Yang Zhang

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Decadal application of WRF/Chem over the continental U.S.: Simulation design, sensitivity simulations, and climatological model evaluation. Atmospheric Environment, 2021, 253, 118331.	4.1	10
2	Evaluation of the offline-coupled GFSv15–FV3–CMAQv5.0.2 in support of the next-generation National Air Quality Forecast Capability over the contiguous United States. Geoscientific Model Development, 2021, 14, 3969-3993.	3.6	2
3	ldentifying Key Drivers of Wildfires in the Contiguous US Using Machine Learning and Game Theory Interpretation. Earth's Future, 2021, 9, e2020EF001910.	6.3	31
4	Pollution inequality 50 years after the Clean Air Act: the need for hyperlocal data and action. Environmental Research Letters, 2021, 16, 071001.	5.2	4
5	Incorporation of volcanic SO ₂ emissions in the Hemispheric CMAQ (H-CMAQ) version 5.2 modeling system and assessing their impacts on sulfate aerosol over the Northern Hemisphere. Geoscientific Model Development, 2021, 14, 5751-5768.	3.6	3
6	A comparative study of two-way and offline coupled WRF v3.4 and CMAQ v5.0.2 over the contiguous US: performance evaluation and impacts of chemistry–meteorology feedbacks on air quality. Geoscientific Model Development, 2021, 14, 7189-7221.	3.6	5
7	Weakening aerosol direct radiative effects mitigate climate penalty on Chinese air quality. Nature Climate Change, 2020, 10, 845-850.	18.8	32
8	Nonlinear effect of compound extreme weather events on ozone formation over the United States. Weather and Climate Extremes, 2020, 30, 100285.	4.1	13
9	Evaluation of Regional Air Quality Models over Sydney, Australia: Part 2, Comparison of PM2.5 and Ozone. Atmosphere, 2020, 11, 233.	2.3	15
10	Health and economic impacts of air pollution induced by weather extremes over the continental U.S Environment International, 2020, 143, 105921.	10.0	21
11	Modeling stratospheric intrusion and trans-Pacific transport on tropospheric ozone using hemispheric CMAQ during AprilÂ2010 – Part 2: Examination of emission impacts based on the higher-order decoupled direct method. Atmospheric Chemistry and Physics, 2020, 20, 3397-3413.	4.9	12
12	Impacts of climate change on future air quality and human health in China. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17193-17200.	7.1	219
13	Health impacts and cost-benefit analyses of surface O3 and PM2.5 over the U.S. under future climate and emission scenarios. Environmental Research, 2019, 178, 108687.	7.5	26
14	Multiscale Applications of Two Online-Coupled Meteorology-Chemistry Models During Recent Field Campaigns in Australia, Part II: Comparison of WRF/Chem and WRF/Chem-ROMS and Impacts of Air-Sea Interactions and Boundary Conditions. Atmosphere, 2019, 10, 210.	2.3	7
15	Multiscale Applications of Two Online-Coupled Meteorology-Chemistry Models during Recent Field Campaigns in Australia, Part I: Model Description and WRF/Chem-ROMS Evaluation Using Surface and Satellite Data and Sensitivity to Spatial Grid Resolutions. Atmosphere, 2019, 10, 189.	2.3	10
16	Using gap-filled MAIAC AOD and WRF-Chem to estimate daily PM2.5 concentrations at 1â€ [–] km resolution in the Eastern United States. Atmospheric Environment, 2019, 199, 443-452.	4.1	68
17	Understanding the role of regional water connectivity in mitigating climate change impacts on surface water supply stress in the United States. Journal of Hydrology, 2019, 570, 80-95.	5.4	35
18	Impacts of transportation sector emissions on future U.S. air quality in a changing climate. Part I: Projected emissions, simulation design, and model evaluation. Environmental Pollution, 2018, 238, 903-917.	7.5	34

2

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19	Implications of Upstream Flow Availability for Watershed Surface Water Supply across the Conterminous United States. Journal of the American Water Resources Association, 2018, 54, 694-707.	2.4	20
