Olivier Boucher

List of Publications by Year
in descending order

273 papers	38,069 citations	4388 86 h-index	3830 178 g-index
407 all docs	407 docs citations	407 times ranked	23618 citing authors

#	Article	IF	Citations
1	A satellite view of aerosols in the climate system. Nature, 2002, 419, 215-223.	27.8	1,942
2	Estimates of the direct and indirect radiative forcing due to tropospheric aerosols: A review. Reviews of Geophysics, 2000, 38, 513-543.	23.0	1,663
3	Analysis and quantification of the diversities of aerosol life cycles within AeroCom. Atmospheric Chemistry and Physics, 2006, 6, 1777-1813.	4.9	1,202
4	Human-induced nitrogenâ€"phosphorus imbalances alter natural and managed ecosystems across the globe. Nature Communications, 2013, 4, 2934.	12.8	1,013
5	The Joint UK Land Environment Simulator (JULES), model description â€" Part 1: Energy and water fluxes. Geoscientific Model Development, 2011, 4, 677-699.	3.6	993
6	The aerosol-climate model ECHAM5-HAM. Atmospheric Chemistry and Physics, 2005, 5, 1125-1156.	4.9	990
7	Emissions of primary aerosol and precursor gases in the years 2000 and 1750 prescribed data-sets for AeroCom. Atmospheric Chemistry and Physics, 2006, 6, 4321-4344.	4.9	912
8	Impact of changes in diffuse radiation on the global land carbon sink. Nature, 2009, 458, 1014-1017.	27.8	858
9	Global dust model intercomparison in AeroCom phase I. Atmospheric Chemistry and Physics, 2011, 11, 7781-7816.	4.9	839
10	The Joint UK Land Environment Simulator (JULES), model description â€" Part 2: Carbon fluxes and vegetation dynamics. Geoscientific Model Development, 2011, 4, 701-722.	3.6	804
11	Creation of the WATCH Forcing Data and Its Use to Assess Global and Regional Reference Crop Evaporation over Land during the Twentieth Century. Journal of Hydrometeorology, 2011, 12, 823-848.	1.9	746
12	A review of measurement-based assessments of the aerosol direct radiative effect and forcing. Atmospheric Chemistry and Physics, 2006, 6, 613-666.	4.9	745
13	Detection of a direct carbon dioxide effect in continental river runoff records. Nature, 2006, 439, 835-838.	27.8	727
14	An AeroCom initial assessment â€" optical properties in aerosol component modules of global models. Atmospheric Chemistry and Physics, 2006, 6, 1815-1834.	4.9	697
15	Radiative forcing by aerosols as derived from the AeroCom present-day and pre-industrial simulations. Atmospheric Chemistry and Physics, 2006, 6, 5225-5246.	4.9	633
16	Evaluation of black carbon estimations in global aerosol models. Atmospheric Chemistry and Physics, 2009, 9, 9001-9026.	4.9	585
17	Projected increase in continental runoff due to plant responses to increasing carbon dioxide. Nature, 2007, 448, 1037-1041.	27.8	570
18	A review of natural aerosol interactions and feedbacks within the Earth system. Atmospheric Chemistry and Physics, 2010, 10, 1701-1737.	4.9	542

#	Article	IF	Citations
19	Presentation and Evaluation of the IPSLâ€CM6Aâ€LR Climate Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002010.	3.8	541
20	Aerosol analysis and forecast in the European Centre for Mediumâ€Range Weather Forecasts Integrated Forecast System: 2. Data assimilation. Journal of Geophysical Research, 2009, 114, .	3.3	477
21	Global estimate of aerosol direct radiative forcing from satellite measurements. Nature, 2005, 438, 1138-1141.	27.8	436
22	Bounding Global Aerosol Radiative Forcing of Climate Change. Reviews of Geophysics, 2020, 58, e2019RG000660.	23.0	424
23	Near-real-time monitoring of global CO2 emissions reveals the effects of the COVID-19 pandemic. Nature Communications, 2020, 11, 5172.	12.8	420
