Stanford

Yuan Wang

Assistant Professor of Earth System Science

Bio

BIO

Yuan Wang is an assistant professor in the Department of Earth System Science at the Stanford Doerr School of Sustainability. He is also an affiliated faculty in the Woods Institute for the Environment. Prior to joining Stanford, he was an associate professor at Purdue University and a research scientist at California Institute of Technology. His research group aims to advance the understanding of the physical and chemical interactions between atmospheric constituents and climate change. Specifically, his group conducts research related to aerosol-cloud-precipitation interactions and their climatic implications, aerosol properties and haze formation, cloud microphysics and dynamics, and the assessment of the greenhouse gas and aerosol forcings on the atmosphere, ocean, and cryosphere. They develop and use hierarchical and multiscale weather and climate models in combination with space-borne and in situ measurements to address those scientific questions.

ACADEMIC APPOINTMENTS

- Assistant Professor, Earth System Science

HONORS AND AWARDS

- Henry G. Houghton Award, American Meteorological Society (2024)
- Fellow, American Geophysical Union (2023)
- James B. Macelwane Medal, American Geophysical Union (2023)
- Future Horizons in Climate Science: Turco Lectureship, American Geophysical Union (2021)
- Journal of the Atmospheric Sciences Editor’s Award, American Meteorological Society (2017)
- James R. Holton Award, American Geophysical Union (2016)
- Early Career Scientist Medal, International Association of Meteorology and Atmospheric Sciences (2015)
- Best Thesis Award, Springer (2014)
- Distinguished Graduate Student Award, Texas A&M University (2014)
- Earth and Space Science Fellowship, NASA (2009-2012)
- The Regents’ Scholarship, Texas A&M University (2008)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Committee Member, AGU Union Medal Selection Committee (2024 - present)
- Chair, AMS Committee on Atmospheric Chemistry (2024 - present)
- Editor, Atmospheric Chemistry and Physics (2022 - present)
- Associate Editor, Journal of Advances in Modeling the Earth System (2022 - present)
- Associate Editor, Journal of the Atmospheric Sciences (2017 - 2021)

- Committee Member, AGU Atmospheric Sciences Early Career Committee (2019 - 2021)

PROFESSIONAL EDUCATION

- B.S., Fudan University , Computer Science (2007)
- Ph.D, Texas A&M University , Atmospheric Sciences (2013)

LINKS

- Wang Research Lab: https://wang-lab.stanford.edu/
- Google Scholar: https://scholar.google.com/citations?user=6MZlQHUAAAAJ&hl=en

Teaching

COURSES

2023-24

- Atmospheric Physics: ESS 326 (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Adam Burnett

Postdoctoral Faculty Sponsor

Chenchong Zhang

Doctoral Dissertation Advisor (AC)

Qi Ge

Master's Program Advisor

Terachet (Drive) Rojrachsombat

Doctoral (Program)

Yangfan Liu

Publications

PUBLICATIONS

- **Effects of smoke on marine low clouds and radiation during 2020 western United States wildfires** *ATMOSPHERIC RESEARCH*
  Dong, L., Wang, M., Rosenfeld, D., Zhu, Y., Wang, Y., Dong, X., Liu, Z., Wang, H., Zeng, Y., Cao, Y., Lu, X., Liu, J., Shen, et al
  2024; 302

- **Distinct PM_{2.5}-Related Near-Term Climate Penalties Induced by Different Clean Air Measures in China** *GEOPHYSICAL RESEARCH LETTERS*
  Gao, D., Zhao, B., Wang, S., Shen, J., Wang, Y., Zhou, C., Jiang, J., Wu, Q., Li, S., Sun, Y., He, Y., Zhu, Y., Jiang, et al
  2024; 51 (8)

- **An updated modeling framework to simulate Los Angeles air quality - Part 1: Model development, evaluation, and source apportionment** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Pennington, E. A., Wang, Y., Schulze, B. C., Seltzer, K. M., Yang, J., Zhao, B., Jiang, Z., Shi, H., Venecek, M., Chau, D., Murphy, B. N., Kenseth, C. M., Ward, et al
  2024; 24 (4): 2345-2363

