Jiwen Fan

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/134242/publications.pdf

Version: 2024-02-01

118 papers	8,732 citations	50276 46 h-index	46799 89 g-index
138 all docs	138 docs citations	138 times ranked	6859 citing authors

#	Article	IF	Citations
1	Aerosol and monsoon climate interactions over Asia. Reviews of Geophysics, 2016, 54, 866-929.	23.0	591
2	Recent advances in understanding secondary organic aerosol: Implications for global climate forcing. Reviews of Geophysics, 2017, 55, 509-559.	23.0	548
3	Long-term impacts of aerosols on the vertical development of clouds and precipitation. Nature Geoscience, 2011, 4, 888-894.	12.9	483
4	Review of Aerosolâ€“Cloud Interactions: Mechanisms, Significance, and Challenges. Journals of the Atmospheric Sciences, 2016, 73, 4221-4252.	1.7	439
5	Substantial convection and precipitation enhancements by ultrafineaerosol particles. Science, 2018, 359, 411-418.	12.6	290
6	Microphysical effects determine macrophysical response for aerosol impacts on deep convective clouds. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E4581-90.	7.1	274
7	Dominant role by vertical wind shear in regulating aerosol effects on deep convective clouds. Journal of Geophysical Research, 2009, 114, .	3.3	265
8	Heavy pollution suppresses light rain in China: Observations and modeling. Journal of Geophysical Research, 2009, 114, .	3.3	255
9	Indirect and Semi-direct Aerosol Campaign. Bulletin of the American Meteorological Society, 2011, 92, 183-201.	3.3	228
10	Intensification of Pacific storm track linked to Asian pollution. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 5295-5299.	7.1	213
11	Introduction: Observations and Modeling of the Green Ocean Amazon (GoAmazon2014/5). Atmospheric Chemistry and Physics, 2016, 16, 4785-4797.	4.9	213
12	Effects of aerosols and relative humidity on cumulus clouds. Journal of Geophysical Research, 2007, 112, .	3.3	197
13	East Asian Study of Tropospheric Aerosols and their Impact on Regional Clouds, Precipitation, and Climate (EASTâ€AIR_{CPC}). Journal of Geophysical Research D: Atmospheres, 2019, 124, 13026-13054.	3.3	175
14	Impacts of black carbon aerosol on photolysis and ozone. Journal of Geophysical Research, 2005, 110, .	3.3	158
15	Aerosol impacts on clouds and precipitation in eastern China: Results from bin and bulk microphysics. Journal of Geophysical Research, 2012, 117, .	3.3	152
16	Structure and Evolution of Mesoscale Convective Systems: Sensitivity to Cloud Microphysics in Convectionâ€Permitting Simulations Over the United States. Journal of Advances in Modeling Earth Systems, 2018, 10, 1470-1494.	3.8	145
17	Substantial contribution of anthropogenic air pollution to catastrophic floods in Southwest China. Geophysical Research Letters, 2015, 42, 6066-6075.	4.0	144
18	Increase of cloud droplet size with aerosol optical depth: An observation and modeling study. Journal of Geophysical Research, 2008, 113, .	3.3	138