24	Aerosol indirect effects â€" general circulation model intercomparison and evaluation with satellite data. Atmospheric Chemistry and Physics, 2009, 9, 8697-8717.	4.9	418
25	Aerosol forcing in the Climate Model Intercomparison Project (CMIP5) simulations by HadGEM2-ES and the role of ammonium nitrate. Journal of Geophysical Research, 2011, 116, .	3.3	369
26	Evaluating the climate and air quality impacts of short-lived pollutants. Atmospheric Chemistry and Physics, 2015, 15, 10529-10566.	4.9	365
27	Aerosol analysis and forecast in the European Centre for Mediumâ€Range Weather Forecasts Integrated Forecast System: Forward modeling. Journal of Geophysical Research, 2009, 114, .	3.3	360
28	ATMOSPHERIC SCIENCE: Climate Forcing by Aerosol--a Hazy Picture. Science, 2003, 300, 1103-1104.	12.6	323
29	The Geoengineering Model Intercomparison Project (GeoMIP). Atmospheric Science Letters, 2011, 12, 162-167.	1.9	314
30	General overview: European Integrated project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI) â€" integrating aerosol research from nano to global scales. Atmospheric Chemistry and Physics, 2011, 11, 13061-13143.	4.9	278
31	Direct human influence of irrigation on atmospheric water vapour and climate. Climate Dynamics, 2004, 22, 597-603.	3.8	274
32	Emissions from open biomass burning in India: Integrating the inventory approach with high-resolution Moderate Resolution Imaging Spectroradiometer (MODIS) active-fire and land cover data. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	4.9	271
33	Energy budget constraints on climate response. Nature Geoscience, 2013, 6, 415-416.	12.9	270
34	Satelliteâ€based estimate of the direct and indirect aerosol climate forcing. Journal of Geophysical Research, 2008, 113, .	3.3	267
35	Precipitation, radiative forcing and global temperature change. Geophysical Research Letters, 2010, 37, .	4.0	259
36	Aerosol anthropogenic component estimated from satellite data. Geophysical Research Letters, 2005, 32, .	4.0	257

#	Article	IF	Citations
37	Carbonâ€"concentration and carbonâ€"climate feedbacks in CMIP6 models and their comparison to CMIP5 models. Biogeosciences, 2020, 17, 4173-4222.	3.3	255
38	TOWARD A MONITORING AND FORECASTING SYSTEM FOR ATMOSPHERIC COMPOSITION. Bulletin of the American Meteorological Society, 2008, 89, 1147-1164.	3.3	253
39	The sulfate-CCN-cloud albedo effect.. Tellus, Series B: Chemical and Physical Meteorology, 1995, 47, 281-300.	1.6	249
40	Aerosol absorption and radiative forcing. Atmospheric Chemistry and Physics, 2007, 7, 5237-5261.	4.9	245
41	Adjustments in the Forcing-Feedback Framework for Understanding Climate Change. Bulletin of the American Meteorological Society, 2015, 96, 217-228.	3.3	239
42	Climate model projections from the Scenario Model Intercomparison ProjectÂ(ScenarioMIP) of CMIP6. Earth System Dynamics, 2021, 12, 253-293.	7.1	236
43	Comparison of the radiative properties and direct radiative effect of aerosols from a global aerosol model and remote sensing data over ocean. Tellus, Series B: Chemical and Physical Meteorology, 2007, 59, 115-129.	1.6	235
44	The effect of harmonized emissions on aerosol properties in global models â€" an AeroCom experiment. Atmospheric Chemistry and Physics, 2007, 7, 4489-4501.	4.9	228
45	Climate model response from the Geoengineering Model Intercomparison Project (GeoMIP). Journal of Geophysical Research D: Atmospheres, 2013, 118, 8320-8332.	3.3	226
46	General circulation model assessment of the sensitivity of direct climate forcing by anthropogenic sulfate aerosols to aerosol size and chemistry. Journal of Geophysical Research, 1995, 100, 26117.	3.3	208
