Christopher D Holmes

List of Publications by Year
in descending order

61 papers	4,356 citations	159358 30 h-index	138251 58 g-index
95 all docs	95 docs citations	95 times ranked	5025 citing authors

#	Article	IF	Citations
1	Global atmospheric model for mercury including oxidation by bromine atoms. Atmospheric Chemistry and Physics, 2010, 10, 12037-12057.	1.9	411
2	Reactive greenhouse gas scenarios: Systematic exploration of uncertainties and the role of atmospheric chemistry. Geophysical Research Letters, 2012, 39, .	1.5	406
3	Gas-particle partitioning of atmospheric Hg(II) and its effect on global mercury deposition. Atmospheric Chemistry and Physics, 2012, 12, 591-603.	1.9	371
4	Globally Gridded Satellite Observations for Climate Studies. Bulletin of the American Meteorological Society, 2011, 92, 893-907.	1.7	244
5	An Improved Global Model for Air-Sea Exchange of Mercury: High Concentrations over the North Atlantic. Environmental Science & Technology, 2010, 44, 8574-8580.	4.6	225
6	Source attribution and interannual variability of Arctic pollution in spring constrained by aircraft (ARCTAS, ARCPAC) and satellite (AIRS) observations of carbon monoxide. Atmospheric Chemistry and Physics, 2010, 10, 977-996.	1.9	189
7	Sources and deposition of reactive gaseous mercury in the marine atmosphere. Atmospheric Environment, 2009, 43, 2278-2285.	1.9	179
8	Global lifetime of elemental mercury against oxidation by atomic bromine in the free troposphere. Geophysical Research Letters, 2006, 33, .	1.5	177
9	Future methane, hydroxyl, and their uncertainties: key climate and emission parameters for future predictions. Atmospheric Chemistry and Physics, 2013, 13, 285-302.	1.9	171
10	Contrasting the direct radiative effect and direct radiative forcing of aerosols. Atmospheric Chemistry and Physics, 2014, 14, 5513-5527.	1.9	171
11	Global Sourceâ€"Receptor Relationships for Mercury Deposition Under Present-Day and 2050 Emissions Scenarios. Environmental Science & Technology, 2011, 45, 10477-10484.	4.6	140
12	Global inorganic nitrate production mechanisms: comparison of a global model with nitrate isotope observations. Atmospheric Chemistry and Physics, 2020, 20, 3859-3877.	1.9	106
13	Present and future nitrogen deposition to national parks in the United States: critical load exceedances. Atmospheric Chemistry and Physics, 2013, 13, 9083-9095.	1.9	105
14	Nested-grid simulation of mercury over North America. Atmospheric Chemistry and Physics, 2012, 12, 6095-6111.	1.9	95
15	Transâ€Pacific transport of mercury. Journal of Geophysical Research, 2008, 113, .	3.3	83
16	Uncertainties in climate assessment for the case of aviation NO. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 10997-11002.	3.3	67
17	The chemical transport model Oslo CTM3. Geoscientific Model Development, 2012, 5, 1441-1469.	1.3	66
18	Mercury in tropical and subtropical coastal environments. Environmental Research, 2012, 119, 88-100.	3.7	59

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19	Global tropospheric halogen (Cl, Br, I) chemistry and its impact on oxidants. Atmospheric Chemistry and Physics, 2021, 21, 13973-13996.	1.9	57
20	The Role of Clouds in the Tropospheric NO_{<i>x</i>} Cycle: A New Modeling Approach for Cloud Chemistry and Its Global Implications. Geophysical Research Letters, 2019, 46, 4980-4990.	1.5	51
21	A New Picture of Fire Extent, Variability, and Drought Interaction in Prescribed Fire Landscapes: Insights From Florida Government Records. Geophysical Research Letters, 2018, 45, 7874-7884.	1.5	49
22	The climate impact of ship NO_x emissions: an improved estimate accounting for plume chemistry. Atmospheric Chemistry and Physics, 2014, 14, 6801-6812.	1.9	47
23	Skill in forecasting extreme ozone pollution episodes with a global atmospheric chemistry model. Atmospheric Chemistry and Physics, 2014, 14, 7721-7739.	1.9	46
24	A preliminary evaluation of GOES-16 active fire product using Landsat-8 and VIIRS active fire data, and ground-based prescribed fire records. Remote Sensing of Environment, 2020, 237, 111600.	4.6	45
25	Ozone chemistry in western U.S. wildfire plumes. Science Advances, 2021, 7, eabl3648.	4.7	45
26	Thunderstorms Increase Mercury Wet Deposition. Environmental Science & Technology, 2016, 50, 9343-9350.	4.6	43
27	Mercury in the Gulf of Mexico: Sources to receptors. Environmental Research, 2012, 119, 42-52.	3.7	40
28	Geometric phase of optical rotators. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1999, 16, 1981.	0.8	38
29	Methane Feedback on Atmospheric Chemistry: Methods, Models, and Mechanisms. Journal of Advances in Modeling Earth Systems, 2018, 10, 1087-1099.	1.3	38
30	Nighttime and daytime dark oxidation chemistry in wildfire plumes: an observation and model analysis of FIREX-AQ aircraft data. Atmospheric Chemistry and Physics, 2021, 21, 16293-16317.	1.9	34
31	Atmospheric Ozone and Methane in a Changing Climate. Atmosphere, 2014, 5, 518-535.	1.0	33
32	Mercury oxidation from bromine chemistry in the free troposphere over the southeasternÂUS. Atmospheric Chemistry and Physics, 2016, 16, 3743-3760.	1.9	33
33	Overexplaining or underexplaining methaneâ€™s role in climate change. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5324-5326.	3.3	31
34	Variability and Time of Day Dependence of Ozone Photochemistry in Western Wildfire Plumes. Environmental Science & Technology, 2021, 55, 10280-10290.	4.6	31
35	Sources of atmospheric mercury in the tropics: continuous observations at a coastal site in Suriname. Atmospheric Chemistry and Physics, 2012, 12, 7391-7397.	1.9	30
36	Air pollution and forest water use. Nature, 2014, 507, E1-E2.	13.7	28