20	Impacts of transportation sector emissions on future U.S. air quality in a changing climate. Part II: Air quality projections and the interplay between emissions and climate change. Environmental Pollution, 2018, 238, 918-930.	7.5	24
21	Modeling of Atmospheric Aerosol Properties in the São Paulo Metropolitan Area: Impact of Biomass Burning. Journal of Geophysical Research D: Atmospheres, 2018, 123, 9935-9956.	3.3	25
22	Decadal application of WRF/Chem for regional air quality and climate modeling over the U.S. under the representative concentration pathways scenarios. Part 1: Model evaluation and impact of downscaling. Atmospheric Environment, 2017, 152, 562-583.	4.1	32
23	Impact of future climate policy scenarios on air quality and aerosol-cloud interactions using an advanced version of CESM/CAM5: Part II. Future trend analysis and impacts of projected anthropogenic emissions. Atmospheric Environment, 2017, 152, 531-552.	4.1	22
24	Impact of future climate policy scenarios on air quality and aerosol-cloud interactions using an advanced version of CESM/CAM5: Part I. model evaluation for the current decadal simulations. Atmospheric Environment, 2017, 152, 222-239.	4.1	29
25	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
26	Decadal application of WRF/chem for regional air quality and climate modeling over the U.S. under the representative concentration pathways scenarios. Part 2: Current vs. future simulations. Atmospheric Environment, 2017, 152, 584-604.	4.1	23
27	Simulation and evaluation of dust emissions with WRF-Chem (v3.7.1) and its relationship to the changing climate over East Asia from 1980 to 2015. Atmospheric Environment, 2017, 167, 511-522.	4.1	43
28	Multi-year application of WRF-CAM5 over East Asia-Part II: Interannual variability, trend analysis, and aerosol indirect effects. Atmospheric Environment, 2017, 165, 222-239.	4.1	9
29	Impact of Projected Emission and Climate Changes on Air Quality in the U.S.: from National to State Level. Procedia Computer Science, 2017, 110, 167-173.	2.0	5
30	Impact of air pollution induced climate change on water availability and ecosystem productivity in the conterminous United States. Climatic Change, 2017, 140, 259-272.	3.6	26
31	Improving organic aerosol treatments in CESM / CAM 5: Development, application, and evaluation. Journal of Advances in Modeling Earth Systems, 2017, 9, 1506-1539.	3.8	17
32	Multi-year downscaling application of two-way coupled WRF v3.4 and CMAQ v5.0.2 over east Asia for regional climate and air quality modeling: model evaluation and aerosol direct effects. Geoscientific Model Development, 2017, 10, 2447-2470.	3.6	55
33	Modeling regional air quality and climate: improving organic aerosol and aerosol activation processes in WRF/Chem versionÂ3.7.1. Geoscientific Model Development, 2017, 10, 2333-2363.	3.6	16
34	Future shift of the relative roles of precipitation and temperature in controlling annual runoff in the conterminous United States. Hydrology and Earth System Sciences, 2017, 21, 5517-5529.	4.9	18
35	Projecting water yield and ecosystem productivity across the United States by linking an ecohydrological model to WRF dynamically downscaled climate data. Hydrology and Earth System Sciences, 2016, 20, 935-952.	4.9	23
36	Decadal evaluation of regional climate, air quality, and their interactions over the continental US and their interactions using WRF/Chem version 3.6.1. Geoscientific Model Development, 2016, 9, 671-695.	3.6	23

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37	Comprehensive evaluation of multi-year real-time air quality forecasting using an online-coupled meteorology-chemistry model over southeastern United States. Atmospheric Environment, 2016, 138, 162-182.	4.1	13
38	Sensitivity of simulated chemical concentrations and aerosolâ€meteorology interactions to aerosol treatments and biogenic organic emissions in WRF/Chem. Journal of Geophysical Research D: Atmospheres, 2016, 121, 6014-6048.	3.3	15
39	Divergence of ecosystem services in U.S. National Forests and Grasslands under a changing climate. Scientific Reports, 2016, 6, 24441.	3.3	22
