Geophysical Research D: Atmospheres, 2018, 123, 11652-11677.	3.3	46
14	Radiative forcing by light-absorbing aerosols of pyrogenetic iron oxides. Scientific Reports, 2018, 8, 7347.	3.3	37
15	SAM-CAAM: A Concept for Acquiring Systematic Aircraft Measurements to Characterize Aerosol Air Masses. Bulletin of the American Meteorological Society, 2017, 98, 2215-2228.	3.3	18
16	Mechanism of SOA formation determines magnitude of radiative effects. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12685-12690.	7.1	42
17	Why do general circulation models overestimate the aerosol cloud lifetime effect? A case study comparing CAM5 and a CRM. Atmospheric Chemistry and Physics, 2017, 17, 21-29.	4.9	26
18	Aerosols at the poles: an AeroCom Phase II multi-model evaluation. Atmospheric Chemistry and Physics, 2017, 17, 12197-12218.	4.9	58

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19	Direct comparisons of ice cloud macro- and microphysical properties simulated by the Community Atmosphere Model version 5 with HIPPO aircraft observations. Atmospheric Chemistry and Physics, 2017, 17, 4731-4749.	4.9	13
20	ARM-Led Improvements in Aerosols in Climate and Climate Models. Meteorological Monographs, 2016, 57, 27.1-27.12.	5.0	4
21	Observation and integrated Earth-system science: A roadmap for 2016â€"2025. Advances in Space Research, 2016, 57, 2037-2103.	2.6	35
22	Improving our fundamental understanding of the role of aerosolâ^'cloud interactions in the climate system. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5781-5790.	7.1	479
23	How will SOA change in the future?. Geophysical Research Letters, 2016, 43, 1718-1726.	4.0	30
24	What controls the low ice number concentration in the upper troposphere?. Atmospheric Chemistry and Physics, 2016, 16, 12411-12424.	4.9	15
25	Aerosol water parameterisation: aÂsingle parameter framework. Atmospheric Chemistry and Physics, 2016, 16, 7213-7237.	4.9	28
26	Impact of Aviation on Climate: FAAâ€™s Aviation Climate Change Research Initiative (ACCRI) Phase II. Bulletin of the American Meteorological Society, 2016, 97, 561-583.	3.3	93
27	Can cirrus cloud seeding be used for geoengineering?. Geophysical Research Letters, 2015, 42, 8775-8782.	4.0	29
28	Dehydration effects from contrails in a coupled contrailâ€"climate model. Atmospheric Chemistry and Physics, 2015, 15, 11179-11199.	4.9	53
29	Radiative forcing of organic aerosol in the atmosphere and on snow: Effects of SOA and brown carbon. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7453-7476.	3.3	197
30	Intercomparison of the cloud water phase among global climate models. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3372-3400.	3.3	126
31	Natalia Andronova (1953-2014). Eos, 2014, 95, 353-353.	0.1	0
32	Radiative Forcing Associated with Particulate Carbon Emissions Resulting from the Use of Mercury Control Technology. Environmental Science & Technology, 2014, 48, 10519-10523.	10.0	9
33	Aircraft soot indirect effect on largeâ€scale cirrus clouds: Is the indirect forcing by aircraft soot positive or negative?. Journal of Geophysical Research D: Atmospheres, 2014, 119, 11,303.	3.3	59
34	Global modeling of SOA: the use of different mechanisms for aqueous-phase formation. Atmospheric Chemistry and Physics, 2014, 14, 5451-5475.	4.9	94
35	Modelled black carbon radiative forcing and atmospheric lifetime in AeroCom Phase II constrained by aircraft observations. Atmospheric Chemistry and Physics, 2014, 14, 12465-12477.	4.9	157
36	An evaluation of the potential radiative forcing and climatic impact of marine organic aerosols as heterogeneous ice nuclei. Geophysical Research Letters, 2013, 40, 4121-4126.	4.0	33

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37	CHASER: An Innovative Satellite Mission Concept to Measure the Effects of Aerosols on Clouds and Climate. Bulletin of the American Meteorological Society, 2013, 94, 685-694.	3.3	15
38	Black carbon vertical profiles strongly affect its radiative forcing uncertainty. Atmospheric Chemistry and Physics, 2013, 13, 2423-2434.	4.9	223
39	Host model uncertainties in aerosol radiative forcing estimates: results from the AeroCom Prescribed intercomparison study. Atmospheric Chemistry and Physics, 2013, 13, 3245-3270.	4.9	143
40	The effects of hygroscopicity on ice nucleation of fossil fuel combustion aerosols in mixed-phase clouds. Atmospheric Chemistry and Physics, 2013, 13, 4339-4348.	4.9	32
41	Transport of black carbon to polar regions: Sensitivity and forcing by black carbon. Geophysical Research Letters, 2012, 39, .	4.0	19
42	Constraining cloud lifetime effects of aerosols using Aâ€Train satellite observations. Geophysical Research Letters, 2012, 39, .	4.0	117
43	Consistent estimates from satellites and models for the first aerosol indirect forcing. Geophysical Research Letters, 2012, 39, .	4.0	17
44	Satellite methods underestimate indirect climate forcing by aerosols. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13404-13408.	7.1	123
45	Short-lived uncertainty?. Nature Geoscience, 2010, 3, 587-588.	12.9	42
46	Coupled IMPACT aerosol and NCAR CAM3 model: Evaluation of predicted aerosol number and size distribution. Journal of Geophysical Research, 2009, 114, .	3.3	64
47	Aerosol effects on liquidâ€water path of thin stratocumulus clouds. Journal of Geophysical Research, 2009, 114, .	3.3	46
48	Inclusion of Ice Microphysics in the NCAR Community Atmospheric Model Version 3 (CAM3). Journal of Climate, 2007, 20, 4526-4547.	3.2	189
49	Global modeling of nitrate and ammonium: Interaction of aerosols and tropospheric chemistry. Journal of Geophysical Research, 2007, 112, .	3.3	113
50	Effects of additional nonmethane volatile organic compounds, organic nitrates, and direct emissions of oxygenated organic species on global tropospheric chemistry. Journal of Geophysical Research, 2007, 112, .	3.3	100
51	Investigation of the first and second aerosol indirect effects using data from the May 2003 Intensive Operational Period at the Southern Great Plains. Journal of Geophysical Research, 2007, 112, .	3.3	18
52	Global atmospheric chemistry: Integrating over fractional cloud cover. Journal of Geophysical Research, 2007, 112, .	3.3	76
53	Uncertainties in global aerosol simulations: Assessment using three meteorological data sets. Journal of Geophysical Research, 2007, 112, .	3.3	79
54	Block-Structured Adaptive Grids on the Sphere: Advection Experiments. Monthly Weather Review, 2006, 134, 3691-3713.	1.4	57