- **Radiative and Microphysical Impacts of the Saharan Dust on Two Concurrent Tropical Cyclones: Danielle and Earl (2010)** *JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES*

Pan, B., Wang, Y., Lin, Y., Hsieh, J., Lavallee, M., Zhao, L., Zhang, R.
2024; 129 (2)

- **Dynamic Traffic Data in Machine-Learning Air Quality Mapping Improves Environmental Justice Assessment.** *Environmental science & technology*
  Wen, Y., Zhang, S., Wang, Y., Yang, J., He, L., Wu, Y., Hao, J.
  2024
- **Microphysical complexity of black carbon particles restricts their warming potential** *ONE EARTH*
  Huang, X., Peng, Y., Wei, J., Peng, J., Lin, X., Tang, M., Cheng, Y., Men, Z., Fang, T., Zhang, J., He, L., Cao, L., Liu, et al
  2024; 7 (1)
- **Consumption Based Source Apportionment Indicates Different Regional Contributions to O₃ Concentrations and Health Effects** *ENGINEERING*
  Zhu, S., Wang, P., Wang, S., Geng, G., Zhao, H., Wang, Y., Zhang, H.
  2023; 28: 130-138
- **The weekly cycle of photosynthesis in Europe reveals the negative impact of particulate pollution on ecosystem productivity.** *Proceedings of the National Academy of Sciences of the United States of America*
  He, L., Rosa, L., Lobell, D. B., Wang, Y., Yin, Y., Doughty, R., Yao, Y., Berry, J. A., Frankenberg, C.
  2023; 120 (49): e2306507120
- **Increased importance of aerosol-cloud interactions for surface PM_{2.5} pollution relative to aerosol-radiation interactions in China with the anthropogenic emission reductions** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Gao, D., Zhao, B., Wang, S., Wang, Y., Gaudet, B., Zhu, Y., Wang, X., Shen, J., Li, S., He, Y., Yin, D., Dong, Z.
  2023; 23 (22): 14359-14373
- **Assessing the destructiveness of tropical cyclones induced by anthropogenic aerosols in an atmosphere-ocean coupled framework** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Lin, Y., Wang, Y., Hsieh, J., Jiang, J. H., Su, Q., Zhao, L., Lavallee, M., Zhang, R.
  2023; 23 (21): 13835-13852
- **An Aerosol Optical Module With Observation-Constrained Black Carbon Properties for Global Climate Models** *JOURNAL OF ADVANCES IN MODELING EARTH SYSTEMS*
  Chen, G., Wang, J., Wang, Y., Wang, J., Jin, Y., Cheng, Y., Yin, Y., Liao, H., Ding, A., Wang, S., Hao, J., Liu, C.
  2023; 15 (10)
- **Characterization of the aerosol vertical distributions and their impacts on warm clouds based on multi-year ARM observations.** *The Science of the total environment*
  Lin, Y., Takano, Y., Gu, Y., Wang, Y., Zhou, S., Zhang, T., Zhu, K., Wang, J., Zhao, B., Chen, G., Zhang, D., Fu, R., Seinfeld, et al
  2023; 904: 166582
- **Insights of warm-cloud biases in Community Atmospheric Model 5 and 6 from the single-columnmodeling framework and Aerosol and Cloud Experiments in the EasternNorth Atlantic (ACE-ENA) observations** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Wang, Y., Zheng, X., Dong, X., Xi, B., Yung, Y. L.
  2023; 23 (15): 8591-8605
- **Elucidating climatic drivers of photosynthesis by tropical forests** *GLOBAL CHANGE BIOLOGY*
  Wang, Y., Liu, J., Wennberg, P. O., He, L., Bonal, D., Kohler, P., Frankenberg, C., Sitch, S., Friedlingstein, P.
  2023
- **Vertical Dependency of Aerosol Impacts on Local Scale Convective Precipitation** *GEOPHYSICAL RESEARCH LETTERS*
  Sun, Y., Wang, Y., Zhao, C., Zhou, Y., Yang, Y., Yang, X., Fan, H., Zhao, X., Yang, J.
  2023; 50 (2)
- **New Progress and Challenges in Cloud-Aerosol-Radiation-Precipitation Interactions: Preface for a Special Issue** *ADVANCES IN ATMOSPHERIC SCIENCES*
  Zhao, C., Wang, Y., Letu, H.
  2022; 39 (12): 1983-1985
- **Marked Impacts of Pollution Mitigation on Crop Yields in China** *EARTHS FUTURE*
  He, L., Wei, J., Wang, Y., Shang, Q., Liu, J., Yin, Y., Frankenberg, C., Jiang, J. H., Li, Z., Yung, Y. L.

