

M C Barth

List of Publications by Year in descending order

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67
papers

3,316
citations

172207

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155451

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all docs

68
docs citations

68
times ranked

3785
citing authors

#	ARTICLE	IF	CITATIONS
1	The acidity of atmospheric particles and clouds. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 4809-4888.	1.9	327
2	Sulfur chemistry in the National Center for Atmospheric Research Community Climate Model: Description, evaluation, features, and sensitivity to aqueous chemistry. <i>Journal of Geophysical Research</i> , 2000, 105, 1387-1415.	3.3	243
3	Premature mortality in India due to PM _{2.5} and ozone exposure. <i>Geophysical Research Letters</i> , 2016, 43, 4650-4658.	1.5	209
4	The Deep Convective Clouds and Chemistry (DC3) Field Campaign. <i>Bulletin of the American Meteorological Society</i> , 2015, 96, 1281-1309.	1.7	165
5	WRF-Chem simulations of a typical pre-monsoon dust storm in northern India: influences on aerosol optical properties and radiation budget. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 2431-2446.	1.9	148
6	Simulations over South Asia using the Weather Research and Forecasting model with Chemistry (WRF-Chem): chemistry evaluation and initial results. <i>Geoscientific Model Development</i> , 2012, 5, 619-648.	1.3	144
7	Cloud-scale model intercomparison of chemical constituent transport in deep convection. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 4709-4731.	1.9	96
8	Numerical simulations of the July 10, 1996, Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone (STERAO)-Deep Convection experiment storm: Redistribution of soluble tracers. <i>Journal of Geophysical Research</i> , 2001, 106, 12381-12400.	3.3	95
9	Upper tropospheric ozone production from lightning NO _x -impacted convection: Smoke ingestion case study from the DC3 campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 2505-2523.	1.2	88
10	What controls the seasonal cycle of black carbon aerosols in India?. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 7788-7812.	1.2	84
11	Estimation of total lightning from various storm parameters: A cloud-resolving model study. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	83
12	Simulations over South Asia using the Weather Research and Forecasting model with Chemistry (WRF-Chem): set-up and meteorological evaluation. <i>Geoscientific Model Development</i> , 2012, 5, 321-343.	1.3	72
13	Evaluating a lightning parameterization based on cloud-top height for mesoscale numerical model simulations. <i>Geoscientific Model Development</i> , 2013, 6, 429-443.	1.3	70
14	Projections of future summertime ozone over the U.S.. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 5559-5582.	1.2	69
15	Effects of dust aerosols on tropospheric chemistry during a typical pre-monsoon season dust storm in northern India. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 6813-6834.	1.9	68
16	Simulations of the redistribution of formaldehyde, formic acid, and peroxides in the 10 July 1996 Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone deep convection storm. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	66
17	Source attribution of carbon monoxide in India and surrounding regions during wintertime. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 1981-1995.	1.2	63
18	Thunderstorms enhance tropospheric ozone by wrapping and shedding stratospheric air. <i>Geophysical Research Letters</i> , 2014, 41, 7785-7790.	1.5	62

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19	How Will Air Quality Change in South Asia by 2050?. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 1840-1864.	1.2	61
20	Acidity and the multiphase chemistry of atmospheric aqueous particles and clouds. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 13483-13536.	1.9	59
21	Aerosol transport and wet scavenging in deep convective clouds: A case study and model evaluation using a multiple passive tracer analysis approach. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 8448-8468.	1.2	56
22	Summary of the cloud chemistry modeling intercomparison: Photochemical box model simulation. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	54
23	Transport and chemical transformations influenced by shallow cumulus over land. <i>Atmospheric Chemistry and Physics</i> , 2005, 5, 3219-3231.	1.9	54
24	Numerical simulations of the July 10 Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone/Deep Convection Experiment convective system: Kinematics and transport. <i>Journal of Geophysical Research</i> , 2000, 105, 19973-19990.	3.3	52
25	Thunderstorms and upper troposphere chemistry during the early stages of the 2006 North American Monsoon. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 11003-11026.	1.9	48
26	Sources of black carbon aerosols in South Asia and surrounding regions during the Integrated Campaign for Aerosols, Gases and Radiation Budget (ICARB). <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 5415-5428.	1.9	48
27	Comprehensive isoprene and terpene gas-phase chemistry improves simulated surface ozone in the southeastern US. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 3739-3776.	1.9	47
28	Measurements of atmospheric gas-phase and aqueous-phase hydrogen peroxide concentrations in winter on the east coast of the United States. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 1989, 41B, 61-69.	0.8	39
29	Transport from convective overshooting of the extratropical tropopause and the role of large-scale lower stratosphere stability. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 2220-2240.	1.2	34
30	Substantial Increase in the Joint Occurrence and Human Exposure of Heatwave and High-PM Hazards Over South Asia in the Mid-21st Century. <i>AGU Advances</i> , 2020, 1, e2019AV000103.	2.3	31
31	Aerosol-cloud associations over Gangetic Basin during a typical monsoon depression event using WRF-Chem simulation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 10,974-10,995.	1.2	30
32	Wet scavenging of soluble gases in DC3 deep convective storms using WRF-Chem simulations and aircraft observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 4233-4257.	1.2	29
33	Influence of fair-weather cumulus clouds on isoprene chemistry. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	28
34	Injection of lightning-produced NO _x , water vapor, wildfire emissions, and stratospheric air to the UT/LS as observed from DC3 measurements. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 6638-6668.	1.2	28
35	Effect of marine boundary layer clouds on tropospheric chemistry as analyzed in a regional chemistry transport model. <i>Journal of Geophysical Research</i> , 2002, 107, AAC 7-1-AAC 7-12.	3.3	25
36	Airborne quantification of upper tropospheric NO _x production from lightning in deep convective storms over the United States Great Plains. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 2002-2028.	1.2	25

