Corinna Hoose

List of Publications by Year
in descending order

80 papers	8,914 citations	101384 36 h-index	66788 78 g-index
136 all docs	136 docs citations	136 times ranked	7911 citing authors

#	Article	IF	Citations
1	Primary biological aerosol particles in the atmosphere: a review. Tellus, Series B: Chemical and Physical Meteorology, 2022, 64, 15598.	0.8	988
2	Heterogeneous ice nucleation on atmospheric aerosols: a review of results from laboratory experiments. Atmospheric Chemistry and Physics, 2012, 12, 9817-9854.	1.9	923
3	The Norwegian Earth System Model, NorESM1-M â€“ Part 1: Description and basic evaluation of the physical climate. Geoscientific Model Development, 2013, 6, 687-720.	1.3	725
4	Clarifying the Dominant Sources and Mechanisms of Cirrus Cloud Formation. Science, 2013, 340, 1320-1324.	6.0	442
5	Aerosol indirect effects â€“ general circulation model intercomparison and evaluation with satellite data. Atmospheric Chemistry and Physics, 2009, 9, 8697-8717.	1.9	418
6	Cloud microphysics and aerosol indirect effects in the global climate model ECHAM5-HAM. Atmospheric Chemistry and Physics, 2007, 7, 3425-3446.	1.9	385
7	A Classical-Theory-Based Parameterization of Heterogeneous Ice Nucleation by Mineral Dust, Soot, and Biological Particles in a Global Climate Model. Journals of the Atmospheric Sciences, 2010, 67, 2483-2503.	0.6	348
8	A Particle-Surface-Area-Based Parameterization of Immersion Freezing on Desert Dust Particles. Journals of the Atmospheric Sciences, 2012, 69, 3077-3092.	0.6	338
9	General overview: European Integrated project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI) â€“ integrating aerosol research from nano to global scales. Atmospheric Chemistry and Physics, 2011, 11, 13061-13143.	1.9	278
10	How important is biological ice nucleation in clouds on a global scale?. Environmental Research Letters, 2010, 5, 024009.	2.2	245
11	Ice nuclei in marine air: biogenic particles or dust?. Atmospheric Chemistry and Physics, 2013, 13, 245-267.	1.9	226
12	Intercomparison of model simulations of mixedâ€phase clouds observed during the ARM Mixedâ€Phase Arctic Cloud Experiment. I: singleâ€layer cloud. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 979-1002.	1.0	224
13	Sensitivity studies of different aerosol indirect effects in mixed-phase clouds. Atmospheric Chemistry and Physics, 2009, 9, 8917-8934.	1.9	175
14	Largeâ€eddy simulations over Germany using ICON: a comprehensive evaluation. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 69-100.	1.0	175
15	Aerosolâ€“climate interactions in the Norwegian Earth System Model â€“ NorESM1-M. Geoscientific Model Development, 2013, 6, 207-244.	1.3	158
16	Confronting the Challenge of Modeling Cloud and Precipitation Microphysics. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001689.	1.3	154
17	A New Ice Nucleation Active Site Parameterization for Desert Dust and Soot. Journals of the Atmospheric Sciences, 2017, 74, 699-717.	0.6	153
18	Classical nucleation theory of homogeneous freezing of water: thermodynamic and kinetic parameters. Physical Chemistry Chemical Physics, 2015, 17, 5514-5537.	1.3	151