2022; 10 (11)

- **Notable impact of wildfires in the western United States on weather hazards in the central United States** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Zhang, Y., Fan, J., Shrivastava, M., Homeyer, C. R., Wang, Y., Seinfeld, J. H.
  2022; 119 (44): e2207329119

- **Aerosol-Cloud-Precipitation Interactions in a Closed-cell and Non-homogenous MBL Stratocumulus Cloud** *ADVANCES IN ATMOSPHERIC SCIENCES*
  Zheng, X., Dong, X., Ward, D. M., Xi, B., Wu, P., Wang, Y.
  2022; 39 (12): 2107-2123

- **Compensating Errors in Cloud Radiative and Physical Properties over the Southern Ocean in the CMIP6 Climate Models** *ADVANCES IN ATMOSPHERIC SCIENCES*
  Zhao, L., Wang, Y., Zhao, C., Dong, X., Yung, Y. L.
  2022; 39 (12): 2156-2171

- **This is FAST: multivariate Full-permutAtion based Stochastic foresT method-improving the retrieval of fine-mode aerosol microphysical properties with multi-wavelength lidar** *REMOTE SENSING OF ENVIRONMENT*
  Wang, N., Xiao, D., Veselovskii, I., Wang, Y., Russell, L. M., Zhao, C., Guo, J., Li, C., Gross, S., Liu, X., Ni, X., Tan, L., Liu, et al
  2022; 280

- **The Hunga Tonga-Hunga Ha'apai Hydration of the Stratosphere** *GEOPHYSICAL RESEARCH LETTERS*
  Millan, L., Santee, M. L., Lambert, A., Livesey, N. J., Werner, F., Schwartz, M. J., Pumphrey, H. C., Manney, G. L., Wang, Y., Su, H., Wu, L., Read, W. G., Froidevaux, et al
  2022; 49 (13): e2022GL099381

- **Formation, radiative forcing, and climatic effects of severe regional haze** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Lin, Y., Wang, Y., Pan, B., Hu, J., Guo, S., Zamora, M., Tian, P., Su, Q., Ji, Y., Zhao, J., Gomez-Hernandez, M., Hu, M., Zhang, et al
  2022; 22 (7): 4951-4967

- **Dual-field-of-view high-spectral-resolution lidar: Simultaneous profiling of aerosol and water cloud to study aerosol-cloud interaction** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Wang, N., Zhang, K., Shen, X., Wang, Y., Li, J., Li, C., Mao, J., Malinka, A., Zhao, C., Russell, L. M., Guo, J., Gross, S., Liu, et al
  2022; 119 (10): e2110756119

- **Environmental effects on aerosol-cloud interaction in non-precipitating marine boundary layer (MBL) clouds over the eastern North Atlantic** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Zheng, X., Xi, B., Dong, X., Wu, P., Logan, T., Wang, Y.
  2022; 22 (1): 335-354

- **Health risk and disease burden attributable to long-term global fine-mode particles** *CHEMOSPHERE*
  Yang, X., Wang, Y., Zhao, C., Fan, H., Yang, Y., Chi, Y., Shen, L., Yan, X.
  2022; 287: 132435

