Yuan Wang

List of Publications by Year
in descending order

109 papers	10,179 citations	71102 41 h-index	36028 97 g-index
131 all docs	131 docs citations	131 times ranked	10272 citing authors

#	Article	IF	Citations
1	Persistent sulfate formation from London Fog to Chinese haze. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13630-13635.	7.1	1,044
2	Formation of Urban Fine Particulate Matter. Chemical Reviews, 2015, 115, 3803-3855.	47.7	988
3	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, 2020, 117, 14857-14863.	7.1	956
4	Aerosol and monsoon climate interactions over Asia. Reviews of Geophysics, 2016, 54, 866-929.	23.0	591
5	Unexpected air pollution with marked emission reductions during the COVID-19 outbreak in China. Science, 2020, 369, 702-706.	12.6	563
6	Markedly enhanced absorption and direct radiative forcing of black carbon under polluted urban environments. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4266-4271.	7.1	453
7	Review of Aerosolâ€“Cloud Interactions: Mechanisms, Significance, and Challenges. Journals of the Atmospheric Sciences, 2016, 73, 4221-4252.	1.7	439
8	Near-real-time monitoring of global CO2 emissions reveals the effects of the COVID-19 pandemic. Nature Communications, 2020, 11, 5172.	12.8	420
9	Change in household fuels dominates the decrease in PM _{2.5} exposure and premature mortality in China in 2005â€“2015. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12401-12406.	7.1	262
10	Long-term impacts of aerosols on precipitation and lightning over the Pearl River Delta megacity area in China. Atmospheric Chemistry and Physics, 2011, 11, 12421-12436.	4.9	183
11	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
12	New Directions: Light absorbing aerosols and their atmospheric impacts. Atmospheric Environment, 2013, 81, 713-715.	4.1	174
13	Implementation of a twoâ€moment bulk microphysics scheme to the WRF model to investigate aerosolâ€cloud interaction. Journal of Geophysical Research, 2008, 113, .	3.3	162
14	Aerosol impacts on clouds and precipitation in eastern China: Results from bin and bulk microphysics. Journal of Geophysical Research, 2012, 117, .	3.3	152
15	Asian pollution climatically modulates mid-latitude cyclones following hierarchical modelling and observational analysis. Nature Communications, 2014, 5, 3098.	12.8	151
16	Reassessing the atmospheric oxidation mechanism of toluene. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8169-8174.	7.1	151
17	An unexpected catalyst dominates formation and radiative forcing of regional haze. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3960-3966.	7.1	132
18	Assessing the effects of anthropogenic aerosols on Pacific storm track using a multiscale global climate model. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6894-6899.	7.1	130

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19	Remarkable nucleation and growth of ultrafine particles from vehicular exhaust. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3427-3432.	7.1	122
20	Trans-Pacific transport of dust aerosols from East Asia: Insights gained from multiple observations and modeling. Environmental Pollution, 2017, 230, 1030-1039.	7.5	111
21	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
22	Aerosol vertical distribution and optical properties over China from long-term satellite and ground-based remote sensing. Atmospheric Chemistry and Physics, 2017, 17, 2509-2523.	4.9	105
23	Contrasting effects on deep convective clouds by different types of aerosols. Nature Communications, 2018, 9, 3874.	12.8	96
24	Enlarging Rainfall Area of Tropical Cyclones by Atmospheric Aerosols. Geophysical Research Letters, 2018, 45, 8604-8611.	4.0	94
25	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, 2018, 18, 10123-10132.	4.9	90
26	Distinct effects of anthropogenic aerosols on tropical cyclones. Nature Climate Change, 2014, 4, 368-373.	18.8	89
27	Year-long simulation of gaseous and particulate air pollutants in India. Atmospheric Environment, 2018, 180, 244-255.	4.1	89
28	The Hunga Tongaâ€Hunga Ha'apai Hydration of the Stratosphere. Geophysical Research Letters, 2022, 49, .	4.0	89
29	Atmospheric responses to the redistribution of anthropogenic aerosols. Journal of Geophysical Research D: Atmospheres, 2015, 120, 9625-9641.	3.3	86
30	Improving bulk microphysics parameterizations in simulations of aerosol effects. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5361-5379.	3.3	69
31	Impacts of aerosols on the development and precipitation of a mesoscale squall line. Journal of Geophysical Research, 2009, 114, .	3.3	66
32	Ice nucleation by aerosols from anthropogenic pollution. Nature Geoscience, 2019, 12, 602-607.	12.9	62
33	Formation and Optical Properties of Brown Carbon from Small Î±-Dicarbonyls and Amines. Environmental Science & Technology, 2019, 53, 117-126.	10.0	62
34	Estimating the Contribution of Local Primary Emissions to Particulate Pollution Using Highâ€Density Station Observations. Journal of Geophysical Research D: Atmospheres, 2019, 124, 1648-1661.	3.3	59
35	Aerosolâ€“photolysis interaction reduces particulate matter during wintertime haze events. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 9755-9761.	7.1	57
36	Estimating daily full-coverage near surface O3, CO, and NO2 concentrations at a high spatial resolution over China based on S5P-TROPOMI and GEOS-FP. ISPRS Journal of Photogrammetry and Remote Sensing, 2021, 175, 311-325.	11.1	57