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19	The global influence of dust mineralogical composition on heterogeneous ice nucleation in mixed-phase clouds. Environmental Research Letters, 2008, 3, 025003.	2.2	149
20	Constraining cloud droplet number concentration in GCMs suppresses the aerosol indirect effect. Geophysical Research Letters, 2009, 36, .	1.5	125
21	Intercomparison of largeâ€eddy simulations of Arctic mixedâ€phase clouds: Importance of ice size distribution assumptions. Journal of Advances in Modeling Earth Systems, 2014, 6, 223-248.	1.3	114
22	Influences of in-cloud aerosol scavenging parameterizations on aerosol concentrations and wet deposition in ECHAM5-HAM. Atmospheric Chemistry and Physics, 2010, 10, 1511-1543.	1.9	109
23	Ice nucleation by cellulose and its potential contribution to ice formation in clouds. Nature Geoscience, 2015, 8, 273-277.	5.4	105
24	Different contact angle distributions for heterogeneous ice nucleation in the Community Atmospheric Model version 5. Atmospheric Chemistry and Physics, 2014, 14, 10411-10430.	1.9	99
25	Intercomparison of model simulations of mixedâ€phase clouds observed during the ARM Mixedâ€Phase Arctic Cloud Experiment. II: Multilayer cloud. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 1003-1019.	1.0	84
26	Global simulations of aerosol processing in clouds. Atmospheric Chemistry and Physics, 2008, 8, 6939-6963.	1.9	71
27	Quantification of ice nuclei active at near 0 Â°C temperatures in low-altitude clouds at the Puy de DÃ´me atmospheric station. Atmospheric Chemistry and Physics, 2014, 14, 8185-8195.	1.9	67
28	Global modeling of mixed-phase clouds: The albedo and lifetime effects of aerosols. Journal of Geophysical Research, 2011, 116, .	3.3	60
29	Ice nucleation properties of fine ash particles from the EyjafjallajÃ¶kull eruption in April 2010. Atmospheric Chemistry and Physics, 2011, 11, 12945-12958.	1.9	60
30	Soot microphysical effects on liquid clouds, a multi-model investigation. Atmospheric Chemistry and Physics, 2011, 11, 1051-1064.	1.9	58
31	A model intercomparison of CCN-limited tenuous clouds in the high Arctic. Atmospheric Chemistry and Physics, 2018, 18, 11041-11071.	1.9	54
32	Initiation of secondary ice production in clouds. Atmospheric Chemistry and Physics, 2018, 18, 1593-1610.	1.9	53
33	Impact of the representation of marine stratocumulus clouds on the anthropogenic aerosol effect. Atmospheric Chemistry and Physics, 2014, 14, 11997-12022.	1.9	52
34	A model of dust transport applied to the Dead Sea Area. Meteorologische Zeitschrift, 2006, 15, 611-624.	0.5	50
35	Ice nucleation activity of agricultural soil dust aerosols from Mongolia, Argentina, and Germany. Journal of Geophysical Research D: Atmospheres, 2016, 121, 13,559.	1.2	49
36	Seasonal variability of Saharan desert dust and ice nucleating particles over Europe. Atmospheric Chemistry and Physics, 2015, 15, 4389-4397.	1.9	47

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37	Regional-scale simulations of fungal spore aerosols using an emission parameterization adapted to local measurements of fluorescent biological aerosol particles. Atmospheric Chemistry and Physics, 2015, 15, 6127-6146.	1.9	44
38	Uncertainty associated with convective wet removal of entrained aerosols in a global climate model. Atmospheric Chemistry and Physics, 2012, 12, 10725-10748.	1.9	43
39	Modelling micro- and macrophysical contributors to the dissipation of an Arctic mixed-phase cloud during the Arctic Summer Cloud Ocean Study (ASCOS). Atmospheric Chemistry and Physics, 2017, 17, 6693-6704.	1.9	39
40	A new temperature- and humidity-dependent surface site density approach for deposition ice nucleation. Atmospheric Chemistry and Physics, 2015, 15, 3703-3717.	1.9	36
41	Aerosol processing in mixedâ€phase clouds in ECHAM5â€HAM: Model description and comparison to observations. Journal of Geophysical Research, 2008, 113, .	3.3	33
42	Parameterizing cloud condensation nuclei concentrations during HOPE. Atmospheric Chemistry and Physics, 2016, 16, 12059-12079.	1.9	33
43	Impacts of Varying Concentrations of Cloud Condensation Nuclei on Deep Convective Cloud Updraftsâ€"A Multimodel Assessment. Journals of the Atmospheric Sciences, 2021, 78, 1147-1172.	0.6	33
44	Modeling immersion freezing with aerosolâ€dependent prognostic ice nuclei in Arctic mixedâ€phase clouds. Journal of Geophysical Research D: Atmospheres, 2014, 119, 9073-9092.	1.2	32
45	Spatial and temporal variability of clouds and precipitation over Germany: multiscale simulations across the "gray zone". Atmospheric Chemistry and Physics, 2015, 15, 12361-12384.	1.9	28
46	Partitioning the primary ice formation modes in large eddy simulations of mixed-phase clouds. Atmospheric Chemistry and Physics, 2017, 17, 14105-14118.	1.9	26
47	One Step at a Time: How Model Time Step Significantly Affects Convectionâ€Permitting Simulations. Journal of Advances in Modeling Earth Systems, 2019, 11, 641-658.	1.3	26
48	Aerosol Effects on Clouds and Precipitation over Central Europe in Different Weather Regimes. Journals of the Atmospheric Sciences, 2018, 75, 4247-4264.	0.6	24
49	Do anthropogenic aerosols enhance or suppress the surface cloud forcing in the Arctic?. Journal of Geophysical Research, 2010, 115, .	3.3	23
50	Classification of Arctic multilayer clouds using radiosonde and radar data in Svalbard. Atmospheric Chemistry and Physics, 2019, 19, 5111-5126.	1.9	23
51	Investigating the contribution of secondary ice production to inâ€cloud ice crystal numbers. Journal of Geophysical Research D: Atmospheres, 2017, 122, 9391-9412.	1.2	22
52	Comparing the impact of environmental conditions and microphysics on the forecast uncertainty of deep convective clouds and hail. Atmospheric Chemistry and Physics, 2020, 20, 2201-2219.	1.9	22
53	Sensitivity of the 2014 Pentecost storms over Germany to different model grids and microphysics schemes. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 1485-1503.	1.0	21
54	Detection and attribution of aerosolâ€"cloud interactions in large-domain large-eddy simulations with the ICOsahedral Non-hydrostatic model. Atmospheric Chemistry and Physics, 2020, 20, 5657-5678.	1.9	20

