Jerome D Fast

List of Publications by Year
in descending order

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103 papers	9,525 citations	47004 47 h-index	45310 90 g-index
104 all docs	104 docs citations	104 times ranked	7172 citing authors

#	Article	IF	Citations
1	Determining Spatial Scales of Soil Moistureâ€"Cloud Coupling Pathways Using Semiâ€Idealized Simulations. Journal of Geophysical Research D: Atmospheres, 2022, 127, e2021JD035282.	3.3	2
2	Enabling probabilistic retrospective transport modeling for accurate source detection. Journal of Environmental Radioactivity, 2022, 247, 106849.	1.7	1
3	The striking effect of vertical mixing in the planetary boundary layer on new particle formation in the Yangtze River Delta. Science of the Total Environment, 2022, 829, 154607.	8.0	11
4	Earth System Model Aerosolâ€"Cloud Diagnostics (ESMAC Diags) package, version 1: assessing E3SM aerosol predictions using aircraft, ship, and surface measurements. Geoscientific Model Development, 2022, 15, 4055-4076.	3.6	3
5	Fine scale variability in Green Vegetation Fraction Over the Southern Great Plains using Sentinel-2 satellite: A case study. Remote Sensing Applications: Society and Environment, 2022, 27, 100799.	1.5	0
6	Impact of Urban Pollution on Organic-Mediated New-Particle Formation and Particle Number Concentration in the Amazon Rainforest. Environmental Science & Technology, 2021, 55, 4357-4367.	10.0	12
7	Representations of Precipitation Diurnal Cycle in the Amazon as Simulated by Observationally Constrained Cloudâ€System Resolving and Global Climate Models. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002586.	3.8	7
8	Aerosol Total Volume Estimation From Wavelengthâ€and Sizeâ€Resolved Scattering Coefficient Data: A New Method. Earth and Space Science, 2020, 7, e2019EA000863.	2.6	1
9	Simulation of Continental Shallow Cumulus Populations Using an Observationâ€Constrained Cloudâ€System Resolving Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002091.	3.8	4
10	Characterization of Surface Heterogeneityâ€Induced Convection Using Cluster Analysis. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032550.	3.3	9
11	Assessing CLUBB PDF Closure Assumptions for a Continental Shallowâ€toâ€Deep Convective Transition Case Over Multiple Spatial Scales. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002145.	3.8	3
12	Wintertime Particulate Matter Decrease Buffered by Unfavorable Chemical Processes Despite Emissions Reductions in China. Geophysical Research Letters, 2020, 47, e2020GL087721.	4.0	40
13	Fineâ€Scale Variability of Observed and Simulated Surface Albedo Over the Southern Great Plains. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD030559.	3.3	5
14	Efficient Nighttime Biogenic SOA Formation in a Polluted Residual Layer. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031583.	3.3	14
15	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
16	The Multi-Scale Infrastructure for Chemistry and Aerosols (MUSICA). Bulletin of the American Meteorological Society, 2020, 101, E1743-E1760.	3.3	21
17	Overview of the HI-SCALE Field Campaign: A New Perspective on Shallow Convective Clouds. Bulletin of the American Meteorological Society, 2019, 100, 821-840.	3.3	44
18	The Impact of Variable Landâ€Atmosphere Coupling on Convective Cloud Populations Observed During the 2016 HIâ€SCALE Field Campaign. Journal of Advances in Modeling Earth Systems, 2019, 11, 2629-2654.	3.8	22

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19	Urban pollution greatly enhances formation of natural aerosols over the Amazon rainforest. Nature Communications, 2019, 10, 1046.	12.8	131
20	Global long-range transport and lung cancer risk from polycyclic aromatic hydrocarbons shielded by coatings of organic aerosol. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 1246-1251.	7.1	185