#	Article	IF	Citations
19	Atmospheric Oxidation Mechanism of Isoprene. Environmental Chemistry, 2004, 1, 140.	1.5	134
20	Urbanization-induced urban heat island and aerosol effects on climate extremes in the Yangtze River Delta region of China. Atmospheric Chemistry and Physics, 2017, 17, 5439-5457.	4.9	133
21	Urban pollution greatly enhances formation of natural aerosols over the Amazon rainforest. Nature Communications, 2019, 10, 1046.	12.8	131
22	The Green Ocean Amazon Experiment (GoAmazon2014/5) Observes Pollution Affecting Gases, Aerosols, Clouds, and Rainfall over the Rain Forest. Bulletin of the American Meteorological Society, 2017, 98, 981-997.	3.3	128
23	Effects of aerosol optical properties on deep convective clouds and radiative forcing. Journal of Geophysical Research, 2008, 113, .	3.3	114
24	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.	3.8	114
25	A comparison of TWPâ€ICE observational data with cloudâ€resolving model results. Journal of Geophysical Research, 2012, 117, .	3.3	108
26	Cloudâ€resolving model intercomparison of an MC3E squall line case: Part Iâ€”Convective updrafts. Journal of Geophysical Research D: Atmospheres, 2017, 122, 9351-9378.	3.3	106
27	Aerosol impacts on California winter clouds and precipitation during CalWater 2011: local pollution versus long-range transported dust. Atmospheric Chemistry and Physics, 2014, 14, 81-101.	4.9	101
28	Evaluation of cloudâ€resolving and limited area model intercomparison simulations using TWPâ€ICE observations: 1. Deep convective updraft properties. Journal of Geophysical Research D: Atmospheres, 2014, 119, 13,891.	3.3	100
29	Potential aerosol indirect effects on atmospheric circulation and radiative forcing through deep convection. Geophysical Research Letters, 2012, 39, .	4.0	99
30	Evaluation of cloud-resolving model intercomparison simulations using TWP-ICE observations: Precipitation and cloud structure. Journal of Geophysical Research, 2011, 116, .	3.3	90
31	Intercomparison of cloud model simulations of Arctic mixed-phase boundary layer clouds observed during SHEBA/FIRE-ACE. Journal of Advances in Modeling Earth Systems, 2011, 3, n/a-n/a.	3.8	90
32	Ice formation in Arctic mixedâ€phase clouds: Insights from a 3â€D cloudâ€resolving model with sizeâ€resolved aerosol and cloud microphysics. Journal of Geophysical Research, 2009, 114, .	3.3	89
33	Effects of cloud condensation nuclei and ice nucleating particles on precipitation processes and supercooled liquid in mixed-phase orographic clouds. Atmospheric Chemistry and Physics, 2017, 17, 1017-1035.	4.9	71
34	Improving bulk microphysics parameterizations in simulations of aerosol effects. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5361-5379.	3.3	69
35	Contribution of secondary condensable organics to new particle formation: A case study in Houston, Texas. Geophysical Research Letters, 2006, 33, .	4.0	67
36	Simulations of cumulus clouds using a spectral microphysics cloud-resolving model. Journal of Geophysical Research, 2007, 112, .	3.3	63

#	Article	IF	Citations
37	Representation of Arctic mixed-phase clouds and the Wegener-Bergeron-Findeisen process in climate models: Perspectives from a cloud-resolving study. Journal of Geophysical Research, 2011, 116, .	3.3	63
38	Precipitation and air pollution at mountain and plain stations in northern China: Insights gained from observations and modeling. Journal of Geophysical Research D: Atmospheres, 2014, 119, 4793-4807.	3.3	63
39	Impacts of biogenic emissions on photochemical ozone production in Houston, Texas. Journal of Geophysical Research, 2007, 112, .	3.3	62
40	Ice nucleation by aerosols from anthropogenic pollution. Nature Geoscience, 2019, 12, 602-607.	12.9	62
41	Improving representation of convective transport for scaleâ€aware parameterization: 1. Convection and cloud properties simulated with spectral bin and bulk microphysics. Journal of Geophysical Research D: Atmospheres, 2015, 120, 3485-3509.	3.3	57
42	Can the GPM IMERG Final Product Accurately Represent MCSsâ€™ Precipitation Characteristics over the Central and Eastern United States?. Journal of Hydrometeorology, 2020, 21, 39-57.	1.9	57
43	Aerosol transport and wet scavenging in deep convective clouds: A case study and model evaluation using a multiple passive tracer analysis approach. Journal of Geophysical Research D: Atmospheres, 2015, 120, 8448-8468.	3.3	56
44	Idealized Simulations of a Squall Line from the MC3E Field Campaign Applying Three Bin Microphysics Schemes: Dynamic and Thermodynamic Structure. Monthly Weather Review, 2017, 145, 4789-4812.	1.4	55
45	The cloud condensation nuclei and ice nuclei effects on tropical anvil characteristics and water vapor of the tropical tropopause layer. Environmental Research Letters, 2010, 5, 044005.	5.2	50
46	Laboratory measurements and model sensitivity studies of dust deposition ice nucleation. Atmospheric Chemistry and Physics, 2012, 12, 7295-7308.	4.9	49
47	High concentration of ultrafine particles in the Amazon free troposphere produced by organic new particle formation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 25344-25351.	7.1	49
48	Roles of wind shear at different vertical levels: Cloud system organization and properties. Journal of Geophysical Research D: Atmospheres, 2015, 120, 6551-6574.	3.3	48
49	Atmospheric Oxidation Mechanism of p-Xylene:â€‰ A Density Functional Theory Study. Journal of Physical Chemistry A, 2006, 110, 7728-7737.	2.5	47
50	Evaluation of cloudâ€resolving and limited area model intercomparison simulations using TWPâ€ICE observations: 2. Precipitation microphysics. Journal of Geophysical Research D: Atmospheres, 2014, 119, 13,919.	3.3	47
51	The mechanisms and seasonal differences of the impact of aerosols on daytime surface urban heat island effect. Atmospheric Chemistry and Physics, 2020, 20, 6479-6493.	4.9	44
52	Cloudâ€Resolving Model Intercomparison of an MC3E Squall Line Case: Part II. Stratiform Precipitation Properties. Journal of Geophysical Research D: Atmospheres, 2019, 124, 1090-1117.	3.3	43
53	Pollution from China increases cloud droplet number, suppresses rain over the East China Sea. Geophysical Research Letters, 2011, 38, .	4.0	42
54	What Drives the Life Cycle of Tropical Anvil Clouds?. Journal of Advances in Modeling Earth Systems, 2019, 11, 2586-2605.	3.8	42