47	Significant contribution of combustion-related emissions to the atmospheric phosphorus budget. Nature Geoscience, 2015, 8, 48-54.	12.9	207
48	Model intercomparison of indirect aerosol effects. Atmospheric Chemistry and Physics, 2006, 6, 3391-3405.	4.9	205
49	The hydrological impact of geoengineering in the Geoengineering Model Intercomparison Project (GeoMIP). Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,036.	3.3	202
50	AerChemMIP: quantifying the effects of chemistry and aerosols in CMIP6. Geoscientific Model Development, 2017, 10, 585-607.	3.6	202
51	The indirect global warming potential and global temperature change potential due to methane oxidation. Environmental Research Letters, 2009, 4, 044007.	5.2	199
52	Possible role of wetlands, permafrost, and methane hydrates in the methane cycle under future climate change: A review. Reviews of Geophysics, 2010, 48, .	23.0	199
53	Constraining the total aerosol indirect effect in the LMDZ and ECHAM4 GCMs using MODIS satellite data. Atmospheric Chemistry and Physics, 2006, 6, 947-955.	4.9	198
54	The sulfate-CCN-cloud albedo effect: A sensitivity study with two general circulation models. Tellus, Series B: Chemical and Physical Meteorology, 2022, 47, 281.	1.6	196

#	Article	IF	Citations
55	Estimates of aerosol radiative forcing from the MACC re-analysis. Atmospheric Chemistry and Physics, 2013, 13, 2045-2062.	4.9	194
56	Strong constraints on aerosolâ€“cloud interactions from volcanic eruptions. Nature, 2017, 546, 485-491.	27.8	191
57	The scavenging processes controlling the seasonal cycle in Arctic sulphate and black carbon aerosol. Atmospheric Chemistry and Physics, 2012, 12, 6775-6798.	4.9	179
58	Evaluating climate geoengineering proposals in the context of the Paris Agreement temperature goals. Nature Communications, 2018, 9, 3734.	12.8	166
59	Climate trade-off between black carbon and carbon dioxide emissions. Energy Policy, 2008, 36, 193-200.	8.8	162
60	Global forest carbon uptake due to nitrogen and phosphorus deposition from 1850 to 2100. Global Change Biology, 2017, 23, 4854-4872.	9.5	158
61	Effective radiative forcing and adjustments in CMIP6 models. Atmospheric Chemistry and Physics, 2020, 20, 9591-9618.	4.9	149
62	Exposure to ambient black carbon derived from a unique inventory and high-resolution model. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 2459-2463.	7.1	148
63	Estimates of global multicomponent aerosol optical depth and direct radiative perturbation in the Laboratoire de MÃ©tÃ©orologie Dynamique general circulation model. Journal of Geophysical Research, 2005, 110, .	3.3	144
64	Host model uncertainties in aerosol radiative forcing estimates: results from the AeroCom Prescribed intercomparison study. Atmospheric Chemistry and Physics, 2013, 13, 3245-3270.	4.9	143
65	The Geoengineering Model Intercomparison Project Phase 6 (GeoMIP6): simulation design and preliminary results. Geoscientific Model Development, 2015, 8, 3379-3392.	3.6	140
66	An â€œA-Trainâ€•Strategy for Quantifying Direct Climate Forcing by Anthropogenic Aerosols. Bulletin of the American Meteorological Society, 2005, 86, 1795-1810.	3.3	138
67	Aerosol direct radiative effects over the northwest Atlantic, northwest Pacific, and North Indian Oceans: estimates based on in-situ chemical and optical measurements and chemical transport modeling. Atmospheric Chemistry and Physics, 2006, 6, 1657-1732.	4.9	135
68	Seasonal and interannual variability in absorbing aerosols over India derived from TOMS: Relationship to regional meteorology and emissions. Atmospheric Environment, 2006, 40, 1909-1921.	4.1	132