21	Large Contribution of Coarse Mode to Aerosol Microphysical and Optical Properties: Evidence from Ground-Based Observations of a Transpacific Dust Outbreak at a High-Elevation North American Site. Journals of the Atmospheric Sciences, 2017, 74, 1431-1443.	1.7	6
22	Quantifying black carbon deposition over the Greenland ice sheet from forest fires in Canada. Geophysical Research Letters, 2017, 44, 7965-7974.	4.0	41
23	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
24	Metrics to quantify the importance of mixing state for CCN activity. Atmospheric Chemistry and Physics, 2017, 17, 7445-7458.	4.9	33
25	Cross-polar transport and scavenging of Siberian aerosols containing black carbon during the 2012 ACCESS summer campaign. Atmospheric Chemistry and Physics, 2017, 17, 10969-10995.	4.9	24
26	Sensitivity of biogenic volatile organic compounds to land surface parameterizations and vegetation distributions in California. Geoscientific Model Development, 2016, 9, 1959-1976.	3.6	34
27	Investigation of boundary-layer wind predictions during nocturnal low-level jet events using the Weather Research and Forecasting model. Wind Energy, 2016, 19, 739-762.	4.2	15
28	The Twoâ€Column Aerosol Project: Phase Iâ€”Overview and impact of elevated aerosol layers on aerosol optical depth. Journal of Geophysical Research D: Atmospheres, 2016, 121, 336-361.	3.3	33
29	Sensitivity analysis of simulated SOA loadings using a varianceâ€based statistical approach. Journal of Advances in Modeling Earth Systems, 2016, 8, 499-519.	3.8	10
30	A threeâ€dimensional sectional representation of aerosol mixing state for simulating optical properties and cloud condensation nuclei. Journal of Geophysical Research D: Atmospheres, 2016, 121, 5912-5929.	3.3	21
31	Simulations of sulfateâ€“nitrateâ€“ammonium (SNA) aerosols during the extreme haze events over northern China in October 2014. Atmospheric Chemistry and Physics, 2016, 16, 10707-10724.	4.9	100
32	Spatial Variability of the Background Diurnal Cycle of Deep Convection around the GoAmazon2014/5 Field Campaign Sites. Journal of Applied Meteorology and Climatology, 2016, 55, 1579-1598.	1.5	38
33	Global transformation and fate of SOA: Implications of lowâ€volatility SOA and gasâ€phase fragmentation reactions. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4169-4195.	3.3	123
34	Modifications to <scp>WRF</scp>'s dynamical core to improve the treatment of moisture for largeâ€eddy simulations. Journal of Advances in Modeling Earth Systems, 2015, 7, 1627-1642.	3.8	8
35	Ice formation on nitric acidâ€coated dust particles: Laboratory and modeling studies. Journal of Geophysical Research D: Atmospheres, 2015, 120, 7682-7698.	3.3	18
36	Transport of anthropogenic and biomass burning aerosols from Europe to the Arctic during spring 2008. Atmospheric Chemistry and Physics, 2015, 15, 3831-3850.	4.9	25

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37	Modeling particle nucleation and growth over northern California during the 2010 CARES campaign. Atmospheric Chemistry and Physics, 2015, 15, 12283-12313.	4.9	25
38	Global and regional modeling of clouds and aerosols in the marine boundary layer during VOCALS: the VOCA intercomparison. Atmospheric Chemistry and Physics, 2015, 15, 153-172.	4.9	36
39	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
40	Airborne Aerosol in Situ Measurements during TCAP: A Closure Study of Total Scattering. Atmosphere, 2015, 6, 1069-1101.	2.3	16
41	A new WRF-Chem treatment for studying regional-scale impacts of cloud processes on aerosol and trace gases in parameterized cumuli. Geoscientific Model Development, 2015, 8, 409-429.	3.6	38
