M C Barth

List of Publications by Year
in descending order

67 papers	3,316 citations	172207 29 h-index	155451 55 g-index
68 all docs	68 docs citations	68 times ranked	3785 citing authors

#	Article	IF	Citations
1	Evaluating the Impact of Chemical Complexity and Horizontal Resolution on Tropospheric Ozone Over the Conterminous US With a Global Variable Resolution Chemistry Model. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	20
2	The impact of inhomogeneous emissions and topography on ozone photochemistry in the vicinity of Hong Kong Island. Atmospheric Chemistry and Physics, 2021, 21, 3531-3553.	1.9	7
3	Acidity and the multiphase chemistry of atmospheric aqueous particles and clouds. Atmospheric Chemistry and Physics, 2021, 21, 13483-13536.	1.9	59
4	Trifluoroacetic acid deposition from emissions of HFO-1234yf in India, China, and the Middle East. Atmospheric Chemistry and Physics, 2021, 21, 14833-14849.	1.9	12
5	Box Model Intercomparison of Cloud Chemistry. Journal of Geophysical Research D: Atmospheres, 2021, 126, .	1.2	7
6	Assessment of Updated Fuelâ€Based Emissions Inventories Over the Contiguous United States Using TROPOMI NO₂ Retrievals. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035484.	1.2	18
7	The acidity of atmospheric particles and clouds. Atmospheric Chemistry and Physics, 2020, 20, 4809-4888.	1.9	327
8	Vertical Transport, Entrainment, and Scavenging Processes Affecting Trace Gases in a Modeled and Observed SEAC 4 RS Case Study. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031957.	1.2	5
9	Substantial Increase in the Joint Occurrence and Human Exposure of Heatwave and Highâ€PM Hazards Over South Asia in the Midâ€21st Century. AGU Advances, 2020, 1, e2019AV000103.	2.3	31
10	Mechanisms Responsible for Stratosphereâ€toâ€Troposphere Transport Around a Mesoscale Convective System Anvil. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032016.	1.2	14
11	Comprehensive isoprene and terpene gas-phase chemistry improves simulated surface ozone in the southeastern US. Atmospheric Chemistry and Physics, 2020, 20, 3739-3776.	1.9	47
12	Overview of the CPOC Pilot Study at Whiteface Mountain, NY: Cloud Processing of Organics within Clouds (CPOC). Bulletin of the American Meteorological Society, 2020, 101, E1820-E1841.	1.7	8
13	The Multi-Scale Infrastructure for Chemistry and Aerosols (MUSICA). Bulletin of the American Meteorological Society, 2020, 101, E1743-E1760.	1.7	21
14	Introduction to the Deep Convective Clouds and Chemistry (DC3) 2012 Studies. Journal of Geophysical Research D: Atmospheres, 2019, 124, 8095-8103.	1.2	3
15	Chemical Characteristics and Ozone Production in the Northern Colorado Front Range. Journal of Geophysical Research D: Atmospheres, 2019, 124, 13397-13419.	1.2	18
16	Simulation of Chemical Transport by Typhoon Mireille (1991). Journal of Geophysical Research D: Atmospheres, 2019, 124, 11614-11639.	1.2	2
17	Wet Scavenging in WRFâ€Chem Simulations of Parameterized Convection for a Severe Storm During the DC3 Field Campaign. Journal of Geophysical Research D: Atmospheres, 2019, 124, 7413-7428.	1.2	4
18	Separating Emission and Meteorological Drivers ofMidâ€21stâ€Century Air Quality Changes in IndiaBased on Multiyear Globalâ€RegionalChemistryâ€Climate Simulations. Journal of Geophysical Research D: Atmospheres, 2019, 124, 13420-13438.	1.2	12