69	Solar irradiance reduction to counteract radiative forcing from a quadrupling of CO₂: climate responses simulated by four earth system models. Earth System Dynamics, 2012, 3, 63-78.	7.1	132
70	Climate impacts of geoengineering marine stratocumulus clouds. Journal of Geophysical Research, 2009, 114, .	3.3	130
71	The impact of abrupt suspension of solar radiation management (termination effect) in experiment G2 of the Geoengineering Model Intercomparison Project (GeoMIP). Journal of Geophysical Research D: Atmospheres, 2013, 118, 9743-9752.	3.3	129
72	Observations of the eruption of the Sarychev volcano and simulations using the HadGEM2 climate model. Journal of Geophysical Research, 2010, 115, .	3.3	128

#	Article	IF	Citations
73	Intercomparison of models representing direct shortwave radiative forcing by sulfate aerosols. Journal of Geophysical Research, 1998, 103, 16979-16998.	3.3	124
74	Rapid Adjustments Cause Weak Surface Temperature Response to Increased Black Carbon Concentrations. Journal of Geophysical Research D: Atmospheres, 2017, 122, 11462-11481.	3.3	118
75	History of sulfate aerosol radiative forcings. Geophysical Research Letters, 2002, 29, 22-1-22-4.	4.0	117
76	Ice-free glacial northern Asia due to dust deposition on snow. Climate Dynamics, 2006, 27, 613-625.	3.8	117
77	PDRMIP: A Precipitation Driver and Response Model Intercomparison Projectâ€"Protocol and Preliminary Results. Bulletin of the American Meteorological Society, 2017, 98, 1185-1198.	3.3	116
78	Carbon Monitor, a near-real-time daily dataset of global CO2 emission from fossil fuel and cement production. Scientific Data, 2020, 7, 392.	5.3	115
79	Trend in Global Black Carbon Emissions from 1960 to 2007. Environmental Science & Technology, 2014, 48, 6780-6787.	10.0	114
80	Understanding Rapid Adjustments to Diverse Forcing Agents. Geophysical Research Letters, 2018, 45, 12023-12031.	4.0	113
81	Uncertainties in assessing radiative forcing by mineral dust. Tellus, Series B: Chemical and Physical Meteorology, 2022, 50, 491.	1.6	111
82	DMS atmospheric concentrations and sulphate aerosol indirect radiative forcing: a sensitivity study to the DMS source representation and oxidation. Atmospheric Chemistry and Physics, 2003, 3, 49-65.	4.9	108
83	Low sensitivity of cloud condensation nuclei to changes in the sea-air flux of dimethyl-sulphide. Atmospheric Chemistry and Physics, 2010, 10, 7545-7559.	4.9	105
84	Air traffic may increase cirrus cloudiness. Nature, 1999, 397, 30-31.	27.8	103
85	Aerosol forcing, climate response and climate sensitivity in the Hadley Centre climate model. Journal of Geophysical Research, 2007, 112, .	3.3	102
86	Reversibility in an Earth System model in response to CO ₂ concentration changes. Environmental Research Letters, 2012, 7, 024013.	5.2	102
87	Uncertainties in assessing radiative forcing by mineral dust. Tellus, Series B: Chemical and Physical Meteorology, 1998, 50, 491-505.	1.6	101
88	Impact of nonabsorbing anthropogenic aerosols on clear-sky atmospheric absorption. Journal of Geophysical Research, 2006, 111, .	3.3	100
89	Implementation of the CMIP6 Forcing Data in the IPSLâ€CM6Aâ€LR Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001940.	3.8	95
90	Aerosol indirect effects in POLDER satellite data and the Laboratoire de MÃ©tÃ©orologie Dynamiqueâ€"Zoom (LMDZ) general circulation model. Journal of Geophysical Research, 2004, 109, .	3.3	94

#	Article	IF	Citations
91	Atmospheric Aerosols. , 2015, , .		93
92	Estimating aerosol emissions by assimilating observed aerosol optical depth in a global aerosol model. Atmospheric Chemistry and Physics, 2012, 12, 4585-4606.	4.9	92