42	Assessing the CAM5 physics suite in the WRF-Chem model: implementation, resolution sensitivity, and a first evaluation for a regional case study. Geoscientific Model Development, 2014, 7, 755-778.	3.6	74
43	Gaseous chemistry and aerosol mechanism developments for version 3.5.1 of the online regional model, WRF-Chem. Geoscientific Model Development, 2014, 7, 2557-2579.	3.6	51
44	Integrated Meteorology and Chemistry Modeling: Evaluation and Research Needs. Bulletin of the American Meteorological Society, 2014, 95, ES81-ES84.	3.3	3
45	Modeling regional aerosol and aerosol precursor variability over California and its sensitivity to emissions and long-range transport during the 2010 CalNex and CARES campaigns. Atmospheric Chemistry and Physics, 2014, 14, 10013-10060.	4.9	62
46	Comparison of mixed layer heights from airborne high spectral resolution lidar, ground-based measurements, and the WRF-Chem model during CalNex and CARES. Atmospheric Chemistry and Physics, 2014, 14, 5547-5560.	4.9	70
47	Simulation of semi-explicit mechanisms of SOA formation from glyoxal in aerosol in a 3-D model. Atmospheric Chemistry and Physics, 2014, 14, 6213-6239.	4.9	166
48	Corrigendum to "Spectro-microscopic measurements of carbonaceous aerosol aging in Central California" published in Atmos. Chem. Phys., 13, 10445â€“10459, 2013. Atmospheric Chemistry and Physics, 2014, 14, 6343-6344.	4.9	0
49	Impact of external industrial sources on the regional and local SO₂ and O₃ levels of the Mexico megacity. Atmospheric Chemistry and Physics, 2014, 14, 8483-8499.	4.9	5
50	Volatility basis-set approach simulation of organic aerosol formation in East Asia: implications for anthropogenicâ€“biogenic interaction and controllable amounts. Atmospheric Chemistry and Physics, 2014, 14, 9513-9535.	4.9	43
51	Development of an aerosol microphysical module: Aerosol Two-dimensional bin module for foRmation and Aging Simulation (ATRAS). Atmospheric Chemistry and Physics, 2014, 14, 10315-10331.	4.9	33
52	Projections of future summertime ozone over the U.S.. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5559-5582.	3.3	69
53	The Separate Physics and Dynamics Experiment (SPADE) framework for determining resolution awareness: A case study of microphysics. Journal of Geophysical Research D: Atmospheres, 2013, 118, 9258-9276.	3.3	13
54	The Lagrangian particle dispersion model FLEXPART-WRF version 3.1. Geoscientific Model Development, 2013, 6, 1889-1904.	3.6	256

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55	Enhanced SOA formation from mixed anthropogenic and biogenic emissions during the CARES campaign. Atmospheric Chemistry and Physics, 2013, 13, 2091-2113.	4.9	146
56	Spectro-microscopic measurements of carbonaceous aerosol aging in Central California. Atmospheric Chemistry and Physics, 2013, 13, 10445-10459.	4.9	56
57	Pollution transport from North America to Greenland during summer 2008. Atmospheric Chemistry and Physics, 2013, 13, 3825-3848.	4.9	34
58	Spatial and temporal variations of new particle formation in East Asia using an NPFâ€explicit WRFâ€chem model: Northâ€south contrast in new particle formation frequency. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,647.	3.3	35
59	The role of circulation features on black carbon transport into the Arctic in the Community Atmosphere Model version 5 (CAM5). Journal of Geophysical Research D: Atmospheres, 2013, 118, 4657-4669.	3.3	64
60	Implications of low volatility SOA and gasâ€phase fragmentation reactions on SOA loadings and their spatial and temporal evolution in the atmosphere. Journal of Geophysical Research D: Atmospheres, 2013, 118, 3328-3342.	3.3	66
61	Development and validation of a black carbon mixing state resolved threeâ€dimensional model: Aging processes and radiative impact. Journal of Geophysical Research D: Atmospheres, 2013, 118, 2304-2326.	3.3	106