#	Article	IF	Citations
19	Comparing turbulent mixing of atmospheric oxidants across model scales. Atmospheric Environment, 2019, 199, 88-101.	1.9	12
20	How Will Air Quality Change in South Asia by 2050?. Journal of Geophysical Research D: Atmospheres, 2018, 123, 1840-1864.	1.2	61
21	Evaluation of Parameterized Convective Transport of Trace Gases in Simulation of Storms Observed During the DC3 Field Campaign. Journal of Geophysical Research D: Atmospheres, 2018, 123, 11238-11261.	1.2	9
22	Effects of Scavenging, Entrainment, and Aqueous Chemistry on Peroxides and Formaldehyde in Deep Convective Outflow Over the Central and Southeast United States. Journal of Geophysical Research D: Atmospheres, 2018, 123, 7594-7614.	1.2	15
23	Contrasting aerosol refractive index and hygroscopicity in the inflow and outflow of deep convective storms: Analysis of airborne data from DC3. Journal of Geophysical Research D: Atmospheres, 2017, 122, 4565-4577.	1.2	10
24	Impact of Inâ€Cloud Aqueous Processes on the Chemistry and Transport of Biogenic Volatile Organic Compounds. Journal of Geophysical Research D: Atmospheres, 2017, 122, 11,131.	1.2	13
25	Sensitivity of simulated convectionâ€driven stratosphereâ€troposphere exchange in WRFâ€Chem to the choice of physical and chemical parameterization. Earth and Space Science, 2017, 4, 454-471.	1.1	13
26	Using Observations and Sourceâ€Specific Model Tracers to Characterize Pollutant Transport During FRAPPÃ‰ and DISCOVERâ€AQ. Journal of Geophysical Research D: Atmospheres, 2017, 122, 10510-10538.	1.2	22
27	Multiphase Chemistry: Experimental Design for Coordinated Measurement and Modeling Studies of Cloud Processing at a Mountaintop. Bulletin of the American Meteorological Society, 2017, 98, ES163-ES167.	1.7	8
28	Evaluation of deep convective transport in storms from different convective regimes during the DC3 field campaign using WRFâ€Chem with lightning data assimilation. Journal of Geophysical Research D: Atmospheres, 2017, 122, 7140-7163.	1.2	9
29	On the origin of pronounced O₃ gradients in the thunderstorm outflow region during DC3. Journal of Geophysical Research D: Atmospheres, 2016, 121, 6600-6637.	1.2	22
30	Observational evidence for the convective transport of dust over the Central United States. Journal of Geophysical Research D: Atmospheres, 2016, 121, 1306-1319.	1.2	23
31	Airborne quantification of upper tropospheric NO<i>_x</i> production from lightning in deep convective storms over the United States Great Plains. Journal of Geophysical Research D: Atmospheres, 2016, 121, 2002-2028.	1.2	25
32	Impact of turbulent mixing on isoprene chemistry. Geophysical Research Letters, 2016, 43, 7701-7708.	1.5	19
33	Convective transport and scavenging of peroxides by thunderstorms observed over the central U.S. during DC3. Journal of Geophysical Research D: Atmospheres, 2016, 121, 4272-4295.	1.2	24
34	Largeâ€eddy simulation of biogenic VOC chemistry during the DISCOVERâ€AQ 2011 campaign. Journal of Geophysical Research D: Atmospheres, 2016, 121, 8083-8105.	1.2	17
35	Injection of lightningâ€produced NO<i>_x</i>, water vapor, wildfire emissions, and stratospheric air to the UT/LS as observed from DC3 measurements. Journal of Geophysical Research D: Atmospheres, 2016, 121, 6638-6668.	1.2	28
36	Wet scavenging of soluble gases in DC3 deep convective storms using WRFâ€Chem simulations and aircraft observations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 4233-4257.	1.2	29