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37	Measurements of submicron aerosols in Houston, Texas during the 2009 SHARP field campaign. Journal of Geophysical Research D: Atmospheres, 2013, 118, 10,518.	3.3	56
38	Radiative absorption enhancement of dust mixed with anthropogenic pollution over East Asia. Atmospheric Chemistry and Physics, 2018, 18, 7815-7825.	4.9	52
39	Source contributions and potential reductions to health effects of particulate matter in India. Atmospheric Chemistry and Physics, 2018, 18, 15219-15229.	4.9	51
40	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, 2021, 118, .	7.1	50
41	Toward reconciling the influence of atmospheric aerosols and greenhouse gases on light precipitation changes in Eastern China. Journal of Geophysical Research D: Atmospheres, 2016, 121, 5878-5887.	3.3	46
42	Application and Evaluation of an Explicit Prognostic Cloudâ€Cover Scheme in GRAPES Global Forecast System. Journal of Advances in Modeling Earth Systems, 2018, 10, 652-667.	3.8	46
43	Health risk and disease burden attributable to long-term global fine-mode particles. Chemosphere, 2022, 287, 132435.	8.2	44
44	Constraining Aging Processes of Black Carbon in the Community Atmosphere Model Using Environmental Chamber Measurements. Journal of Advances in Modeling Earth Systems, 2018, 10, 2514-2526.	3.8	43
45	The Role of Primary Emission and Transboundary Transport in the Air Quality Changes During and After the COVIDâ€19 Lockdown in China. Geophysical Research Letters, 2021, 48, e2020GL091065.	4.0	42
46	Spatiotemporal Variations of Precipitation in China Using Surface Gauge Observations from 1961 to 2016. Atmosphere, 2020, 11, 303.	2.3	41
47	The climatology and trend of black carbon in China from 12-year ground observations. Climate Dynamics, 2019, 53, 5881-5892.	3.8	40
48	Measurements of nitrous acid (HONO) using ion drift-chemical ionization mass spectrometry during the 2009 SHARP field campaign. Atmospheric Environment, 2014, 94, 231-240.	4.1	35
49	Increased winter precipitation over the North Pacific from 1984â€“1994 to 1995â€“2005 inferred from the Global Precipitation Climatology Project. Geophysical Research Letters, 2008, 35, .	4.0	34
50	The blue skies in Beijing during APEC 2014: A quantitative assessment of emission control efficiency and meteorological influence. Atmospheric Environment, 2017, 167, 235-244.	4.1	33
51	Typeâ€Dependent Responses of Ice Cloud Properties to Aerosols From Satellite Retrievals. Geophysical Research Letters, 2018, 45, 3297-3306.	4.0	33
52	Interaction between succinic acid and sulfuric acidâ€“base clusters. Atmospheric Chemistry and Physics, 2019, 19, 8003-8019.	4.9	33
53	Declining diurnal temperature range in the North China Plain related to environmental changes. Climate Dynamics, 2019, 52, 6109-6119.	3.8	33
54	Measurements of submicron aerosols at the Californiaâ€“Mexico border during the Calâ€“Mex 2010 field campaign. Atmospheric Environment, 2014, 88, 308-319.	4.1	32