#	Article	IF	Citations
55	Effects of ice number concentration on dynamics of a shallow mixed-phase stratiform cloud. Journal of Geophysical Research, 2011, 116, .	3.3	41
56	Simulations of fine particulate matter (PM2.5) in Houston, Texas. Journal of Geophysical Research, 2005, 110, .	3.3	34
57	Investigation of aerosol indirect effects using a cumulus microphysics parameterization in a regional climate model. Journal of Geophysical Research D: Atmospheres, 2014, 119, 906-926.	3.3	34
58	Overview: Precipitation characteristics and sensitivities to environmental conditions during GoAmazon2014/5 and ACRIDICON-CHUVA. Atmospheric Chemistry and Physics, 2018, 18, 6461-6482.	4.9	34
59	Density Functional Theory Study on OH-Initiated Atmospheric Oxidation of m-Xylene. Journal of Physical Chemistry A, 2008, 112, 4314-4323.	2.5	33
60	Quantifying the impact of dust on heterogeneous ice generation in midlevel supercooled stratiform clouds. Geophysical Research Letters, 2012, 39, .	4.0	33
61	A study of cloud microphysics and precipitation over the Tibetan Plateau by radar observations and cloudâ€resolving model simulations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 13,735.	3.3	33
62	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.	1.7	33
63	Urbanization-induced land and aerosol impacts on sea-breeze circulation and convective precipitation. Atmospheric Chemistry and Physics, 2020, 20, 14163-14182.	4.9	33
64	Threeâ€Moment Representation of Rain in a Bulk Microphysics Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 257-277.	3.8	32
65	Tropical anvil characteristics and water vapor of the tropical tropopause layer: Impact of heterogeneous and homogeneous freezing parameterizations. Journal of Geophysical Research, 2010, 115, .	3.3	30
66	Mechanisms Contributing to Suppressed Precipitation in Mt. Hua of Central China. Part I: Mountain Valley Circulation. Journals of the Atmospheric Sciences, 2016, 73, 1351-1366.	1.7	30
67	Impacts of the Manaus pollution plume on the microphysical properties of Amazonian warm-phase clouds in the wet season. Atmospheric Chemistry and Physics, 2016, 16, 7029-7041.	4.9	29
68	Large-Eddy Simulation of Shallow Cumulus over Land: A Composite Case Based on ARM Long-Term Observations at Its Southern Great Plains Site. Journals of the Atmospheric Sciences, 2017, 74, 3229-3251.	1.7	28
69	Analysis of cloudâ€resolving simulations of a tropical mesoscale convective system observed during TWPâ€ICE: Vertical fluxes and draft properties in convective and stratiform regions. Journal of Geophysical Research, 2012, 117, .	3.3	26
70	Theoretical study of OH addition to Î±-pinene and Î²-pinene. Chemical Physics Letters, 2005, 411, 1-7.	2.6	24
71	Ice Concentration Retrieval in Stratiform Mixed-Phase Clouds Using Cloud Radar Reflectivity Measurements and 1D Ice Growth Model Simulations. Journals of the Atmospheric Sciences, 2014, 71, 3613-3635.	1.7	22
72	Incorporating an advanced aerosol activation parameterization into WRFâ€CAM5: Model evaluation and parameterization intercomparison. Journal of Geophysical Research D: Atmospheres, 2015, 120, 6952-6979.	3.3	21