- **From COVID-19 to future electrification: Assessing traffic impacts on air quality by a machine-learning model** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Yang, J., Wen, Y., Wang, Y., Zhang, S., Pinto, J. P., Pennington, E. A., Wang, Z., Wu, Y., Sander, S. P., Jiang, J. H., Hao, J., Yung, Y. L., Seinfeld, et al
  2021; 118 (26)

- **Multigeneration Production of Secondary Organic Aerosol from Toluene Photooxidation** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
  Li, Y., Zhao, J., Wang, Y., Seinfeld, J. H., Zhang, R.
  2021; 55 (13): 8592-8603

- **The Role of Primary Emission and Transboundary Transport in the Air Quality Changes During and After the COVID-19 Lockdown in China** *GEOPHYSICAL RESEARCH LETTERS*
  Fan, H., Wang, Y., Zhao, C., Yang, Y., Yang, X., Sun, Y., Jiang, S.
  2021; 48 (7): e2020GL091065

- **New Observational Constraints on Warm Rain Processes and Their Climate Implications** *GEOPHYSICAL RESEARCH LETTERS*
  Dong, X., Wu, P., Wang, Y., Xi, B., Huang, Y.
  2021; 48 (6)

- **Unexpected Oligomerization of Small #-Dicarbonyls for Secondary Organic Aerosol and Brown Carbon Formation** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
  Li, Y., Ji, Y., Zhao, J., Wang, Y., Shi, Q., Peng, J., Wang, Y., Wang, C., Zhang, F., Wang, Y., Seinfeld, J. H., Zhang, R.
  2021; 55 (8): 4430-4439
- **Insights into particulate matter pollution in the North China Plain during wintertime: local contribution or regional transport?** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Wu, J., Bei, N., Wang, Y., Li, X., Liu, S., Liu, L., Wang, R., Yu, J., Le, T., Zuo, M., Shen, Z., Cao, J., Tie, et al
  2021; 21 (3): 2229-2249
- **Author Correction: Near-real-time monitoring of global CO2 emissions reveals the effects of the COVID-19 pandemic.** *Nature communications*
  Liu, Z., Ciais, P., Deng, Z., Lei, R., Davis, S. J., Feng, S., Zheng, B., Cui, D., Dou, X., Zhu, B., Guo, R., Ke, P., Sun, et al
  2020; 11 (1): 6292
- **Impacts of long-range transport of aerosols on marine-boundary-layer clouds in the eastern North Atlantic** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Wang, Y., Zheng, X., Dong, X., Xi, B., Wu, P., Logan, T., Yung, Y. L.
  2020; 20 (23): 14741-14755
- **Quantifying Long-Term Seasonal and Regional Impacts of North American Fire Activity on Continental Boundary Layer Aerosols and Cloud Condensation Nuclei** *EARTH AND SPACE SCIENCE*
  Logan, T., Dong, X., Xi, B., Zheng, X., Wang, Y., Wu, P., Marlow, E., Maddux, J.
  2020; 7 (12)
- **Air quality impact of the Northern California Camp Fire of November 2018** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Rooney, B., Wang, Y., Jiang, J. H., Zhao, B., Zeng, Z., Seinfeld, J. H.
  2020; 20 (23): 14597-14616
- **Determinant Role of Aerosols From Industrial Sources in Hurricane Harvey's Catastrophe** *GEOPHYSICAL RESEARCH LETTERS*
  Pan, B., Wang, Y., Logan, T., Hsieh, J., Jiang, J. H., Li, Y., Zhang, R.
  2020; 47 (23)
- **Near-real-time monitoring of global CO2 emissions reveals the effects of the COVID-19 pandemic** *NATURE COMMUNICATIONS*
  Liu, Z., Ciais, P., Deng, Z., Lei, R., Davis, S. J., Feng, S., Zheng, B., Cui, D., Dou, X., Zhu, B., Guo, R., Ke, P., Sun, et al
  2020; 11 (1): 5172
- **Tracking the atmospheric pulse of a North American megacity from a mountaintop remote sensing observatory** *REMOTE SENSING OF ENVIRONMENT*
  Zeng, Z., Wang, Y., Pongetti, T. J., Gong, F., Newman, S., Li, Y., Natraj, V., Shia, R., Yung, Y. L., Sander, S. P.
  2020; 248
- **Retrieval of Ice-Over-Water Cloud Microphysical and Optical Properties Using Passive Radiometers** *GEOPHYSICAL RESEARCH LETTERS*
  Teng, S., Liu, C., Zhang, Z., Wang, Y., Sohn, B., Yung, Y. L.
  2020; 47 (16)
- **Unexpected air pollution with marked emission reductions during the COVID-19 outbreak in China** *SCIENCE*
  Le, T., Wang, Y., Liu, L., Yang, J., Yung, Y. L., Li, G., Seinfeld, J. H.
  2020; 369 (6504): 702-+
- **Identifying airborne transmission as the dominant route for the spread of COVID-19** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Zhang, R., Li, Y., Zhang, A. L., Wang, Y., Molina, M. J.
  2020; 117 (26): 14857-14863
- **Carbenium ion-mediated oligomerization of methylglyoxal for secondary organic aerosol formation** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Ji, Y., Shi, Q., Li, Y., An, T., Zheng, J., Peng, J., Gao, Y., Chen, J., Li, G., Wang, Y., Zhang, F., Zhang, A. L., Zhao, et al
  2020; 117 (24): 13294-13299
- **Reduced European aerosol emissions suppress winter extremes over northern Eurasia (vol 10, pg 225, 2020)** *NATURE CLIMATE CHANGE*
  Wang Yuan, Le Tianhao, Chen Gang, Yung, Y. L., Su Hui, Seinfeld, J. H., Jiang, J. H.
  2020; 10 (6): 582