93	Geoengineering by stratospheric SO₂ injection: results from the Met Office HadGEM2 climate model and comparison with the Goddard Institute for Space Studies ModelE. Atmospheric Chemistry and Physics, 2010, 10, 5999-6006.	4.9	89
94	LMDZ6A: The Atmospheric Component of the IPSL Climate Model With Improved and Better Tuned Physics. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001892.	3.8	89
95	Intercomparison of shortwave radiative transfer codes and measurements. Journal of Geophysical Research, 2005, 110, .	3.3	88
96	A study of the global cycle of carbonaceous aerosols in the LMDZT general circulation model. Journal of Geophysical Research, 2004, 109, .	3.3	86
97	Refractive index of aerosol particles over the Amazon tropical forest during LBA-EUSTACH 1999. Journal of Aerosol Science, 2003, 34, 883-907.	3.8	85
98	Improving the seasonal cycle and interannual variations of biomass burning aerosol sources. Atmospheric Chemistry and Physics, 2003, 3, 1211-1222.	4.9	85
99	Sources, transport and deposition of iron in the global atmosphere. Atmospheric Chemistry and Physics, 2015, 15, 6247-6270.	4.9	85
100	Carbon dioxide induced stomatal closure increases radiative forcing via a rapid reduction in low cloud. Geophysical Research Letters, 2009, 36, .	4.0	84
101	On summing the components of radiative forcing of climate change. Climate Dynamics, 2001, 18, 297-302.	3.8	83
102	Sensitivity of cloud condensation nuclei to regional changes in dimethyl-sulphide emissions. Atmospheric Chemistry and Physics, 2013, 13, 2723-2733.	4.9	83
103	A PDRMIP Multimodel Study on the Impacts of Regional Aerosol Forcings on Global and Regional Precipitation. Journal of Climate, 2018, 31, 4429-4447.	3.2	83
104	Aerosol optical depths and direct radiative perturbations by species and source type. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	82
105	Snow cover sensitivity to black carbon deposition in the Himalayas: from atmospheric and ice core measurements to regional climate simulations. Atmospheric Chemistry and Physics, 2014, 14, 4237-4249.	4.9	80
106	In the wake of Paris Agreement, scientists must embrace new directions for climate change research. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7287-7290.	7.1	79
107	Precipitation and radiation modeling in a general circulation model: Introduction of cloud microphysical processes. Journal of Geophysical Research, 1995, 100, 16395.	3.3	76
108	STAAARTE-MED 1998 summer airborne measurements over the Aegean Sea 2. Aerosol scattering and absorption, and radiative calculations. Journal of Geophysical Research, 2002, 107, AAC 2-1-AAC 2-14.	3.3	73

#	Article	IF	Citations
109	Implications of possible interpretations of â€˜greenhouse gas balanceâ€™ in the Paris Agreement. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20160445.	3.4	72
110	Estimation of the aerosol perturbation to the Earth's Radiative Budget over oceans using POLDER satellite aerosol retrievals. Geophysical Research Letters, 2000, 27, 1103-1106.	4.0	71
111	Description and evaluation of the tropospheric aerosol scheme in the European Centre for Medium-Range Weather Forecasts (ECMWF) Integrated Forecasting System (IFS-AER, cycle 45R1). Geoscientific Model Development, 2019, 12, 4627-4659.	3.6	71
112	Climate impact of black carbon emitted from energy consumption in the world's regions. Geophysical Research Letters, 2007, 34, .	4.0	70
113	How vegetation impacts affect climate metrics for ozone precursors. Journal of Geophysical Research, 2010, 115, .	3.3	70
114	Physical properties and concentration of aerosol particles over the Amazon tropical forest during background and biomass burning conditions. Atmospheric Chemistry and Physics, 2003, 3, 951-967.	4.9	69
