Chien Wang

List of Publications by Year
in descending order

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87 papers	5,212 citations	109321 35 h-index	95266 68 g-index
122 all docs	122 docs citations	122 times ranked	5713 citing authors

#	Article	IF	Citations
1	Impact of aerosols on convective clouds and precipitation. Reviews of Geophysics, 2012, 50, .	23.0	657
2	Multi-gas assessment of the Kyoto Protocol. Nature, 1999, 401, 549-555.	27.8	279
3	Probabilistic Forecast for Twenty-First-Century Climate Based on Uncertainties in Emissions (Without) Tj ETQq1 1 0.784314 rgBT /Ove	3.2	192
4	Uncertainty Analysis of Climate Change and Policy Response. Climatic Change, 2003, 61, 295-320.	3.6	186
5	Impact of anthropogenic aerosols on Indian summer monsoon. Geophysical Research Letters, 2009, 36, .	4.0	178
6	A revival of Indian summer monsoon rainfall sinceÂ2002. Nature Climate Change, 2017, 7, 587-594.	18.8	161
7	Potential climatic impacts and reliability of very large-scale wind farms. Atmospheric Chemistry and Physics, 2010, 10, 2053-2061.	4.9	155
8	Effects of ozone on net primary production and carbon sequestration in the conterminous United States using a biogeochemistry model. Tellus, Series B: Chemical and Physical Meteorology, 2004, 56, 230-248.	1.6	154
9	A modeling study of the response of tropical deep convection to the increase of cloud condensation nuclei concentration: 1. Dynamics and microphysics. Journal of Geophysical Research, 2005, 110, .	3.3	143
10	Integrated Global System Model for Climate Policy Assessment: Feedbacks and Sensitivity Studies. Climatic Change, 1999, 41, 469-546.	3.6	132
11	Future Effects of Ozone on Carbon Sequestration and Climate Change Policy Using a Global Biogeochemical Model. Climatic Change, 2005, 73, 345-373.	3.6	124
12	A modeling study on the climate impacts of black carbon aerosols. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	123
13	Variation in global chemical composition of PM_{2.5}: emerging results from SPARTAN. Atmospheric Chemistry and Physics, 2016, 16, 9629-9653.	4.9	123
14	Estimating global black carbon emissions using a topâ€down Kalman Filter approach. Journal of Geophysical Research D: Atmospheres, 2014, 119, 307-323.	3.3	108
15	On the roles of deep convective clouds in tropospheric chemistry. Journal of Geophysical Research, 2000, 105, 22269-22297.	3.3	107
16	Uncertainty in emissions projections for climate models. Atmospheric Environment, 2002, 36, 3659-3670.	4.1	107
17	Global economic effects of changes in crops, pasture, and forests due to changing climate, carbon dioxide, and ozone. Energy Policy, 2007, 35, 5370-5383.	8.8	104
18	Impact of anthropogenic absorbing aerosols on clouds and precipitation: A review of recent progresses. Atmospheric Research, 2013, 122, 237-249.	4.1	97

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19	Cloud-scale model intercomparison of chemical constituent transport in deep convection. Atmospheric Chemistry and Physics, 2007, 7, 4709-4731.	4.9	96
20	Impact of direct radiative forcing of black carbon aerosols on tropical convective precipitation. Geophysical Research Letters, 2007, 34, .	4.0	84
21	Distribution and direct radiative forcing of carbonaceous and sulfate aerosols in an interactive sizeâ€resolving aerosolâ€“climate model. Journal of Geophysical Research, 2008, 113, .	3.3	81
22	Explicit Simulation of Aerosol Physics in a Cloud-Resolving Model: Aerosol Transport and Processing in the Free Troposphere. Journals of the Atmospheric Sciences, 2006, 63, 682-696.	1.7	76
23	A threeâ€dimensional numerical model of cloud dynamics, microphysics, and chemistry: 1. Concepts and formulation. Journal of Geophysical Research, 1993, 98, 14827-14844.	3.3	72
24	Analysis of climate policy targets under uncertainty. Climatic Change, 2012, 112, 569-583.	3.6	72
25	Effects of ozone on net primary production and carbon sequestration in the conterminous United States using a biogeochemistry model. Tellus, Series B: Chemical and Physical Meteorology, 2022, 56, 230.	1.6	70
26	Global Sources of Fine Particulate Matter: Interpretation of PM_{2.5} Chemical Composition Observed by SPARTAN using a Global Chemical Transport Model. Environmental Science & Technology, 2018, 52, 11670-11681.	10.0	68
27	Biomass burning aerosols and the low-visibility events in Southeast Asia. Atmospheric Chemistry and Physics, 2017, 17, 965-980.	4.9	67
28	Interactions of Asian mineral dust with Indian summer monsoon: Recent advances and challenges. Earth-Science Reviews, 2021, 215, 103562.	9.1	67
29	Linking local air pollution to global chemistry and climate. Journal of Geophysical Research, 2000, 105, 22869-22896.	3.3	66
30	Transient climate change and net ecosystem production of the terrestrial biosphere. Global Biogeochemical Cycles, 1998, 12, 345-360.	4.9	64
31	Explicit simulations of aerosol physics in a cloud-resolving model: a sensitivity study based on an observed convective cloud. Atmospheric Chemistry and Physics, 2004, 4, 773-791.	4.9	58
32	The role of a deep convective storm over the tropical Pacific Ocean in the redistribution of atmospheric chemical species. Journal of Geophysical Research, 1995, 100, 11509.	3.3	56
33	The effect of aerosol composition and concentration on the development and anvil properties of a continental deep convective cloud. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 1439-1452.	2.7	50
34	Impacts of air pollutants from fire and non-fire emissions on the regional air quality in Southeast Asia. Atmospheric Chemistry and Physics, 2018, 18, 6141-6156.	4.9	50
35	A global interactive chemistry and climate model: Formulation and testing. Journal of Geophysical Research, 1998, 103, 3399-3417.	3.3	46
36	The Impact of the Aerosol Direct Radiative Forcing on Deep Convection and Air Quality in the Pearl River Delta Region. Geophysical Research Letters, 2018, 45, 4410-4418.	4.0	43