62	Modeling aerosols and their interactions with shallow cumuli during the 2007 CHAPS field study. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1343-1360.	3.3	30
63	Transport and mixing patterns over Central California during the carbonaceous aerosol and radiative effects study (CARES). Atmospheric Chemistry and Physics, 2012, 12, 1759-1783.	4.9	67
64	Characterization of submicron particles influenced by mixed biogenic and anthropogenic emissions using high-resolution aerosol mass spectrometry: results from CARES. Atmospheric Chemistry and Physics, 2012, 12, 8131-8156.	4.9	146
65	Overview of the 2010 Carbonaceous Aerosols and Radiative Effects Study (CARES). Atmospheric Chemistry and Physics, 2012, 12, 7647-7687.	4.9	94
66	Impact of natural and anthropogenic aerosols on stratocumulus and precipitation in the Southeast Pacific: a regional modelling study using WRF-Chem. Atmospheric Chemistry and Physics, 2012, 12, 8777-8796.	4.9	43
67	Physical and chemical properties of the regional mixed layer of Mexico's Megapolis Part II: evaluation of measured and modeled trace gases and particle size distributions. Atmospheric Chemistry and Physics, 2012, 12, 10161-10179.	4.9	2
68	Tropospheric chemistry of internally mixed sea salt and organic particles: Surprising reactivity of NaCl with weak organic acids. Journal of Geophysical Research, 2012, 117, .	3.3	224
69	Assessing regional scale predictions of aerosols, marine stratocumulus, and their interactions during VOCALS-REx using WRF-Chem. Atmospheric Chemistry and Physics, 2011, 11, 11951-11975.	4.9	99
70	Inclusion of biomass burning in WRF-Chem: impact of wildfires on weather forecasts. Atmospheric Chemistry and Physics, 2011, 11, 5289-5303.	4.9	208
71	Modeling organic aerosols in a megacity: comparison of simple and complex representations of the volatility basis set approach. Atmospheric Chemistry and Physics, 2011, 11, 6639-6662.	4.9	230
72	Evaluating WRF-Chem multi-scale model in simulating aerosol radiative properties over the tropics â€" A case study over India. Mapan - Journal of Metrology Society of India, 2011, 26, 269-284.	1.5	8

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73	The Aerosol Modeling Testbed: A Community Tool to Objectively Evaluate Aerosol Process Modules. Bulletin of the American Meteorological Society, 2011, 92, 343-360.	3.3	31
74	An overview of the MILAGRO 2006 Campaign: Mexico City emissions and their transport and transformation. Atmospheric Chemistry and Physics, 2010, 10, 8697-8760.	4.9	349
75	An investigation of the sub-grid variability of trace gases and aerosols for global climate modeling. Atmospheric Chemistry and Physics, 2010, 10, 6917-6946.	4.9	62
76	The spatial distribution of mineral dust and its shortwave radiative forcing over North Africa: modeling sensitivities to dust emissions and aerosol size treatments. Atmospheric Chemistry and Physics, 2010, 10, 8821-8838.	4.9	265
77	Microscopic characterization of carbonaceous aerosol particle aging in the outflow from Mexico City. Atmospheric Chemistry and Physics, 2010, 10, 961-976.	4.9	85
78	Modeling organic aerosols in a megacity: potential contribution of semi-volatile and intermediate volatility primary organic compounds to secondary organic aerosol formation. Atmospheric Chemistry and Physics, 2010, 10, 5491-5514.	4.9	340
79	Technical Note: Evaluation of the WRF-Chem "Aerosol Chemical to Aerosol Optical Properties" Module using data from the MILAGRO campaign. Atmospheric Chemistry and Physics, 2010, 10, 7325-7340.	4.9	210
80	Spatial and temporal variations of aerosols around Beijing in summer 2006: 2. Local and column aerosol optical properties. Journal of Geophysical Research, 2010, 115, .	3.3	20