40	Incorporation of new particle formation and early growth treatments into WRF/Chem: Model improvement, evaluation, and impacts of anthropogenic aerosols over East Asia. Atmospheric Environment, 2016, 124, 262-284.	4.1	34
41	Application of Weather Research and Forecasting Model with Chemistry (WRF/Chem) over northern China: Sensitivity study, comparative evaluation, and policy implications. Atmospheric Environment, 2016, 124, 337-350.	4.1	60
42	Application of online-coupled WRF/Chem-MADRID in East Asia: Model evaluation and climatic effects of anthropogenic aerosols. Atmospheric Environment, 2016, 124, 321-336.	4.1	31
43	Application of WRF/Chem over East Asia: Part I. Model evaluation and intercomparison with MM5/CMAQ. Atmospheric Environment, 2016, 124, 285-300.	4.1	74
44	Incorporating an advanced aerosol activation parameterization into WRF AM5: Model evaluation and parameterization intercomparison. Journal of Geophysical Research D: Atmospheres, 2015, 120, 6952-6979.	3.3	21
45	Multiyear applications of WRF/Chem over continental U.S.: Model evaluation, variation trend, and impacts of boundary conditions. Journal of Geophysical Research D: Atmospheres, 2015, 120, 12748-12777.	3.3	11
46	Application of an Online-Coupled Regional Climate Model, WRF-CAM5, over East Asia for Examination of lce Nucleation Schemes: Part II. Sensitivity to Heterogeneous Ice Nucleation Parameterizations and Dust Emissions. Climate, 2015, 3, 753-774.	2.8	11
47	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
48	Application of WRF/Chem over North America under the AQMEII Phase 2: Part I. Comprehensive evaluation of 2006 simulation. Atmospheric Environment, 2015, 115, 733-755.	4.1	38
49	Influence of the choice of gas-phase mechanism on predictions of key gaseous pollutants during the AQMEII phase-2 intercomparison. Atmospheric Environment, 2015, 115, 553-568.	4.1	92
50	Decadal simulation and comprehensive evaluation of <scp>CESM</scp> / <scp>CAM</scp> 5.1 with advanced chemistry, aerosol microphysics, and aerosolâ€eloud interactions. Journal of Advances in Modeling Earth Systems, 2015, 7, 110-141.	3.8	32
51	A multi-model assessment for the 2006 and 2010 simulations under the Air Quality Model Evaluation International Initiative (AQMEII) phase 2 over North America: Part I. Indicators of the sensitivity of O3 and PM2.5 formation regimes. Atmospheric Environment, 2015, 115, 569-586.	4.1	36
52	Drought impacts on ecosystem functions of the U.S. National Forests and Grasslands: Part I evaluation of a water and carbon balance model. Forest Ecology and Management, 2015, 353, 260-268.	3.2	32
53	Evaluation of operational on-line-coupled regional air quality models over Europe and North America in the context of AQMEII phase 2. Part I: Ozone. Atmospheric Environment, 2015, 115, 404-420.	4.1	168
54	Implementation and initial application of new chemistry-aerosol options in WRF/Chem for simulating secondary organic aerosols and aerosol indirect effects for regional air quality. Atmospheric Environment, 2015, 115, 716-732.	4.1	88

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55	A multi-model assessment for the 2006 and 2010 simulations under the Air Quality Model Evaluation International Initiative (AQMEII) Phase 2 over North America: Part II. Evaluation of column variable predictions using satellite data. Atmospheric Environment, 2015, 115, 587-603.	4.1	25
56	Evaluation of operational online-coupled regional air quality models over Europe and North America in the context of AQMEII phase 2. Part II: Particulate matter. Atmospheric Environment, 2015, 115, 421-441.	4.1	133
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	Studying Aerosol-Cloud-Climate Interactions over East Asia Using WRF/Chem. Springer Proceedings in Complexity, 2014, , 61-66.	0.3	4
59	Impacts of updated emission inventories on source apportionment of fine particle and ozone over the southeastern U.S Atmospheric Environment, 2014, 88, 133-154.	4.1	26