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55	Unexpected Oligomerization of Small Î±-Dicarbonyls for Secondary Organic Aerosol and Brown Carbon Formation. Environmental Science & Technology, 2021, 55, 4430-4439.	10.0	31
56	Distinct Impacts of Aerosols on an Evolving Continental Cloud Complex during the RACORO Field Campaign. Journals of the Atmospheric Sciences, 2016, 73, 3681-3700.	1.7	30
57	Impacts of Saharan Dust on Atlantic Regional Climate and Implications for Tropical Cyclones. Journal of Climate, 2018, 31, 7621-7644.	3.2	30
58	Impacts of household sources on air pollution at village and regional scales in India. Atmospheric Chemistry and Physics, 2019, 19, 7719-7742.	4.9	30
59	Non-Monotonic Aerosol Effect on Precipitation in Convective Clouds over Tropical Oceans. Scientific Reports, 2019, 9, 7809.	3.3	29
60	Multigeneration Production of Secondary Organic Aerosol from Toluene Photooxidation. Environmental Science & Technology, 2021, 55, 8592-8603.	10.0	29
61	Reduced European aerosol emissions suppress winter extremes over northern Eurasia. Nature Climate Change, 2020, 10, 225-230.	18.8	29
62	Carbenium ion-mediated oligomerization of methylglyoxal for secondary organic aerosol formation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13294-13299.	7.1	28
63	Elucidating the Role of Anthropogenic Aerosols in Arctic Sea Ice Variations. Journal of Climate, 2018, 31, 99-114.	3.2	27
64	Increased Frequency of Extreme Tropical Deep Convection: AIRS Observations and Climate Model Predictions. Geophysical Research Letters, 2018, 45, 13,530.	4.0	27
65	Optical Properties and Radiative Forcing of Aged BC due to Hygroscopic Growth: Effects of the Aggregate Structure. Journal of Geophysical Research D: Atmospheres, 2019, 124, 4620-4633.	3.3	27
66	The linkage between stratospheric water vapor and surface temperature in an observation-constrained coupled general circulation model. Climate Dynamics, 2017, 48, 2671-2683.	3.8	26
67	Aerosol microphysical and radiative effects on continental cloud ensembles. Advances in Atmospheric Sciences, 2018, 35, 234-247.	4.3	24
68	Warming effect of dust aerosols modulated by overlapping clouds below. Atmospheric Environment, 2017, 166, 393-402.	4.1	23
69	Reconciling Contrasting Relationships Between Relative Dispersion and Volumeâ€Mean Radius of Cloud Droplet Size Distributions. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031868.	3.3	22
70	Impacts of long-range transport of aerosols on marine-boundary-layer clouds in the eastern North Atlantic. Atmospheric Chemistry and Physics, 2020, 20, 14741-14755.	4.9	21
71	Investigating multiple aerosol optical depth products from MODIS and VIIRS over Asia: Evaluation, comparison, and merging. Atmospheric Environment, 2020, 230, 117548.	4.1	20
72	Modeling Study of the Air Quality Impact of Recordâ€Breaking Southern California Wildfires in December 2017. Journal of Geophysical Research D: Atmospheres, 2019, 124, 6554-6570.	3.3	19

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73	A New Method for Distinguishing Unactivated Particles in Cloud Condensation Nuclei Measurements: Implications for Aerosol Indirect Effect Evaluation. Geophysical Research Letters, 2019, 46, 14185-14194.	4.0	18
74	Effects of Cloud Liquidâ€Phase Microphysical Processes in Mixedâ€Phase Cumuli Over the Tibetan Plateau. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD033371.	3.3	18
75	Investigation of aerosolâ€“cloud interactions under different absorptive aerosol regimes using Atmospheric Radiation Measurement (ARM) southern Great Plains (SGP) ground-based measurements. Atmospheric Chemistry and Physics, 2020, 20, 3483-3501.	4.9	18
76	Air quality impact of the Northern California Camp Fire of November 2018. Atmospheric Chemistry and Physics, 2020, 20, 14597-14616.	4.9	17
77	Air pollution or global warming: Attribution of extreme precipitation changes in eastern Chinaâ€”Comments on â€œTrends of extreme precipitation in Eastern China and their possible causesâ€. Advances in Atmospheric Sciences, 2015, 32, 1444-1446.	4.3	16
78	Insights into particulate matter pollution in the North China Plain during wintertime: local contribution or regional transport?. Atmospheric Chemistry and Physics, 2021, 21, 2229-2249.	4.9	16
79	Coordination and supramolecular assemblies of mono-hydroxylated octamethylcucurbit[6]uril with alkali and alkaline earth metal ions in the presence of polychloride cadmium anions. CrystEngComm, 2017, 19, 4017-4024.	2.6	15
80	Dual-field-of-view high-spectral-resolution lidar: Simultaneous profiling of aerosol and water cloud to study aerosolâ€“cloud interaction. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2110756119.	7.1	15
81	Influences of an entrainmentâ€“mixing parameterization on numerical simulations of cumulus and stratocumulus clouds. Atmospheric Chemistry and Physics, 2022, 22, 5459-5475.	4.9	15
82	Evaluation of Cloud Microphysical Properties Derived From MODIS and Himawariâ€8 Using In Situ Aircraft Measurements Over the Southern Ocean. Earth and Space Science, 2020, 7, e2020EA001137.	2.6	14
83	Adducts of aqua complexes of Ln³⁺ with a di-hydroxylated symmetrical octamethyl-substituted cucurbituril: potential applications for isolation of heavier lanthanides. CrystEngComm, 2017, 19, 5635-5639.	2.6	13
84	Retrieval of Iceâ€Overâ€Water Cloud Microphysical and Optical Properties Using Passive Radiometers. Geophysical Research Letters, 2020, 47, e2020GL088941.	4.0	12
85	A new CCN activation parameterization and its potential influences on aerosol indirect effects. Atmospheric Research, 2021, 253, 105491.	4.1	12
86	Relationships Between Tropical Ascent and High Cloud Fraction Changes With Warming Revealed by Perturbation Physics Experiments in CAM5. Geophysical Research Letters, 2019, 46, 10112-10121.	4.0	11
87	An Observational Study on Cloud Spectral Width in North China. Atmosphere, 2019, 10, 109.	2.3	11
88	Global air quality change during COVID-19: a synthetic analysis of satellite, reanalysis and ground station data. Environmental Research Letters, 2021, 16, 074052.	5.2	11
89	Environmental effects on aerosolâ€“cloud interaction in non-precipitating marine boundary layer (MBL) clouds over the eastern North Atlantic. Atmospheric Chemistry and Physics, 2022, 22, 335-354.	4.9	11
90	Inducing Factors and Impacts of the October 2017 California Wildfires. Earth and Space Science, 2019, 6, 1480-1488.	2.6	10