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55	Ice nucleation parameterization for global models. Meteorologische Zeitschrift, 2005, 14, 499-514.	1.0	216
56	Historical emissions of carbonaceous aerosols from biomass and fossil fuel burning for the period 1870-2000. Global Biogeochemical Cycles, 2005, 19, n/a-n/a.	4.9	184
57	Global modeling of aerosol dynamics: Model description, evaluation, and interactions between sulfate and nonsulfate aerosols. Journal of Geophysical Research, 2005, 110, .	3.3	207
58	PARAGON: An Integrated Approach for Characterizing Aerosol Climate Impacts and Environmental Interactions. Bulletin of the American Meteorological Society, 2004, 85, 1491-1502.	3.3	59
59	Observational evidence of a change in radiative forcing due to the indirect aerosol effect. Nature, 2004, 427, 231-234.	27.8	194
60	Effects of cloud overlap in photochemical models. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	24
61	A dynamic aerosol module for global chemical transport models: Model description. Journal of Geophysical Research, 2004, 109, .	3.3	56
62	Global estimates of biomass burning emissions based on satellite imagery for the year 2000. Journal of Geophysical Research, 2004, 109, .	3.3	226
63	Comment on â€œControl of fossil-fuel particulate black carbon and organic matter, possibly the most effective method of slowing global warmingâ€• by M. Z. Jacobson. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	29
64	Soot and smoke aerosol may not warm climate. Journal of Geophysical Research, 2003, 108, .	3.3	185
65	A Comparison of Model- and Satellite-Derived Aerosol Optical Depth and Reflectivity. Journals of the Atmospheric Sciences, 2002, 59, 441-460.	1.7	96
66	Effect of Mount Pinatubo H2SO4/H2O aerosol on ice nucleation in the upper troposphere using a global chemistry and transport model. Journal of Geophysical Research, 2002, 107, AAC 2-1.	3.3	44
67	Cloud susceptibility and the first aerosol indirect forcing: Sensitivity to black carbon and aerosol concentrations. Journal of Geophysical Research, 2002, 107, AAC 10-1-AAC 10-23.	3.3	118
68	A possible correlation between satellite-derived cloud and aerosol microphysical parameters. Geophysical Research Letters, 2001, 28, 1171-1174.	4.0	335
69	Indirect Aerosol Forcing, Quasi Forcing, and Climate Response. Journal of Climate, 2001, 14, 2960-2975.	3.2	122
70	Geographical Distributions of Temperature Change for Scenarios of Greenhouse Gas and Sulfur Dioxide Emissions. Technological Forecasting and Social Change, 2000, 65, 167-193.	11.6	49
71	Indirect effect of sulfate and carbonaceous aerosols: A mechanistic treatment. Journal of Geophysical Research, 2000, 105, 12193-12206.	3.3	183
72	Precipitation changes in a GCM resulting from the indirect effects of anthropogenic aerosols. Geophysical Research Letters, 2000, 27, 3045-3048.	4.0	55

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73	Modeling the spectral optical properties of ammonium sulfate and biomass burning aerosols: parameterization of relative humidity effects and model results. Atmospheric Environment, 1999, 33, 2603-2620.	4.1	63
74	Prediction of the number of cloud droplets in the ECHAM GCM. Journal of Geophysical Research, 1999, 104, 9169-9198.	3.3	283
75	Effects of anthropogenic sulfate on cloud drop nucleation and optical properties. Tellus, Series B: Chemical and Physical Meteorology, 1995, 47, 566-577.	1.6	24
76	Towards the detection and attribution of an anthropogenic effect on climate. Climate Dynamics, 1995, 12, 77-100.	3.8	175
77	A parameterization of cloud droplet nucleation part I: single aerosol type. Atmospheric Research, 1993, 30, 198-221.	4.1	121
78	Three-dimensional modeling of the global atmospheric sulfur cycle: A first step. Atmospheric Environment Part A General Topics, 1991, 25, 2513-2520.	1.3	35
79	The Role of Atmospheric Chemistry in Climate Change. Japca, 1989, 39, 22-28.	0.3	32
80	Uncertainties in the smoke source term for â€˜nuclear winterâ€™ studies. Nature, 1986, 324, 222-226.	27.8	50
81	Possible variations in atmospheric ozone related to the elevenâ€year solar cycle. Geophysical Research Letters, 1978, 5, 817-820.	4.0	65
82	Effect of black carbon on mid-troposphere and surface temperature trends. , 0, , 18-33.		1