81	Spatial and temporal variations of aerosols around Beijing in summer 2006: Model evaluation and source apportionment. Journal of Geophysical Research, 2009, 114, .	3.3	86
82	Modeling organic aerosols during MILAGRO: importance of biogenic secondary organic aerosols. Atmospheric Chemistry and Physics, 2009, 9, 6949-6981.	4.9	119
83	Evaluating simulated primary anthropogenic and biomass burning organic aerosols during MILAGRO: implications for assessing treatments of secondary organic aerosols. Atmospheric Chemistry and Physics, 2009, 9, 6191-6215.	4.9	138
84	Coupling aerosol-cloud-radiative processes in the WRF-Chem model: Investigating the radiative impact of elevated point sources. Atmospheric Chemistry and Physics, 2009, 9, 945-964.	4.9	318
85	Model for Simulating Aerosol Interactions and Chemistry (MOSAIC). Journal of Geophysical Research, 2008, 113, .	3.3	824
86	Applications of lagrangian dispersion modeling to the analysis of changes in the specific absorption of elemental carbon. Atmospheric Chemistry and Physics, 2008, 8, 1377-1389.	4.9	75
87	Basin-scale wind transport during the MILAGRO field campaign and comparison to climatology using cluster analysis. Atmospheric Chemistry and Physics, 2008, 8, 1209-1224.	4.9	130
88	The T1-T2 study: evolution of aerosol properties downwind of Mexico City. Atmospheric Chemistry and Physics, 2007, 7, 1585-1598.	4.9	124
89	A meteorological overview of the MILAGRO field campaigns. Atmospheric Chemistry and Physics, 2007, 7, 2233-2257.	4.9	199
90	Impact on modeled cloud characteristics due to simplified treatment of uniform cloud condensation nuclei during NEAQS 2004. Geophysical Research Letters, 2007, 34, .	4.0	145

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91	Evolution of ozone, particulates, and aerosol direct radiative forcing in the vicinity of Houston using a fully coupled meteorology-chemistry-aerosol model. Journal of Geophysical Research, 2006, 111, .	3.3	843
92	The performance of RAMS in representing the convective boundary layer structure in a very steep valley. Environmental Fluid Mechanics, 2005, 5, 35-62.	1.6	40
93	Photochemical age determinations in the Phoenix metropolitan area. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	60
94	An Evaluation of the MM5, RAMS, and Meso-Eta Models at Subkilometer Resolution Using VTMX Field Campaign Data in the Salt Lake Valley. Monthly Weather Review, 2003, 131, 1301-1322.	1.4	121
95	Forecasts of Valley Circulations Using the Terrain-Following and Step-Mountain Vertical Coordinates in the Meso-Eta Model. Weather and Forecasting, 2003, 18, 1192-1206.	1.4	9
96	THE VTMX 2000 CAMPAIGN. Bulletin of the American Meteorological Society, 2002, 83, 537-551.	3.3	115
97	Unexpectedly high concentrations of molecular chlorine in coastal air. Nature, 1998, 394, 353-356.	27.8	584
98	The IMADA-AVER Boundary Layer Experiment in the Mexico City Area. Bulletin of the American Meteorological Society, 1998, 79, 2497-2508.	3.3	100
99	A Case Study of the Great Plains Low-Level Jet Using Wind Profiler Network Data and a High-Resolution Mesoscale Model. Monthly Weather Review, 1996, 124, 785-806.	1.4	117
100	The Effect of Heterogeneous Soil Moisture on a Summer Baroclinic Circulation in the Central United States. Monthly Weather Review, 1991, 119, 2140-2167.	1.4	67
101	A Two-Dimensional Numerical Sensitivity Study of the Great Plains Low-Level Jet. Monthly Weather Review, 1990, 118, 151-164.	1.4	46
102	Application of a quasi-nonhydrostatic parameterization for numerically modeling neutral flow over an isolated hill. Boundary-Layer Meteorology, 1988, 44, 285-304.	2.3	3
103	Evaluation of an alternative method for numerically modeling nonhydrostatic flows over irregular terrain. Boundary-Layer Meteorology, 1988, 44, 181-206.	2.3	5