115	Constraining the first aerosol indirect radiative forcing in the LMDZ GCM using POLDER and MODIS satellite data. Geophysical Research Letters, 2005, 32, .	4.0	69
116	OH and halogen atom influence on the variability of non-methane hydrocarbons in the Antarctic Boundary Layer. Tellus, Series B: Chemical and Physical Meteorology, 2007, 59, 22-38.	1.6	69
117	Rethinking climate engineering categorization in the context of climate change mitigation and adaptation. Wiley Interdisciplinary Reviews: Climate Change, 2014, 5, 23-35.	8.1	69
118	Will marine dimethylsulfide emissions amplify or alleviate global warming? A model study. Canadian Journal of Fisheries and Aquatic Sciences, 2004, 61, 826-835.	1.4	68
119	Causes of irregularities in trends of global mean surface temperature since the late 19th century. Science Advances, 2018, 4, eaao5297.	10.3	67
120	On Aerosol Direct Shortwave Forcing and the Henyeyâ€"Greenstein Phase Function. Journals of the Atmospheric Sciences, 1998, 55, 128-134.	1.7	66
121	Climate response to the physiological impact of carbon dioxide on plants in the Met Office Unified Model HadCM3. Climate Dynamics, 2009, 32, 237-249.	3.8	66
122	Estimation of global black carbon direct radiative forcing and its uncertainty constrained by observations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 5948-5971.	3.3	66
123	Status and future of numerical atmospheric aerosol prediction with a focus on data requirements. Atmospheric Chemistry and Physics, 2018, 18, 10615-10643.	4.9	64
124	Drivers of Precipitation Change: An Energetic Understanding. Journal of Climate, 2018, 31, 9641-9657.	3.2	63
125	Parameterization of contrails in the UK Met Office Climate Model. Journal of Geophysical Research, 2010, 115, .	3.3	59
126	Spatially explicit analysis identifies significant potential for bioenergy with carbon capture and storage in China. Nature Communications, 2021, 12, 3159.	12.8	58

#	Article	IF	Citations
127	Contrasts in the effects on climate of anthropogenic sulfate aerosols between the 20th and the 21st century. Geophysical Research Letters, 2005, 32, .	4.0	57
128	The roles of aerosol, water vapor and cloud in future global dimming/brightening. Journal of Geophysical Research, 2011, 116, .	3.3	56
129	A regional and global analysis of carbon dioxide physiological forcing and its impact on climate. Climate Dynamics, 2011, 36, 783-792.	3.8	56
130	A comparison of the climate impacts of geoengineering by stratospheric SO₂ injection and by brightening of marine stratocumulus cloud. Atmospheric Science Letters, 2011, 12, 176-183.	1.9	55
131	Efficacy of Climate Forcings in PDRMIP Models. Journal of Geophysical Research D: Atmospheres, 2019, 124, 12824-12844.	3.3	55
132	IPSL-CM5A2 â€" an Earth system model designed for multi-millennial climate simulations. Geoscientific Model Development, 2020, 13, 3011-3053.	3.6	55
133	General circulation model estimates of aerosol transport and radiative forcing during the Indian Ocean Experiment. Journal of Geophysical Research, 2004, 109, .	3.3	53
134	Seaâ€salt and dust aerosols in the ECMWF IFS model. Geophysical Research Letters, 2008, 35, .	4.0	53
135	Aerosol analysis and forecast in the European Centre for Medium-Range Weather Forecasts Integrated Forecast System: 3. Evaluation by means of case studies. Journal of Geophysical Research, 2011, 116, .	3.3	53
136	Highly contrasting effects of different climate forcing agents on terrestrial ecosystem services. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 2026-2037.	3.4	49