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37	Particulate absorption of solar radiation: anthropogenic aerosols vs. dust. Atmospheric Chemistry and Physics, 2009, 9, 3935-3945.	4.9	38
38	Potential climatic impacts and reliability of large-scale offshore wind farms. Environmental Research Letters, 2011, 6, 025101.	5.2	37
39	Formation of ozone and growth of aerosols in young smoke plumes from biomass burning: 2. Threeâ€dimensional Eulerian studies. Journal of Geophysical Research, 2009, 114, .	3.3	36
40	The impact of detailed urban-scale processing on the composition, distribution, and radiative forcing of anthropogenic aerosols. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	36
41	Uncertainty in counting ice nucleating particles with continuous flow diffusion chambers. Atmospheric Chemistry and Physics, 2017, 17, 10855-10864.	4.9	36
42	Impact of a simulated severe local storm on the redistribution of sulfur dioxide. Journal of Geophysical Research, 1995, 100, 11357.	3.3	35
43	Anthropogenic aerosols and the distribution of past largeâ€scale precipitation change. Geophysical Research Letters, 2015, 42, 10876-10884.	4.0	32
44	The greening of Northwest Indian subcontinent and reduction of dust abundance resulting from Indian summer monsoon revival. Scientific Reports, 2018, 8, 4573.	3.3	32
45	Quantification of the impact of climate uncertainty on regional air quality. Atmospheric Chemistry and Physics, 2009, 9, 865-878.	4.9	31
46	Impact of emissions, chemistry and climate on atmospheric carbon monoxide: 100-yr predictions from a global chemistryâ€“climate model. Chemosphere, 1999, 1, 73-81.	1.2	30
47	A threeâ€dimensional numerical model of cloud dynamics, microphysics, and chemistry: 3. Redistribution of pollutants. Journal of Geophysical Research, 1993, 98, 16787-16798.	3.3	28
48	The sensitivity of tropical convective precipitation to the direct radiative forcings of black carbon aerosols emitted from major regions. Annales Geophysicae, 2009, 27, 3705-3711.	1.6	27
49	Metamodeling of Droplet Activation for Global Climate Models. Journals of the Atmospheric Sciences, 2016, 73, 1255-1272.	1.7	27
50	Description and Evaluation of the MIT Earth System Model (MESM). Journal of Advances in Modeling Earth Systems, 2018, 10, 1759-1789.	3.8	25
51	The Impact of Future Fuel Consumption on Regional Air Quality in Southeast Asia. Scientific Reports, 2019, 9, 2648.	3.3	24
52	Observational and modelling evidence of tropical deep convective clouds as a source of midâ€tropospheric accumulation mode aerosols. Geophysical Research Letters, 2008, 35, .	4.0	23
53	Radiative effects of interannually varying vs. interannually invariant aerosol emissions from fires. Atmospheric Chemistry and Physics, 2016, 16, 14495-14513.	4.9	23
54	On the representation of aerosol activation and its influence on model-derived estimates of the aerosol indirect effect. Atmospheric Chemistry and Physics, 2018, 18, 7961-7983.	4.9	23

