# Yang Zhang

List of Publications by Year
in descending order

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|---|---|---|---|
| 102 papers | 5,387 citations | 94269 37 h-index | 98622 67 g-index |
| 102 all docs | 102 docs citations | 102 times ranked | 4564 citing authors |

| # | 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. | 1.9 | 10 |
| 2 | Evaluation of the offline-coupled GFSv15â€“FV3â€“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. | 1.3 | 2 |
| 3 | Identifying Key Drivers of Wildfires in the Contiguous US Using Machine Learning and Game Theory Interpretation. Earth's Future, 2021, 9, e2020EF001910. | 2.4 | 31 |
| 4 | Pollution inequality 50 years after the Clean Air Act: the need for hyperlocal data and action. Environmental Research Letters, 2021, 16, 071001. | 2.2 | 4 |
| 5 | Incorporation of volcanic SO<sub>2</sub> 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. | 1.3 | 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 chemistryâ€“meteorology feedbacks on air quality. Geoscientific Model Development, 2021, 14, 7189-7221. | 1.3 | 5 |
| 7 | Weakening aerosol direct radiative effects mitigate climate penalty on Chinese air quality. Nature Climate Change, 2020, 10, 845-850. | 8.1 | 32 |
| 8 | Nonlinear effect of compound extreme weather events on ozone formation over the United States. Weather and Climate Extremes, 2020, 30, 100285. | 1.6 | 13 |
| 9 | Evaluation of Regional Air Quality Models over Sydney, Australia: Part 2, Comparison of PM2.5 and Ozone. Atmosphere, 2020, 11, 233. | 1.0 | 15 |
| 10 | Health and economic impacts of air pollution induced by weather extremes over the continental U.S.. Environment International, 2020, 143, 105921. | 4.8 | 21 |
| 11 | Modeling stratospheric intrusion and trans-Pacific transport on tropospheric ozone using hemispheric CMAQ during AprilÂ2010 â€“ Part 2: Examination of emission impacts based on the higher-order decoupled direct method. Atmospheric Chemistry and Physics, 2020, 20, 3397-3413. | 1.9 | 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. | 3.3 | 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. | 3.7 | 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. | 1.0 | 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. | 1.0 | 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. | 1.9 | 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. | 2.3 | 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. | 3.7 | 34 |

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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. | 1.0 | 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. | 3.7 | 24 |
| 21 | Modeling of Atmospheric Aerosol Properties in the SÃ£o Paulo Metropolitan Area: Impact of Biomass Burning. Journal of Geophysical Research D: Atmospheres, 2018, 123, 9935-9956. | 1.2 | 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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 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. | 1.2 | 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. | 1.7 | 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. | 1.3 | 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. | 1.3 | 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. | 1.3 | 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. | 1.9 | 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. | 1.9 | 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. | 1.3 | 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. | 1.9 | 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. | 1.2 | 15 |
| 39 | Divergence of ecosystem services in U.S. National Forests and Grasslands under a changing climate. Scientific Reports, 2016, 6, 24441. | 1.6 | 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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 31 |
| 43 | Application of WRF/Chem over East Asia: Part I. Model evaluation and intercomparison with MM5/CMAQ. Atmospheric Environment, 2016, 124, 285-300. | 1.9 | 74 |
| 44 | Incorporating an advanced aerosol activation parameterization into WRFâ€CAM5: Model evaluation and parameterization intercomparison. Journal of Geophysical Research D: Atmospheres, 2015, 120, 6952-6979. | 1.2 | 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. | 1.2 | 11 |
| 46 | 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. | 1.2 | 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. | 1.2 | 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. | 1.9 | 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. | 1.9 | 92 |
| 50 | Decadal simulation and comprehensive evaluation of <scp>CESM</scp>/<scp>CAM</scp>5.1 with advanced chemistry, aerosol microphysics, and aerosolâ€cloud interactions. Journal of Advances in Modeling Earth Systems, 2015, 7, 110-141. | 1.3 | 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. | 1.9 | 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. | 1.4 | 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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 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. | 1.2 | 34 |
| 58 | Studying Aerosol-Cloud-Climate Interactions over East Asia Using WRF/Chem. Springer Proceedings in Complexity, 2014, , 61-66. | 0.2 | 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. | 1.9 | 26 |
| 60 | Impacts of future climate and emission changes on U.S. air quality. Atmospheric Environment, 2014, 89, 533-547. | 1.9 | 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. | 1.9 | 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. | 1.9 | 18 |
| 63 | Development of an extended chemical mechanism for globalâ€“throughâ€“urban applications. Atmospheric Pollution Research, 2012, 3, 1-24. | 1.8 | 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. | 1.9 | 8 |
| 65 | Real-time air quality forecasting, part I: History, techniques, and current status. Atmospheric Environment, 2012, 60, 632-655. | 1.9 | 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. â€“ Part I: Model evaluation. Atmospheric Pollution Research, 2011, 2, 49-60. | 1.8 | 8 |
| 69 | Use of a process analysis tool for diagnostic study on fine particulate matter predictions in the U.S.â€“Part II: Analyses and sensitivity simulations. Atmospheric Pollution Research, 2011, 2, 61-71. | 1.8 | 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. | 1.8 | 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. | 1.9 | 81 |
| 72 | Application of WRF/Chem-MADRID for real-time air quality forecasting over the Southeastern United States. Atmospheric Environment, 2011, 45, 6241-6250. | 1.9 | 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. | 1.8 | 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. | 1.9 | 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. | 1.9 | 23 |
| 76 | Understanding of regional air pollution over China using CMAQ, part I performance evaluation and seasonal variation. Atmospheric Environment, 2010, 44, 2415-2426. | 1.9 | 156 |
| 77 | Simulating chemistryâ€“aerosolâ€“cloudâ€“radiationâ€“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. | 1.9 | 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. | 1.9 | 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<sub>3</sub> 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 Carolinaâ€”Part I: Evaluation of meteorological and chemical predictions. Atmospheric Environment, 2008, 42, 3419-3436. | 1.9 | 52 |
| 89 | Examining the sensitivity of MM5â€“CMAQ predictions to explicit microphysics schemes and horizontal grid resolutions, Part IIâ€”PM concentrations and wet deposition predictions. Atmospheric Environment, 2008, 42, 3856-3868. | 1.9 | 18 |
| 90 | Examining the sensitivity of MM5â€“CMAQ predictions to explicit microphysics schemes and horizontal grid resolutions, Part Iâ€”Database, evaluation protocol, and precipitation predictions. Atmospheric Environment, 2008, 42, 3842-3855. | 1.9 | 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 episodeâ€"Part I: Evaluation protocols, databases, and meteorological predictions. Atmospheric Environment, 2006, 40, 4825-4838. | 1.9 | 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. | 1.9 | 50 |
| 96 | A comprehensive performance evaluation of MM5-CMAQ for the Summer 1999 Southern Oxidants Study episodeâ€"Part II: Gas and aerosol predictions. Atmospheric Environment, 2006, 40, 4839-4855. | 1.9 | 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 | MIRAGE: 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. | 1.9 | 218 |
| 101 | Simulation of Aerosol Dynamics: A Comparative Review of Algorithms Used in Air Quality Models. Aerosol Science and Technology, 1999, 31, 487-514. | 1.5 | 190 |
| 102 | Sensitivity analysis of a mixed-phase chemical mechanism using automatic differentiation. Journal of Geophysical Research, 1998, 103, 18953-18979. | 3.3 | 45 |