60	Impacts of future climate and emission changes on U.S. air quality. Atmospheric Environment, 2014, 89, 533-547.	4.1	70
61	Real-time air quality forecasting over the southeastern United States using WRF/Chem-MADRID: Multiple-year assessment and sensitivity studies. Atmospheric Environment, 2014, 92, 318-338.	4.1	43
62	Understanding of the formation mechanisms of ozone and particulate matter at a fine scale over the southeastern U.S.: Process analyses and responses to future-year emissions. Atmospheric Environment, 2013, 74, 259-276.	4.1	18
63	Development of an extended chemical mechanism for global–through–urban applications. Atmospheric Pollution Research, 2012, 3, 1-24.	3.8	24
64	Development and initial application of a sub-grid scale plume treatment in a state-of-the-art online Multi-scale Air Quality and Weather Prediction Model. Atmospheric Environment, 2012, 63, 125-134.	4.1	8
65	Real-time air quality forecasting, part I: History, techniques, and current status. Atmospheric Environment, 2012, 60, 632-655.	4.1	327
66	Impact of gasâ€phase mechanisms on Weather Research Forecasting Model with Chemistry (WRF/Chem) predictions: Mechanism implementation and comparative evaluation. Journal of Geophysical Research, 2012, 117, .	3.3	63
67	Development and initial application of the globalâ€throughâ€urban weather research and forecasting model with chemistry (GUâ€WRF/Chem). Journal of Geophysical Research, 2012, 117, .	3.3	63
68	Use of a process analysis tool for diagnostic study on fine particulate matter predictions in the U.S. – Part I: Model evaluation. Atmospheric Pollution Research, 2011, 2, 49-60.	3.8	8
69	Use of a process analysis tool for diagnostic study on fine particulate matter predictions in the U.S.–Part II: Analyses and sensitivity simulations. Atmospheric Pollution Research, 2011, 2, 61-71.	3.8	21
70	Source apportionment of fine particulate matter over the Eastern U.S. Part II: source apportionment simulations using CAMx/PSAT and comparisons with CMAQ source sensitivity simulations. Atmospheric Pollution Research, 2011, 2, 318-336.	3.8	36
71	Modeling study on the air quality impacts from emission reductions and atypical meteorological conditions during the 2008 Beijing Olympics. Atmospheric Environment, 2011, 45, 1786-1798.	4.1	81
72	Application of WRF/Chem-MADRID for real-time air quality forecasting over the Southeastern United States. Atmospheric Environment, 2011, 45, 6241-6250.	4.1	84

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73	Source apportionment of fine particulate matter over the Eastern U.S. Part I: source sensitivity simulations using CMAQ with the Brute Force method. Atmospheric Pollution Research, 2011, 2, 300-317.	3.8	70
74	The effect of marine isoprene emissions on secondary organic aerosol and ozone formation in the coastal United States. Atmospheric Environment, 2010, 44, 115-121.	4.1	37
75	Responses of future air quality to emission controls over North Carolina, Part II: Analyses of future-year predictions and their policy implications. Atmospheric Environment, 2010, 44, 2767-2779.	4.1	23
76	Understanding of regional air pollution over China using CMAQ, part I performance evaluation and seasonal variation. Atmospheric Environment, 2010, 44, 2415-2426.	4.1	156
77	Simulating chemistry–aerosol–cloud–radiation–climate feedbacks over the continental U.S. using the online-coupled Weather Research Forecasting Model with chemistry (WRF/Chem). Atmospheric Environment, 2010, 44, 3568-3582.	4.1	200
78	Assessment of air quality benefits from national air pollution control policies in China. Part II: Evaluation of air quality predictions and air quality benefits assessment. Atmospheric Environment, 2010, 44, 3449-3457.	4.1	82
79	Fine scale modeling of wintertime aerosol mass, number, and size distributions in central California. Journal of Geophysical Research, 2010, 115, .	3.3	20
80	WRF/Chemâ€MADRID: Incorporation of an aerosol module into WRF/Chem and its initial application to the TexAQS2000 episode. Journal of Geophysical Research, 2010, 115, .	3.3	47