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55	A threeâ€dimensional numerical model of cloud dynamics, microphysics, and chemistry: 4. Cloud chemistry and precipitation chemistry. Journal of Geophysical Research, 1993, 98, 16799-16808.	3.3	22
56	Nonlinear Effects of Coexisting Surface and Atmospheric Forcing of Anthropogenic Absorbing Aerosols: Impact on the South Asian Monsoon Onset. Journal of Climate, 2013, 26, 5594-5607.	3.2	19
57	A modeling study of the response of tropical deep convection to the increase of cloud condensation nuclei concentration: 2. Radiation and tropospheric chemistry. Journal of Geophysical Research, 2005, 110, .	3.3	18
58	Enhanced marine sulphur emissions offset global warming and impact rainfall. Scientific Reports, 2015, 5, 13055.	3.3	18
59	Black Carbon and West African Monsoon precipitation: observations and simulations. Annales Geophysicae, 2009, 27, 4171-4181.	1.6	17
60	The responses of cloudiness to the direct radiative effect of sulfate and carbonaceous aerosols. Journal of Geophysical Research D: Atmospheres, 2014, 119, 1172-1185.	3.3	17
61	Effective radiative forcing in the aerosolâ€“climate model CAM5.3-MARC-ARG. Atmospheric Chemistry and Physics, 2018, 18, 15783-15810.	4.9	17
62	Large global variations in measured airborne metal concentrations driven by anthropogenic sources. Scientific Reports, 2020, 10, 21817.	3.3	17
63	Impact of the horizontal wind profile on the convective transport of chemical species. Journal of Geophysical Research, 1998, 103, 22063-22071.	3.3	16
64	Transient Climate Impacts for Scenarios of Aerosol Emissions from Asia: A Story of Coal versus Gas. Journal of Climate, 2016, 29, 2849-2867.	3.2	16
65	Impacts on cloud radiative effects induced by coexisting aerosols converted from international shipping and maritime DMS emissions. Atmospheric Chemistry and Physics, 2018, 18, 16793-16808.	4.9	16
66	The rise of Indian summer monsoon precipitation extremes and its correlation with long-term changes of climate and anthropogenic factors. Scientific Reports, 2022, 12, .	3.3	15
67	A threeâ€dimensional numerical model of cloud dynamics, microphysics, and chemistry: 2. A case study of the dynamics and microphysics of a severe local storm. Journal of Geophysical Research, 1993, 98, 14845-14862.	3.3	12
68	Evaluating model parameterizations of submicron aerosol scattering and absorption with in situ data from ARCTAS 2008. Atmospheric Chemistry and Physics, 2016, 16, 9435-9455.	4.9	12
69	Climate effects of seasonally varying Biomass Burning emitted Carbonaceous Aerosols (BBCA). Atmospheric Chemistry and Physics, 2010, 10, 8373-8389.	4.9	11
70	The Response of the South Asian Summer Monsoon to Temporal and Spatial Variations in Absorbing Aerosol Radiative Forcing. Journal of Climate, 2015, 28, 6626-6646.	3.2	10
71	Background Conditions Influence the Estimated Cloud Radiative Effects of Anthropogenic Aerosol Emissions From Different Source Regions. Journal of Geophysical Research D: Atmospheres, 2019, 124, 2276-2295.	3.3	10
72	The impacts of biomass burning activities on convective systems over the Maritime Continent. Atmospheric Chemistry and Physics, 2020, 20, 2533-2548.	4.9	10

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73	An aerosol activation metamodel of v1.2.0 of the pyrcel cloud parcel model: development and offline assessment for use in an aerosolâ€“climate model. Geoscientific Model Development, 2017, 10, 1817-1833.	3.6	9
74	Uncertainty in the oceanic heat and carbon uptake and its impact on climate projections. Geophysical Research Letters, 1998, 25, 3603-3606.	4.0	8
75	Effects of air pollution control on climate: results from an integrated global system model. , 2007, , 93-102.		8
76	Subâ€micrometer aerosol particles in the upper troposphere/lowermost stratosphere as measured by CARIBIC and modeled using the MITâ€CAM3 global climate model. Journal of Geophysical Research, 2012, 117, .	3.3	8
77	How Uncertainty in Field Measurements of Ice Nucleating Particles Influences Modeled Cloud Forcing. Journals of the Atmospheric Sciences, 2018, 75, 179-187.	1.7	8
78	The Equilibrium Climate Response to Sulfur Dioxide and Carbonaceous Aerosol Emissions From East and Southeast Asia. Geophysical Research Letters, 2018, 45, 11,318.	4.0	7
79	Cloudâ€“rain interactions: as complex as it gets. Environmental Research Letters, 2008, 3, 045018.	5.2	4
80	Radiative and microphysical responses of clouds to an anomalous increase in fire particles over the Maritime Continent in 2015. Atmospheric Chemistry and Physics, 2022, 22, 4129-4147.	4.9	3
81	Regional Emission Scenarios for HFCs, PFCs and SF6. , 2000, , 231-238.		2
82	A revival of Indian summer monsoon rainfall since 2002. , 0, .		1
83	Reply to comment by John H. Helsdon Jr. on â€œOn the roles of deep convective clouds in tropospheric chemistryâ€. Journal of Geophysical Research, 2004, 109, .	3.3	0
84	Correction to â€œReply to comment by John H. Helsdon Jr. on â€˜On the roles of deep convective clouds in tropospheric chemistryâ€™ by C. Wang and R. G. Prinnâ€. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	0
85	Monsoon Systems, Modeling of. , 2012, , 303-329.		0
86	Forecasting and identifying the meteorological and hydrological conditions favoring the occurrence of severe hazes in Beijing and Shanghai using deep learning. Atmospheric Chemistry and Physics, 2021, 21, 13149-13166.	4.9	0
87	Modelling. , 2003, , 185-206.		0