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91	Climate Impacts of the Biomass Burning in Indochina on Atmospheric Conditions over Southern China. Aerosol and Air Quality Research, 2019, 9, 2707-2720.	2.1	9
92	Determinant Role of Aerosols From Industrial Sources in Hurricane Harvey's Catastrophe. Geophysical Research Letters, 2020, 47, e2020GL090014.	4.0	7
93	Impact of Cloud Ice Particle Size Uncertainty in a Climate Model and Implications for Future Satellite Missions. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032119.	3.3	7
94	Observational study of the physical and chemical characteristics of the winter radiation fog in the tropical rainforest in Xishuangbanna, China. Science China Earth Sciences, 2021, 64, 1982-1995.	5.2	7
95	Interpretation of the Top-of-Atmosphere Energy Flux for Future Arctic Warming. Scientific Reports, 2019, 9, 13059.	3.3	6
96	New Observational Constraints on Warm Rain Processes and Their Climate Implications. Geophysical Research Letters, 2021, 48, e2020GL091836.	4.0	6
97	Observation and Simulation Studies of Three Types of Wire Icing. Atmosphere, 2019, 10, 234.	2.3	5
98	Secondary organic aerosol formation from photooxidation of C3H6 under the presence of NH3: Effects of seed particles. Environmental Research, 2022, 211, 113064.	7.5	5
99	Formation, radiative forcing, and climatic effects of severe regional haze. Atmospheric Chemistry and Physics, 2022, 22, 4951-4967.	4.9	5
100	Reply to Boucher et al.: Rate and timescale of black carbon aging regulate direct radiative forcing. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5094-5.	7.1	4
101	Monoâ€‰ Diâ€‰ and Triâ€‰Hydroxylated Symmetrical Hexamethylcucurbit[3,3]uril and Allylated Derivatives. European Journal of Organic Chemistry, 2017, 2017, 6980-6985.	2.4	3
102	Overview of Persistent Haze Events in China. , 2017, , 3-25.		1
103	Quantifying Longâ€‰Term Seasonal and Regional Impacts of North American Fire Activity on Continental Boundary Layer Aerosols and Cloud Condensation Nuclei. Earth and Space Science, 2020, 7, e2020EA001113.	2.6	1
104	Influence of Electrolytes and Humic Acid on Aggregation Behavior of C60 Nanoparticles in Aquatic System. Applied Mechanics and Materials, 2013, 448-453, 48-51.	0.2	0
105	Impacts of Urban Pollution on Thunderstorms. Springer Theses, 2015, , 17-35.	0.1	0
106	Numerical Model Description. Springer Theses, 2015, , 9-15.	0.1	0
107	Impacts of Asian Pollution Outflows on the Pacific Storm Track. Springer Theses, 2015, , 55-83.	0.1	0
108	Aerosol Effects on the Stratocumulus and Evaluations of Microphysics. Springer Theses, 2015, , 37-53.	0.1	0

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109	Analyzing the Contribution of Human Mobility to Changes in Air Pollutants: Insights from the COVID-19 Lockdown in Wuhan. ISPRS International Journal of Geo-Information, 2021, 10, 836.	2.9	0