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55	The Research Unit VolImpact: Revisiting the volcanic impact on atmosphere and climateÂâ€“ preparations for the next big volcanic eruption. Meteorologische Zeitschrift, 2020, 29, 3-18.	0.5	20
56	The precipitation response to variable terrain forcing over low mountain ranges in different weather regimes. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 970-989.	1.0	19
57	The effect of secondary ice production parameterization on the simulation of a cold frontal rainband. Atmospheric Chemistry and Physics, 2018, 18, 16461-16480.	1.9	19
58	The impact of mineral dust on cloud formation during the Saharan dust event in AprilÂ2014 over Europe. Atmospheric Chemistry and Physics, 2018, 18, 17545-17572.	1.9	19
59	A comprehensive parameterization of heterogeneous ice nucleation of dust surrogate: laboratory study with hematite particles and its application to atmospheric models. Atmospheric Chemistry and Physics, 2014, 14, 13145-13158.	1.9	18
60	Simulating the influence of primary biological aerosol particles on clouds by heterogeneous ice nucleation. Atmospheric Chemistry and Physics, 2018, 18, 15437-15450.	1.9	17
61	Using Emulators to Understand the Sensitivity of Deep Convective Clouds and Hail to Environmental Conditions. Journal of Advances in Modeling Earth Systems, 2018, 10, 3103-3122.	1.3	16
62	Relative impact of aerosol, soil moisture, and orography perturbations on deep convection. Atmospheric Chemistry and Physics, 2019, 19, 12343-12359.	1.9	15
63	Redistribution of ice nuclei between cloud and rain droplets: Parameterization and application to deep convective clouds. Journal of Advances in Modeling Earth Systems, 2017, 9, 514-535.	1.3	13
64	Online treatment of eruption dynamics improves the volcanic ash and SO₂ dispersion forecast: case of the 2019 Raikoke eruption. Atmospheric Chemistry and Physics, 2022, 22, 3535-3552.	1.9	13
65	Cloud glaciation temperature estimation from passive remote sensing data with evolutionary computing. Journal of Geophysical Research D: Atmospheres, 2016, 121, 13,591.	1.2	11
66	Detection of Mixedâ€Phase Convective Clouds by a Binary Phase Information From the Passive Geostationary Instrument SEVIRI. Journal of Geophysical Research D: Atmospheres, 2019, 124, 5045-5057.	1.2	10
67	Exploring the Cloud Top Phase Partitioning in Different Cloud Types Using Active and Passive Satellite Sensors. Geophysical Research Letters, 2021, 48, e2020GL089863.	1.5	10
68	Simulated and observed horizontal inhomogeneities of optical thickness of Arctic stratus. Atmospheric Chemistry and Physics, 2018, 18, 13115-13133.	1.9	7
69	Aerosolâ€Cloudâ€Precipitation Interactions in the Context of Convective Selfâ€Aggregation. Journal of Advances in Modeling Earth Systems, 2019, 11, 1066-1087.	1.3	7
70	Ocean algae and atmospheric ice. Nature Geoscience, 2011, 4, 76-77.	5.4	6
71	Analysis of the Thermodynamic Phase Transition of Tracked Convective Clouds Based on Geostationary Satellite Observations. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032146.	1.2	6
72	Biological ice formation. Nature Geoscience, 2009, 2, 385-386.	5.4	5

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73	Aerosol- and Droplet-Dependent Contact Freezing: Parameterization Development and Case Study. Journals of the Atmospheric Sciences, 2017, 74, 2229-2245.	0.6	5
74	Waves to Weather: Exploring the Limits of Predictability of Weather. Bulletin of the American Meteorological Society, 2021, 102, E2151-E2164.	1.7	5
75	Cloud Top Phase Distributions of Simulated Deep Convective Clouds. Journal of Geophysical Research D: Atmospheres, 2018, 123, 10,464.	1.2	4
76	Analyzing the Thermodynamic Phase Partitioning of Mixed Phase Clouds Over the Southern Ocean Using Passive Satellite Observations. Geophysical Research Letters, 2021, 48, e2021GL093225.	1.5	4
77	Comparison of Modeled and Measured Ice Nucleating Particle Composition in a Cirrus Cloud. Journals of the Atmospheric Sciences, 2019, 76, 1015-1029.	0.6	3
78	Another Piece of Evidence for Important but Uncertain Ice Multiplication Processes. AGU Advances, 2022, 3, .	2.3	2
79	Implement a classical-theory-based parameterization of heterogeneous ice nucleation in CAM5. , 2013, , .		0
80	Parameterizations of ice formation derived from AIDA cloud simulation experiments. , 2013, , .		0