- **Aerosol-photolysis interaction reduces particulate matter during wintertime haze events.** *Proceedings of the National Academy of Sciences of the United States of America*
  Wu, J., Bei, N., Hu, B., Liu, S., Wang, Y., Shen, Z., Li, X., Liu, L., Wang, R., Liu, Z., Cao, J., Tie, X., Molina, et al
  2020; 117 (18): 9755-9761

- **Evaluation of Cloud Microphysical Properties Derived From MODIS and Himawari-8 Using In Situ Aircraft Measurements Over the Southern Ocean** *EARTH AND SPACE SCIENCE*
  Zhao, L., Zhao, C., Wang, Y., Wang, Y., Ya, Y.
  2020; 7 (5)

- **Impact of Cloud Ice Particle Size Uncertainty in a Climate Model and Implications for Future Satellite Missions** *JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES*
  Wang, Y., Su, H., Jiang, J. H., Xu, F., Yung, Y. L.
  2020; 125 (6)

- **Investigation of aerosol-cloud interactions under different absorptive aerosol regimes using Atmospheric Radiation Measurement (ARM) southern Great Plains (SGP) ground-based measurements** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Zheng, X., Xi, B., Dong, X., Logan, T., Wang, Y., Wu, P.
  2020; 20 (6): 3483-3501

- **Spatiotemporal Variations of Precipitation in China Using Surface Gauge Observations from 1961 to 2016** *ATMOSPHERE*
  Su, Y., Zhao, C., Wang, Y., Ma, Z.
  2020; 11 (3)

- **An unexpected catalyst dominates formation and radiative forcing of regional haze** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Zhang, F., Wang, Y., Peng, J., Chen, L., Sun, Y., Duan, L., Ge, X., Li, Y., Zhao, J., Liu, C., Zhang, X., Zhang, G., Pan, et al
  2020; 117 (8): 3960-3966

- **Remarkable nucleation and growth of ultrafine particles from vehicular exhaust.** *Proceedings of the National Academy of Sciences of the United States of America*
  Guo, S., Hu, M., Peng, J., Wu, Z., Zamora, M. L., Shang, D., Du, Z., Zheng, J., Fang, X., Tang, R., Wu, Y., Zeng, L., Shuai, et al
  2020; 117 (7): 3427-3432