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37	Convective transport and scavenging of peroxides by thunderstorms observed over the central U.S. during DC3. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 4272-4295.	1.2	24
38	Observational evidence for the convective transport of dust over the Central United States. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 1306-1319.	1.2	23
39	On the origin of pronounced O_3 gradients in the thunderstorm outflow region during DC3. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 6600-6637.	1.2	22
40	Using Observations and Source-Specific Model Tracers to Characterize Pollutant Transport During FRAPP% and DISCOVERAQ. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 10510-10538.	1.2	22
41	The Multi-Scale Infrastructure for Chemistry and Aerosols (MUSICA). <i>Bulletin of the American Meteorological Society</i> , 2020, 101, E1743-E1760.	1.7	21
42	Cloud-resolving chemistry simulation of a Hector thunderstorm. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 2757-2777.	1.9	20
43	Evaluating the Impact of Chemical Complexity and Horizontal Resolution on Tropospheric Ozone Over the Conterminous US With a Global Variable Resolution Chemistry Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	1.3	20
44	Impact of turbulent mixing on isoprene chemistry. <i>Geophysical Research Letters</i> , 2016, 43, 7701-7708.	1.5	19
45	Chemical Characteristics and Ozone Production in the Northern Colorado Front Range. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 13397-13419.	1.2	18
46	Assessment of Updated Fuel-Based Emissions Inventories Over the Contiguous United States Using TROPOMI NO_2 Retrievals. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD035484.	1.2	18
47	Large-eddy simulation of biogenic VOC chemistry during the DISCOVERAQ 2011 campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 8083-8105.	1.2	17
48	Numerical modeling of cloud chemistry effects on isocyanic acid (HNCO). <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 8688-8701.	1.2	15
49	Effects of Scavenging, Entrainment, and Aqueous Chemistry on Peroxides and Formaldehyde in Deep Convective Outflow Over the Central and Southeast United States. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 7594-7614.	1.2	15
50	Title is missing!. <i>Journal of Atmospheric Chemistry</i> , 2002, 41, 211-237.	1.4	14
51	Mechanisms Responsible for Stratosphere-to-Troposphere Transport Around a Mesoscale Convective System Anvil. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD032016.	1.2	14
52	Impact of In-Cloud Aqueous Processes on the Chemistry and Transport of Biogenic Volatile Organic Compounds. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 11,131.	1.2	13
53	Sensitivity of simulated convection-driven stratosphere-troposphere exchange in WRF-Chem to the choice of physical and chemical parameterization. <i>Earth and Space Science</i> , 2017, 4, 454-471.	1.1	13
54	Separating Emission and Meteorological Drivers of Mid-21st-Century Air Quality Changes in India Based on Multiyear Global-Regional Chemistry-Climate Simulations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 13420-13438.	1.2	12

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55	Comparing turbulent mixing of atmospheric oxidants across model scales. <i>Atmospheric Environment</i> , 2019, 199, 88-101.	1.9	12
56	Trifluoroacetic acid deposition from emissions of HFO-1234yf in India, China, and the Middle East. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 14833-14849.	1.9	12
57	Contrasting aerosol refractive index and hygroscopicity in the inflow and outflow of deep convective storms: Analysis of airborne data from DC3. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 4565-4577.	1.2	10
58	Evaluation of deep convective transport in storms from different convective regimes during the DC3 field campaign using WRF-Chem with lightning data assimilation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 7140-7163.	1.2	9
59	Evaluation of Parameterized Convective Transport of Trace Gases in Simulation of Storms Observed During the DC3 Field Campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 11238-11261.	1.2	9
60	Multiphase Chemistry: Experimental Design for Coordinated Measurement and Modeling Studies of Cloud Processing at a Mountaintop. <i>Bulletin of the American Meteorological Society</i> , 2017, 98, ES163-ES167.	1.7	8
61	Overview of the CPOC Pilot Study at Whiteface Mountain, NY: Cloud Processing of Organics within Clouds (CPOC). <i>Bulletin of the American Meteorological Society</i> , 2020, 101, E1820-E1841.	1.7	8
62	The impact of inhomogeneous emissions and topography on ozone photochemistry in the vicinity of Hong Kong Island. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 3531-3553.	1.9	7
63	Box Model Intercomparison of Cloud Chemistry. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, .	1.2	7
64	Vertical Transport, Entrainment, and Scavenging Processes Affecting Trace Gases in a Modeled and Observed SEAC 4 RS Case Study. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031957.	1.2	5
65	Wet Scavenging in WRF-Chem Simulations of Parameterized Convection for a Severe Storm During the DC3 Field Campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 7413-7428.	1.2	4
66	Introduction to the Deep Convective Clouds and Chemistry (DC3) 2012 Studies. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 8095-8103.	1.2	3
67	Simulation of Chemical Transport by Typhoon Mireille (1991). <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 11614-11639.	1.2	2