#	Article	IF	Citations
73	Improving representation of convective transport for scaleâ€aware parameterization: 2. Analysis of cloudâ€resolving model simulations. Journal of Geophysical Research D: Atmospheres, 2015, 120, 3510-3532.	3.3	21
74	Extreme Convective Storms Over Highâ€Latitude Continental Areas Where Maximum Warming Is Occurring. Geophysical Research Letters, 2019, 46, 4059-4065.	4.0	21
75	Simulating a Mesoscale Convective System Using WRF With a New Spectral Bin Microphysics: 1: Hail vs Graupel. Journal of Geophysical Research D: Atmospheres, 2019, 124, 14072-14101.	3.3	21
76	Wildfire Impact on Environmental Thermodynamics and Severe Convective Storms. Geophysical Research Letters, 2019, 46, 10082-10093.	4.0	20
77	Impacts of cloud microphysics parameterizations on simulated aerosolâ€“cloud interactions for deep convective clouds over Houston. Atmospheric Chemistry and Physics, 2021, 21, 2363-2381.	4.9	20
78	Coupling spectralâ€bin cloud microphysics with the MOSAIC aerosol model in WRFâ€Chem: Methodology and results for marine stratocumulus clouds. Journal of Advances in Modeling Earth Systems, 2016, 8, 1289-1309.	3.8	19
79	Rapid growth of anthropogenic organic nanoparticles greatly alters cloud life cycle in the Amazon rainforest. Science Advances, 2022, 8, eabj0329.	10.3	19
80	Multi-year application of WRF-CAM5 over East Asia-Part I: Comprehensive evaluation and formation regimes of O3 and PM2.5. Atmospheric Environment, 2017, 165, 122-142.	4.1	18
81	Investigating the impacts of Saharan dust on tropical deep convection using spectral bin microphysics. Atmospheric Chemistry and Physics, 2018, 18, 12161-12184.	4.9	18
82	The Detection of Mesoscale Convective Systems by the GPM Ku-Band Spaceborne Radar. Journal of the Meteorological Society of Japan, 2019, 97, 1059-1073.	1.8	17
83	Aerosol Impacts on Mesoscale Convective Systems Forming Under Different Vertical Wind Shear Conditions. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2018JD030027.	3.3	17
84	Better calibration of cloud parameterizations and subgrid effects increases the fidelity of the E3SM Atmosphere Model version 1. Geoscientific Model Development, 2022, 15, 2881-2916.	3.6	17
85	Retrievals of ice cloud microphysical properties of deep convective systems using radar measurements. Journal of Geophysical Research D: Atmospheres, 2016, 121, 10,820.	3.3	16
86	Urbanization-Induced Land and Aerosol Impacts on Storm Propagation and Hail Characteristics. Journals of the Atmospheric Sciences, 2021, 78, 925-947.	1.7	16
87	Role of liquid phase in the development of ice phase in monsoon clouds: Aircraft observations and numerical simulations. Atmospheric Research, 2019, 229, 157-174.	4.1	15
88	An Analysis of Coordinated Observations from NOAAâ€™s Ronald H. Brown Ship and G-IV Aircraft in a Landfalling Atmospheric River over the North Pacific during CalWater-2015. Monthly Weather Review, 2017, 145, 3647-3669.	1.4	13
89	Comparison of aircraft measurements during GoAmazon2014/5 and ACRIDICON-CHUVA. Atmospheric Measurement Techniques, 2020, 13, 661-684.	3.1	12
90	Application of an Online-Coupled Regional Climate Model, WRF-CAM5, over East Asia for Examination of Ice Nucleation Schemes: Part II. Sensitivity to Heterogeneous Ice Nucleation Parameterizations and Dust Emissions. Climate, 2015, 3, 753-774.	2.8	11