137	Water vapour affects both rain and aerosol optical depth. Nature Geoscience, 2013, 6, 4-5.	12.9	49
138	Validation of reactive gases and aerosols in the MACC global analysis and forecast system. Geoscientific Model Development, 2015, 8, 3523-3543.	3.6	49
139	The compact Earth system model OSCARÂv2.2: description and first results. Geoscientific Model Development, 2017, 10, 271-319.	3.6	49
140	Direct Radiative Effect by Mineral Dust Aerosols Constrained by New Microphysical and Spectral Optical Data. Geophysical Research Letters, 2020, 47, e2019GL086186.	4.0	49
141	Evaluating aerosol/cloud/radiation process parameterizations with single-column models and Second Aerosol Characterization Experiment (ACE-2) cloudy column observations. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	47
142	Sulfate Aerosol Indirect Effect and CO2Greenhouse Forcing: EquilibriumResponse of the LMD GCM and Associated Cloud Feedbacks. Journal of Climate, 1998, 11, 1673-1684.	3.2	45
143	Arctic sea ice and atmospheric circulation under the GeoMIP G1 scenario. Journal of Geophysical Research D: Atmospheres, 2014, 119, 567-583.	3.3	45
144	Identifying the sources of uncertainty in climate model simulations of solar radiation modification with the G6sulfur and G6solar Geoengineering Model Intercomparison Project (GeoMIP) simulations. Atmospheric Chemistry and Physics, 2021, 21, 10039-10063.	4.9	45

#	Article	IF	Citations
145	Why Does Aerosol Forcing Control Historical Global-Mean Surface Temperature Change in CMIP5 Models?. Journal of Climate, 2015, 28, 6608-6625.	3.2	44
146	Sensible heat has significantly affected the global hydrological cycle over the historical period. Nature Communications, 2018, 9, 1922.	12.8	44
147	Aerosol absorption over the clear-sky oceans deduced from POLDER-1 and AERONET observations. Geophysical Research Letters, 2003, 30, .	4.0	43
148	Jury is still out on the radiative forcing by black carbon. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5092-3.	7.1	43
149	Are there reasons against open-ended research into solar radiation management? A model of intergenerational decision-making under uncertainty. Journal of Environmental Economics and Management, 2017, 84, 1-17.	4.7	43
150	Detection of solar dimming and brightening effects on Northern Hemisphere river flow. Nature Geoscience, 2014, 7, 796-800.	12.9	42
151	Impacts of nationally determined contributions on 2030 global greenhouse gas emissions: uncertainty analysis and distribution of emissions. Environmental Research Letters, 2018, 13, 014022.	5.2	41
152	Declining Aerosols in CMIP5 Projections: Effects on Atmospheric Temperature Structure and Midlatitude Jets. Journal of Climate, 2014, 27, 6960-6977.	3.2	40
153	Influence of anthropogenic aerosol deposition on the relationship between oceanic productivity and warming. Geophysical Research Letters, 2015, 42, 10745-10754.	4.0	40
154	Sensitivity of the radiative forcing by stratospheric sulfur geoengineering to the amount and strategy of the SO₂injection studied with the LMDZ-S3A model. Atmospheric Chemistry and Physics, 2018, 18, 2769-2786.	4.9	40
155	Dynamical response of Mediterranean precipitation to greenhouse gases and aerosols. Atmospheric Chemistry and Physics, 2018, 18, 8439-8452.	4.9	40
156	Arctic Amplification Response to Individual Climate Drivers. Journal of Geophysical Research D: Atmospheres, 2019, 124, 6698-6717.	3.3	39
157	Declining uncertainty in transient climate response as CO2 forcing dominates future climateÂchange. Nature Geoscience, 2015, 8, 181-185.	12.9	38
158	New Directions: Atmospheric methane removal as a way to mitigate climate change?. Atmospheric Environment, 2010, 44, 3343-3345.	4.1	37
