Joyce E Penner

List of Publications by Year
in descending order

82	6,757	57758 44	69250 77
papers	citations	h-index	g-index

100	100	100	6095
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	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
2	A possible correlation between satellite-derived cloud and aerosol microphysical parameters. Geophysical Research Letters, 2001, 28, 1171-1174.	4.0	335
3	Prediction of the number of cloud droplets in the ECHAM GCM. Journal of Geophysical Research, 1999, 104, 9169-9198.	3.3	283
4	Global estimates of biomass burning emissions based on satellite imagery for the year 2000. Journal of Geophysical Research, 2004, 109, .	3.3	226
5	Black carbon vertical profiles strongly affect its radiative forcing uncertainty. Atmospheric Chemistry and Physics, 2013, 13, 2423-2434.	4.9	223
6	Ice nucleation parameterization for global models. Meteorologische Zeitschrift, 2005, 14, 499-514.	1.0	216
7	Global modeling of aerosol dynamics: Model description, evaluation, and interactions between sulfate and nonsulfate aerosols. Journal of Geophysical Research, 2005, 110, .	3.3	207
8	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
9	Observational evidence of a change in radiative forcing due to the indirect aerosol effect. Nature, 2004, 427, 231-234.	27.8	194
10	Inclusion of Ice Microphysics in the NCAR Community Atmospheric Model Version 3 (CAM3). Journal of Climate, 2007, 20, 4526-4547.	3.2	189
11	Soot and smoke aerosol may not warm climate. Journal of Geophysical Research, 2003, 108, .	3.3	185
12	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
13	Indirect effect of sulfate and carbonaceous aerosols: A mechanistic treatment. Journal of Geophysical Research, 2000, 105, 12193-12206.	3.3	183
14	Towards the detection and attribution of an anthropogenic effect on climate. Climate Dynamics, 1995, 12, 77-100.	3.8	175
15	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
16	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
17	Intercomparison of the cloud water phase among global climate models. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3372-3400.	3.3	126
18	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

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19	Indirect Aerosol Forcing, Quasi Forcing, and Climate Response. Journal of Climate, 2001, 14, 2960-2975.	3.2	122
20	A parameterization of cloud droplet nucleation part I: single aerosol type. Atmospheric Research, 1993, 30, 198-221.	4.1	121
21	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
22	Constraining cloud lifetime effects of aerosols using Aâ€Train satellite observations. Geophysical Research Letters, 2012, 39, .	4.0	117
23	Global modeling of nitrate and ammonium: Interaction of aerosols and tropospheric chemistry. Journal of Geophysical Research, 2007, 112, .	3.3	113
24	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
25	A Comparison of Model- and Satellite-Derived Aerosol Optical Depth and Reflectivity. Journals of the Atmospheric Sciences, 2002, 59, 441-460.	1.7	96
26	Global modeling of SOA: the use of different mechanisms for aqueous-phase formation. Atmospheric Chemistry and Physics, 2014, 14, 5451-5475.	4.9	94
27	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
28	Scattering and absorbing aerosols in the climate system. Nature Reviews Earth & Environment, 2022, 3, 363-379.	29.7	93
29	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
30	Uncertainties in global aerosol simulations: Assessment using three meteorological data sets. Journal of Geophysical Research, 2007, 112, .	3.3	79
31	Global atmospheric chemistry: Integrating over fractional cloud cover. Journal of Geophysical Research, 2007, 112, .	3.3	76
32	Possible variations in atmospheric ozone related to the elevenâ€year solar cycle. Geophysical Research Letters, 1978, 5, 817-820.	4.0	65
33	Coupled IMPACT aerosol and NCAR CAM3 model: Evaluation of predicted aerosol number and size distribution. Journal of Geophysical Research, 2009, 114, .	3.3	64
34	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
35	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
36	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