#	Article	IF	Citations
91	Application of an Online-Coupled Regional Climate Model, WRF-CAM5, over East Asia for Examination of Ice Nucleation Schemes: Part I. Comprehensive Model Evaluation and Trend Analysis for 2006 and 2011. Climate, 2015, 3, 627-667.	2.8	11
92	Assessing the Resolution Adaptability of the Zhangâ€McFarlane Cumulus Parameterization With Spatial and Temporal Averaging. Journal of Advances in Modeling Earth Systems, 2017, 9, 2753-2770.	3.8	11
93	Can the Multiscale Modeling Framework (MMF) Simulate the MCSâ€Associated Precipitation Over the Central United States?. Journal of Advances in Modeling Earth Systems, 2019, 11, 4669-4686.	3.8	11
94	Parameterizing correlations between hydrometeor species in mixed-phase Arctic clouds. Journal of Geophysical Research, 2011, 116, .	3.3	10
95	Fine-scale application of WRF-CAM5 during a dust storm episode over East Asia: Sensitivity to grid resolutions and aerosol activation parameterizations. Atmospheric Environment, 2018, 176, 1-20.	4.1	10
96	Understanding Ice Cloudâ€Precipitation Properties of Three Modes of Mesoscale Convective Systems During PECAN. Journal of Geophysical Research D: Atmospheres, 2019, 124, 4121-4140.	3.3	10
97	Impact of a New Cloud Microphysics Parameterization on the Simulations of Mesoscale Convective Systems in E3SM. Journal of Advances in Modeling Earth Systems, 2021, 13, .	3.8	10
98	Comments on â€œA Unified Representation of Deep Moist Convection in Numerical Modeling of the Atmosphere. Part Iâ€• Journals of the Atmospheric Sciences, 2015, 72, 2562-2565.	1.7	9
99	Climatology of diablo winds in Northern California and their relationships with large-scale climate variabilities. Climate Dynamics, 2021, 56, 1335-1356.	3.8	8
100	Comments on â€œDo Ultrafine Cloud Condensation Nuclei Invigorate Deep Convection?â€• Journals of the Atmospheric Sciences, 2021, 78, 329-339.	1.7	8
101	Impacts of long-range-transported mineral dust on summertime convective cloud and precipitation: a case study over the Taiwan region. Atmospheric Chemistry and Physics, 2021, 21, 17433-17451.	4.9	8
102	Understanding Hailstone Temporal Variability and Contributing Factors over the U.S. Southern Great Plains. Journal of Climate, 2020, 33, 3947-3966.	3.2	7
103	Challenges for Cloud Modeling in the Context of Aerosolâ€“Cloudâ€“Precipitation Interactions. Bulletin of the American Meteorological Society, 2017, 98, 1749-1755.	3.3	6
104	Using radar observations to evaluate 3-D radar echo structure simulated by the Energy Exascale Earth System Model (E3SM) versionÂ1. Geoscientific Model Development, 2021, 14, 719-734.	3.6	5
105	Notable Contributions of Aerosols to the Predictability of Hail Precipitation. Geophysical Research Letters, 2021, 48, e2020GL091712.	4.0	5
106	Corrigendum to Aerosol impacts on California winter clouds and precipitation during CalWater 2011: local pollution versus long-range transported dust published in Atmos. Chem. Phys., 14, 81â€“101, 2014. Atmospheric Chemistry and Physics, 2014, 14, 3063-3064.	4.9	4
107	Evaluation of a multi-scale WRF-CAM5 simulation during the 2010 East Asian Summer Monsoon. Atmospheric Environment, 2017, 169, 204-217.	4.1	4
108	A Climatology and Extreme Value Analysis of Large Hail in China. Monthly Weather Review, 2020, 148, 1431-1447.	1.4	4

#	Article	IF	Citations
109	Spatial and temporal trends and variabilities of hailstones in the United States Northern Great Plains and their possible attributions. Journal of Climate, 2021, , 1-53.	3.2	4
110	Modeling impacts of ice-nucleating particles from marine aerosols on mixed-phase orographic clouds during 2015 ACAPEX field campaign. Atmospheric Chemistry and Physics, 2022, 22, 6749-6771.	4.9	4
111	Revealing Bias of Cloud Radiative Effect in WRF Simulation: Bias Quantification and Source Attribution. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	4
112	Analysis of Cloud-Resolving Model Simulations for Scale Dependence of Convective Momentum Transport. Journals of the Atmospheric Sciences, 2018, 75, 2445-2472.	1.7	3
113	Pathways of precipitation formation in different thermodynamic and aerosol environments over the Indian Peninsula. Atmospheric Research, 2022, 266, 105934.	4.1	3
114	Concerning the Aims and Scope for JAMES. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002567.	3.8	2
115	Development and Evaluation of an Explicit Treatment of Aerosol Processes at Cloud Scale Within a Multiâ€Scale Modeling Framework (MMF). Journal of Advances in Modeling Earth Systems, 2018, 10, 1663-1679.	3.8	1
116	Contrasting Responses of Hailstorms to Anthropogenic Climate Change in Different Synoptic Weather Systems. Earth's Future, 0, , .	6.3	1
117	Correction to â€œEvaluation of cloud-resolving model intercomparison simulations using TWP-ICE observations: Precipitation and cloud structureâ€. Journal of Geophysical Research, 2012, 117, n/a-n/a.	3.3	0
118	Thank You to Our 2021 Reviewers. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	0