- **Reduced European aerosol emissions suppress winter extremes over northern Eurasia** *NATURE CLIMATE CHANGE*
  Wang, Y., Le, T., Chen, G., Yung, Y. L., Su, H., Seinfeld, J. H., Jiang, J. H.
  2020; 10 (3): 225-+

- **East Asian Study of Tropospheric Aerosols and their Impact on Regional Clouds, Precipitation, and Climate (EAST-AIR_{CPC})** *JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES*
  Li, Z., Wang, Y., Guo, J., Zhao, C., Cribb, M., Dong, X., Fan, J., Gong, D., Huang, J., Jiang, M., Jiang, Y., Lee, S., Li, et al
  2019; 124 (23): 13026-13054

- **Climate Impacts of the Biomass Burning in Indochina on Atmospheric Conditions over Southern China** *AEROSOL AND AIR QUALITY RESEARCH*
  Huang, L., Lin, W., Li, F., Wang, Y., Jiang, B.
  2019; 19 (12): 2707-2720

- **The climatology and trend of black carbon in China from 12-year ground observations** *CLIMATE DYNAMICS*
  Zhang, Y., Li, Y., Guo, J., Wang, Y., Chen, D., Chen, H.
  2019; 53 (9-10): 5881-5892

- **Interpretation of the Top-of-Atmosphere Energy Flux for Future Arctic Warming** *SCIENTIFIC REPORTS*
  Hwang, J., Choi, Y., Yoo, C., Wang, Y., Su, H., Jiang, J. H.
  2019; 9: 13059

- **Relationships Between Tropical Ascent and High Cloud Fraction Changes With Warming Revealed by Perturbation Physics Experiments in CAM5** *GEOPHYSICAL RESEARCH LETTERS*
  Schiro, K. A., Su, H., Wang, Y., Langenbrunner, B., Jiang, J. H., Neelin, J.
  2019; 46 (16): 10112-10121

- **Inducing Factors and Impacts of the October 2017 California Wildfires** *EARTH AND SPACE SCIENCE*