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37	Aerosols at the poles: an AeroCom Phase II multi-model evaluation. Atmospheric Chemistry and Physics, 2017, 17, 12197-12218.	4.9	58
38	Block-Structured Adaptive Grids on the Sphere: Advection Experiments. Monthly Weather Review, 2006, 134, 3691-3713.	1.4	57
39	A dynamic aerosol module for global chemical transport models: Model description. Journal of Geophysical Research, 2004, 109, .	3.3	56
40	Precipitation changes in a GCM resulting from the indirect effects of anthropogenic aerosols. Geophysical Research Letters, 2000, 27, 3045-3048.	4.0	55
41	Dehydration effects from contrails in a coupled contrailâ€"climate model. Atmospheric Chemistry and Physics, 2015, 15, 11179-11199.	4.9	53
42	Uncertainties in the smoke source term for â€˜nuclear winterâ€™ studies. Nature, 1986, 324, 222-226.	27.8	50
43	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
44	Constraining the Twomey effect from satellite observations: issues and perspectives. Atmospheric Chemistry and Physics, 2020, 20, 15079-15099.	4.9	49
45	Decrease in radiative forcing by organic aerosol nucleation, climate, and land use change. Nature Communications, 2019, 10, 423.	12.8	47
46	Aerosol effects on liquidâ€water path of thin stratocumulus clouds. Journal of Geophysical Research, 2009, 114, .	3.3	46
47	Anthropogenic Aerosol Indirect Effects in Cirrus Clouds. Journal of Geophysical Research D: Atmospheres, 2018, 123, 11652-11677.	3.3	46
48	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
49	Short-lived uncertainty?. Nature Geoscience, 2010, 3, 587-588.	12.9	42
50	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
51	Radiative forcing by light-absorbing aerosols of pyrogenetic iron oxides. Scientific Reports, 2018, 8, 7347.	3.3	37
52	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
53	Observation and integrated Earth-system science: A roadmap for 2016â€"2025. Advances in Space Research, 2016, 57, 2037-2103.	2.6	35
54	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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55	The Role of Atmospheric Chemistry in Climate Change. Japca, 1989, 39, 22-28.	0.3	32
56	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
57	How will SOA change in the future?. Geophysical Research Letters, 2016, 43, 1718-1726.	4.0	30
58	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
59	Can cirrus cloud seeding be used for geoengineering?. Geophysical Research Letters, 2015, 42, 8775-8782.	4.0	29
60	Aerosol water parameterisation: aÂsingle parameter framework. Atmospheric Chemistry and Physics, 2016, 16, 7213-7237.	4.9	28
61	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
62	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
63	Effects of cloud overlap in photochemical models. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	24
64	Brown carbon from biomass burning imposes strong circum-Arctic warming. One Earth, 2022, 5, 293-304.	6.8	23
65	Transport of black carbon to polar regions: Sensitivity and forcing by black carbon. Geophysical Research Letters, 2012, 39, .	4.0	19
66	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
67	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
68	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
69	Soot, sulfate, dust and the climate â€" three ways through the fog. Nature, 2019, 570, 158-159.	27.8	18
70	Consistent estimates from satellites and models for the first aerosol indirect forcing. Geophysical Research Letters, 2012, 39, .	4.0	17
71	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
72	What controls the low ice number concentration in the upper troposphere?. Atmospheric Chemistry and Physics, 2016, 16, 12411-12424.	4.9	15

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73	Global Modeling of Secondary Organic Aerosol With Organic Nucleation. Journal of Geophysical Research D: Atmospheres, 2019, 124, 8260-8286.	3.3	15
74	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
75	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
76	Indirect Effects of Secondary Organic Aerosol on Cirrus Clouds. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032233.	3.3	8
77	Cloudy-sky contributions to the direct aerosol effect. Atmospheric Chemistry and Physics, 2020, 20, 8855-8865.	4.9	8
78	Decreased Aviation Leads to Increased Ice Crystal Number and a Positive Radiative Effect in Cirrus Clouds. AGU Advances, 2022, 3, .	5.4	7
79	ARM-Led Improvements in Aerosols in Climate and Climate Models. Meteorological Monographs, 2016, 57, 27.1-27.12.	5.0	4
80	Effect of black carbon on mid-troposphere and surface temperature trends. , 0, , 18-33.		1
81	Natalia Andronova (1953-2014). Eos, 2014, 95, 353-353.	0.1	0
82	The formation mechanism and radiative effect of secondary organic aerosols. , 2021, , 57-100.		0