81	A comparative study of nucleation parameterizations: 1. Examination and evaluation of the formulations. Journal of Geophysical Research, 2010, 115, .	3.3	45
82	A comparative study of nucleation parameterizations: 2. Threeâ€dimensional model application and evaluation. Journal of Geophysical Research, 2010, 115, .	3.3	33
83	On-Line Coupled Meteorology and Chemistry Models in the US. , 2010, , 15-39.		0
84	Probing into regional ozone and particulate matter pollution in the United States: 1. A 1 year CMAQ simulation and evaluation using surface and satellite data. Journal of Geophysical Research, 2009, 114, .	3.3	84
85	Probing into regional O ₃ and particulate matter pollution in the United States: 2. An examination of formation mechanisms through a process analysis technique and sensitivity study. Journal of Geophysical Research, 2009, 114, .	3.3	86
86	Export of reactive nitrogen from coalâ€fired power plants in the U.S.: Estimates from a plumeâ€inâ€grid modeling study. Journal of Geophysical Research, 2009, 114, .	3.3	11
87	Modeling intercontinental air pollution transport over the transâ€Pacific region in 2001 using the Community Multiscale Air Quality modeling system. Journal of Geophysical Research, 2009, 114, .	3.3	58
88	Modeling atmospheric transport and fate of ammonia in North Carolina—Part I: Evaluation of meteorological and chemical predictions. Atmospheric Environment, 2008, 42, 3419-3436.	4.1	52
89	Examining the sensitivity of MM5–CMAQ predictions to explicit microphysics schemes and horizontal grid resolutions, Part II—PM concentrations and wet deposition predictions. Atmospheric Environment, 2008, 42, 3856-3868.	4.1	18
90	Examining the sensitivity of MM5–CMAQ predictions to explicit microphysics schemes and horizontal grid resolutions, Part l—Database, evaluation protocol, and precipitation predictions. Atmospheric Environment, 2008, 42, 3842-3855.	4.1	16

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91	Coupling and evaluating gas/particle mass transfer treatments for aerosol simulation and forecast. Journal of Geophysical Research, 2008, 113, .	3.3	44
92	Impacts of regional climate change on biogenic emissions and air quality. Journal of Geophysical Research, 2008, 113, .	3.3	42
93	Role of isoprene in secondary organic aerosol formation on a regional scale. Journal of Geophysical Research, 2007, 112, .	3.3	75
94	A comprehensive performance evaluation of MM5-CMAQ for the Summer 1999 Southern Oxidants Study episode—Part I: Evaluation protocols, databases, and meteorological predictions. Atmospheric Environment, 2006, 40, 4825-4838.	4.1	154
95	A comprehensive performance evaluation of MM5-CMAQ for the summer 1999 southern oxidants study episode, Part III: Diagnostic and mechanistic evaluations. Atmospheric Environment, 2006, 40, 4856-4873.	4.1	50
96	A comprehensive performance evaluation of MM5-CMAQ for the Summer 1999 Southern Oxidants Study episode—Part II: Gas and aerosol predictions. Atmospheric Environment, 2006, 40, 4839-4855.	4.1	90
97	Development and application of the Model of Aerosol Dynamics, Reaction, Ionization, and Dissolution (MADRID). Journal of Geophysical Research, 2004, 109, .	3.3	184
98	MIRACE: Model description and evaluation of aerosols and trace gases. Journal of Geophysical Research, 2004, 109, .	3.3	251
99	Evaluation of aerosol direct radiative forcing in MIRAGE. Journal of Geophysical Research, 2001, 106, 5295-5316.	3.3	174
100	A comparative review of inorganic aerosol thermodynamic equilibrium modules: similarities, differences, and their likely causes. Atmospheric Environment, 2000, 34, 117-137.	4.1	218
101	Simulation of Aerosol Dynamics: A Comparative Review of Algorithms Used in Air Quality Models. Aerosol Science and Technology, 1999, 31, 487-514.	3.1	190
102	Sensitivity analysis of a mixed-phase chemical mechanism using automatic differentiation. Journal of Geophysical Research, 1998, 103, 18953-18979.	3.3	45