Li, A. X., Wang, Y., Yung, Y. L.
2019; 6 (8): 1480-1488

- **Ice nucleation by aerosols from anthropogenic pollution** *NATURE GEOSCIENCE*
  Zhao, B., Wang, Y., Gu, Y., Liou, K., Jiang, J. H., Fan, J., Liu, X., Huang, L., Yung, Y. L.
  2019; 12 (8): 602-+
- **Modeling Study of the Air Quality Impact of Record-Breaking Southern California Wildfires in December 2017** *JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES*
  Shi, H., Jiang, Z., Zhao, B., Li, Z., Chen, Y., Gu, Y., Jiang, J. H., Lee, M., Liou, K., Neu, J. L., Payne, V. H., Su, H., Wang, et al
  2019; 124 (12): 6554-6570
- **Interaction between succinic acid and sulfuric acid-base clusters** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Lin, Y., Ji, Y., Li, Y., Secrest, J., Xu, W., Xu, F., Wang, Y., An, T., Zhang, R.
  2019; 19 (12): 8003-8019
- **Impacts of household sources on air pollution at village and regional scales in India** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Rooney, B., Zhao, R., Wang, Y., Bates, K. H., Pillarisetti, A., Sharma, S., Kundu, S., Bond, T. C., Lam, N. L., Ozaltun, B., Xu, L., Goel, V., Fleming, et al
  2019; 19 (11): 7719-7742
- **Non-Monotonic Aerosol Effect on Precipitation in Convective Clouds over Tropical Oceans** *SCIENTIFIC REPORTS*
  Liu, H., Guo, J., Koren, I., Altaratz, O., Dagan, G., Wang, Y., Jiang, J. H., Zhai, P., Yung, Y. L.
  2019; 9: 7809
- **Declining diurnal temperature range in the North China Plain related to environmental changes** *CLIMATE DYNAMICS*
  Xue, W., Guo, J., Zhang, Y., Zhou, S., Wang, Y., Miao, Y., Liu, L., Xu, H., Li, J., Chen, D., Liu, H.
  2019; 52 (9-10): 6109-6119
- **Optical Properties and Radiative Forcing of Aged BC due to Hygroscopic Growth: Effects of the Aggregate Structure** *JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES*
  Zeng, C., Liu, C., Li, J., Zhu, B., Yin, Y., Wang, Y.
  2019; 124 (8): 4620-4633
- **Estimating the Contribution of Local Primary Emissions to Particulate Pollution Using High-Density Station Observations** *JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES*
  Zhao, C., Wang, Y., Shi, X., Zhang, D., Wang, C., Jiang, J. H., Zhang, Q., Fan, H.
  2019; 124 (3): 1648-1661
- **Formation and Optical Properties of Brown Carbon from Small #-Dicarbonyls and Amines** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
  Marrero-Ortiz, W., Hu, M., Du, Z., Ji, Y., Wang, Y., Guo, S., Lin, Y., Gomez-Hermandez, M., Peng, J., Li, Y., Secrest, J., Zamora, M. L., Wang, et al
  2019; 53 (1): 117-126
- **Increased Frequency of Extreme Tropical Deep Convection: AIRS Observations and Climate Model Predictions** *GEOPHYSICAL RESEARCH LETTERS*
  Aumann, H. H., Behrangi, A., Wang, Y.
  2018; 45 (24): 13530-13537
- **Change in household fuels dominates the decrease in PM_{2.5} exposure and premature mortality in China in 2005-2015** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Zhao, B., Zheng, H., Wang, S., Smith, K. R., Lu, X., Aunan, K., Gu, Y., Wang, Y., Ding, D., Xing, J., Fu, X., Yang, X., Liou, et al
  2018; 115 (49): 12401-12406
- **Source contributions and potential reductions to health effects of particulate matter in India** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Guo, H., Kota, S., Chen, K., Sahu, S., Hu, J., Ying, Q., Wang, Y., Zhang, H.
  2018; 18 (20): 15219-15229
- **Constraining Aging Processes of Black Carbon in the Community Atmosphere Model Using Environmental Chamber Measurements** *JOURNAL OF ADVANCES IN MODELING EARTH SYSTEMS*
  Wang, Y., Ma, P., Peng, J., Zhang, R., Jiang, J. H., Easter, R. C., Yung, Y. L.
  2018; 10 (10): 2514-2526
- **Contrasting effects on deep convective clouds by different types of aerosols** *NATURE COMMUNICATIONS*

Jiang, J. H., Su, H., Huang, L., Wang, Y., Massie, S., Zhao, B., Omar, A., Wang, Z.
2018; 9: 3874

- **Impacts of Saharan Dust on Atlantic Regional Climate and Implications for Tropical Cyclones** *JOURNAL OF CLIMATE*
  Pan, B., Wang, Y., Hu, J., Lin, Y., Hsieh, J., Logan, T., Feng, X., Jiang, J. H., Yung, Y. L., Zhang, R.
  2018; 31 (18): 7621-7644
- **Enlarging Rainfall Area of Tropical Cyclones by Atmospheric Aerosols** *GEOPHYSICAL RESEARCH LETTERS*
  Zhao, C., Lin, Y., Wu, F., Wang, Y., Li, Z., Rosenfeld, D., Wang, Y.
  2018; 45 (16): 8604-8611
- **Particle acidity and sulfate production during severe haze events in China cannot be reliably inferred by assuming a mixture of inorganic salts** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Wang, G., Zhang, F., Peng, J., Duan, L., Ji, Y., Marrero-Ortiz, W., Wang, J., Li, J., Wu, C., Cao, C., Wang, Y., Zheng, J., Secrest, et al
  2018; 18 (14): 10123-10132
- **Radiative absorption enhancement of dust mixed with anthropogenic pollution over East Asia** *ATMOSPHERIC CHEMISTRY AND PHYSICS*
  Tian, P., Zhang, L., Ma, J., Tang, K., Xu, L., Wang, Y., Cao, X., Liang, J., Ji, Y., Jiang, J. H., Yung, Y. L., Zhang, R.
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