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37	Rapid cloud removal of dimethyl sulfide oxidation products limits SO ₂ and cloud condensation nuclei production in the marine atmosphere. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	28
38	Modeled methanesulfonic acid (MSA) deposition in Antarctica and its relationship to sea ice. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	26
39	Heterogeneous Nitrate Production Mechanisms in Intense Haze Events in the North China Plain. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034688.	1.2	25
40	Effects of Sea Salt Aerosol Emissions for Marine Cloud Brightening on Atmospheric Chemistry: Implications for Radiative Forcing. Geophysical Research Letters, 2020, 47, e2019GL085838.	1.5	24
41	Formaldehyde evolution in US wildfire plumes during the Fire Influence on Regional to Global Environments and Air Quality experiment (FIREX-AQ). Atmospheric Chemistry and Physics, 2021, 21, 18319-18331.	1.9	24
42	Cloud-resolving simulations of mercury scavenging and deposition in thunderstorms. Atmospheric Chemistry and Physics, 2013, 13, 10143-10157.	1.9	23
43	Synthetic ozone deposition and stomatal uptake at flux tower sites. Biogeosciences, 2018, 15, 5395-5413.	1.3	22
44	Efficient Production of Carbonyl Sulfide in the Lowâ€NO_x Oxidation of Dimethyl Sulfide. Geophysical Research Letters, 2022, 49, .	1.5	16
45	Airborne Emission Rate Measurements Validate Remote Sensing Observations and Emission Inventories of Western U.S. Wildfires. Environmental Science & Technology, 2022, 56, 7564-7577.	4.6	15
46	Mercury Wet Scavenging and Deposition Differences by Precipitation Type. Environmental Science & Technology, 2017, 51, 2628-2634.	4.6	14
47	Technical note: AQMEII4 Activity 1: evaluation of wet and dry deposition schemes as an integral part of regional-scale air quality models. Atmospheric Chemistry and Physics, 2021, 21, 15663-15697.	1.9	14
48	Have improvements in ozone air quality reduced ozone uptake into plants?. Elementa, 2020, 8, .	1.1	11
49	Novel Analysis to Quantify Plume Crosswind Heterogeneity Applied to Biomass Burning Smoke. Environmental Science & Technology, 2021, 55, 15646-15657.	4.6	11
50	Spatial distributions of <i>X</i>_{CO₂} seasonal cycle amplitude and phase over northern high-latitude regions. Atmospheric Chemistry and Physics, 2021, 21, 16661-16687.	1.9	10
51	Complexity in the Evolution, Composition, and Spectroscopy of Brown Carbon in Aircraft Measurements of Wildfire Plumes. Geophysical Research Letters, 2022, 49, .	1.5	10
52	Variable geometric-phase polarization rotators for the visible. Optics Communications, 1999, 171, 7-13.	1.0	9
53	Arctic Reactive Bromine Events Occur in Two Distinct Sets of Environmental Conditions: A Statistical Analysis of 6ÂYears of Observations. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032139.	1.2	9
54	Saharan dust deposition initiates successional patterns among marine microbes in the Western Atlantic. Limnology and Oceanography, 2020, 65, 191-203.	1.6	8

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55	A perspective on time: loss frequencies, time scales and lifetimes. Environmental Chemistry, 2013, 10, 73.	0.7	4
56	Influence of plant ecophysiology on ozone dry deposition: comparing between multiplicative and photosynthesis-based dry deposition schemes and their responses to rising CO₂ level. Biogeosciences, 2022, 19, 1753-1776.	1.3	4
57	New Evidence for the Importance of Nonâ€Stomatal Pathways in Ozone Deposition During Extreme Heat and Dry Anomalies. Geophysical Research Letters, 2022, 49, .	1.5	4
58	Quick cycling of quicksilver. Nature Geoscience, 2012, 5, 95-96.	5.4	2
59	Overview of the Atmospheric Mercury Cycle. , 2019, , 47-59.		1
60	Should the United States Resume Reprocessing? A Pro and Con. Bulletin of the Atomic Scientists, 2009, 65, 30-41.	0.2	0
61	Technical note: Entrainment-limited kinetics of bimolecular reactions in clouds. Atmospheric Chemistry and Physics, 2022, 22, 9011-9015.	1.9	0