#	Article	IF	Citations
37	Premature mortality in India due to PM_{2.5} and ozone exposure. Geophysical Research Letters, 2016, 43, 4650-4658.	1.5	209
38	What controls the seasonal cycle of black carbon aerosols in India?. Journal of Geophysical Research D: Atmospheres, 2015, 120, 7788-7812.	1.2	84
39	Aerosol-cloud associations over Gangetic Basin during a typical monsoon depression event using WRF-Chem simulation. Journal of Geophysical Research D: Atmospheres, 2015, 120, 10,974-10,995.	1.2	30
40	Upper tropospheric ozone production from lightning NO<i>_x</i>â€impacted convection: Smoke ingestion case study from the DC3 campaign. Journal of Geophysical Research D: Atmospheres, 2015, 120, 2505-2523.	1.2	88
41	Sources of black carbon aerosols in South Asia and surrounding regions during the Integrated Campaign for Aerosols, Gases and Radiation Budget (ICARB). Atmospheric Chemistry and Physics, 2015, 15, 5415-5428.	1.9	48
42	The Deep Convective Clouds and Chemistry (DC3) Field Campaign. Bulletin of the American Meteorological Society, 2015, 96, 1281-1309.	1.7	165
43	Aerosol transport and wet scavenging in deep convective clouds: A case study and model evaluation using a multiple passive tracer analysis approach. Journal of Geophysical Research D: Atmospheres, 2015, 120, 8448-8468.	1.2	56
44	Transport from convective overshooting of the extratropical tropopause and the role of largeâ€scale lower stratosphere stability. Journal of Geophysical Research D: Atmospheres, 2014, 119, 2220-2240.	1.2	34
45	Thunderstorms enhance tropospheric ozone by wrapping and shedding stratospheric air. Geophysical Research Letters, 2014, 41, 7785-7790.	1.5	62
46	Effects of dust aerosols on tropospheric chemistry during a typical pre-monsoon season dust storm in northern India. Atmospheric Chemistry and Physics, 2014, 14, 6813-6834.	1.9	68
47	WRF-Chem simulations of a typical pre-monsoon dust storm in northern India: influences on aerosol optical properties and radiation budget. Atmospheric Chemistry and Physics, 2014, 14, 2431-2446.	1.9	148
48	Projections of future summertime ozone over the U.S.. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5559-5582.	1.2	69
49	Evaluating a lightning parameterization based on cloud-top height for mesoscale numerical model simulations. Geoscientific Model Development, 2013, 6, 429-443.	1.3	70
50	Cloud-resolving chemistry simulation of a Hector thunderstorm. Atmospheric Chemistry and Physics, 2013, 13, 2757-2777.	1.9	20
51	Source attribution of carbon monoxide in India and surrounding regions during wintertime. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1981-1995.	1.2	63
52	Numerical modeling of cloud chemistry effects on isocyanic acid (HNCO). Journal of Geophysical Research D: Atmospheres, 2013, 118, 8688-8701.	1.2	15
53	Simulations over South Asia using the Weather Research and Forecasting model with Chemistry (WRF-Chem): set-up and meteorological evaluation. Geoscientific Model Development, 2012, 5, 321-343.	1.3	72
54	Simulations over South Asia using the Weather Research and Forecasting model with Chemistry (WRF-Chem): chemistry evaluation and initial results. Geoscientific Model Development, 2012, 5, 619-648.	1.3	144

#	Article	IF	Citations
55	Thunderstorms and upper troposphere chemistry during the early stages of the 2006 North American Monsoon. Atmospheric Chemistry and Physics, 2012, 12, 11003-11026.	1.9	48
56	Influence of fairâ€weather cumulus clouds on isoprene chemistry. Journal of Geophysical Research, 2012, 117, .	3.3	28
57	Estimation of total lightning from various storm parameters: A cloudâ€resolving model study. Journal of Geophysical Research, 2010, 115, .	3.3	83
58	Cloud-scale model intercomparison of chemical constituent transport in deep convection. Atmospheric Chemistry and Physics, 2007, 7, 4709-4731.	1.9	96
59	Simulations of the redistribution of formaldehyde, formic acid, and peroxides in the 10 July 1996 Stratosphericâ€Tropospheric Experiment: Radiation, Aerosols, and Ozone deep convection storm. Journal of Geophysical Research, 2007, 112, .	3.3	66
60	Transport and chemical transformations influenced by shallow cumulus over land. Atmospheric Chemistry and Physics, 2005, 5, 3219-3231.	1.9	54
61	Summary of the cloud chemistry modeling intercomparison: Photochemical box model simulation. Journal of Geophysical Research, 2003, 108, .	3.3	54
62	Effect of marine boundary layer clouds on tropospheric chemistry as analyzed in a regional chemistry transport model. Journal of Geophysical Research, 2002, 107, AAC 7-1-AAC 7-12.	3.3	25
63	Title is missing!. Journal of Atmospheric Chemistry, 2002, 41, 211-237.	1.4	14
64	Numerical simulations of the July 10, 1996, Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone (STERAO)-Deep Convection experiment storm: Redistribution of soluble tracers. Journal of Geophysical Research, 2001, 106, 12381-12400.	3.3	95
65	Numerical simulations of the July 10 Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone/Deep Convection Experiment convective system: Kinematics and transport. Journal of Geophysical Research, 2000, 105, 19973-19990.	3.3	52
66	Sulfur chemistry in the National Center for Atmospheric Research Community Climate Model: Description, evaluation, features, and sensitivity to aqueous chemistry. Journal of Geophysical Research, 2000, 105, 1387-1415.	3.3	243
67	Measurements of atmospheric gas-phase and aqueous-phase hydrogen peroxide concentrations in winter on the east coast of the United States. Tellus, Series B: Chemical and Physical Meteorology, 1989, 41B, 61-69.	0.8	39