159	Comparison of physically- and economically-based CO₂-equivalences for methane. Earth System Dynamics, 2012, 3, 49-61.	7.1	37
160	Sea spray geoengineering experiments in the geoengineering model intercomparison project (GeoMIP): Experimental design and preliminary results. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,175.	3.3	37
161	Climate extremes in multi-model simulations of stratospheric aerosol and marine cloud brightening climate engineering. Atmospheric Chemistry and Physics, 2015, 15, 9593-9610.	4.9	37
162	Response to marine cloud brightening in a multi-model ensemble. Atmospheric Chemistry and Physics, 2018, 18, 621-634.	4.9	37

#	Article	IF	Citations
163	Source evaluation of aerosols measured during the Indian Ocean Experiment using combined chemical transport and back trajectory modeling. Journal of Geophysical Research, 2007, 112, .	3.3	36
164	Indicate separate contributions of long-lived and short-lived greenhouse gases in emission targets. Npj Climate and Atmospheric Science, 2022, 5, 5.	6.8	36
165	Changes in atmospheric sulfur burdens and concentrations and resulting radiative forcings under IPCC SRES emission scenarios for 1990-2100. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	35
166	Seaâ€salt injections into the lowâ€latitude marine boundary layer: The transient response in three Earth system models. Journal of Geophysical Research D: Atmospheres, 2013, 118, 12,195.	3.3	35
167	Carbon Dioxide Physiological Forcing Dominates Projected Eastern Amazonian Drying. Geophysical Research Letters, 2018, 45, 2815-2825.	4.0	35
168	Exploiting the weekly cycle as observed over Europe to analyse aerosol indirect effects in two climate models. Atmospheric Chemistry and Physics, 2009, 9, 8493-8501.	4.9	34
169	Fast and slow shifts of the zonalâ€mean intertropical convergence zone in response to an idealized anthropogenic aerosol. Journal of Advances in Modeling Earth Systems, 2017, 9, 870-892.	3.8	33
170	Weak hydrological sensitivity to temperature change over land, independent of climate forcing. Npj Climate and Atmospheric Science, 2018, 1, .	6.8	33
171	Population Genome Sequencing of the Scab Fungal Species<i>Venturia inaequalis</i>,<i>Venturia pirina</i>,<i>Venturia aucupariae</i>and<i>Venturia asperata</i>. G3: Genes, Genomes, Genetics, 2019, 9, 2405-2414.	1.8	33
172	Aerosol lofting from sea breeze during the Indian Ocean Experiment. Journal of Geophysical Research, 2006, 111, .	3.3	32
173	Estimating the climate impact of linear contrails using the UK Met Office climate model. Geophysical Research Letters, 2010, 37, .	4.0	32
174	Attribution of aerosol radiative forcing over India during the winter monsoon to emissions from source categories and geographical regions. Atmospheric Environment, 2011, 45, 4398-4407.	4.1	31
175	New Directions: The impact of oceanic iron fertilisation on cloud condensation nuclei. Atmospheric Environment, 2008, 42, 5728-5730.	4.1	30
176	Origin of surface and columnar Indian Ocean Experiment (INDOEX) aerosols using sourceâ€and regionâ€tagged emissions transport in a general circulation model. Journal of Geophysical Research, 2008, 113, .	3.3	30
177	Global Realâ€time Fire Emission Estimates Based on Spaceâ€borne Fire Radiative Power Observations. , 2009, , .		30
178	GCM Estimate of the Indirect Aerosol Forcing Using Satellite-Retrieved Cloud Droplet Effective Radii. Journal of Climate, 1995, 8, 1403-1409.	3.2	29
179	The aerosol effect. Nature, 2012, 490, 40-41.	27.8	29
180	Atmospheric inversion of SO₂ and primary aerosol emissions for the year 2010. Atmospheric Chemistry and Physics, 2013, 13, 6555-6573.	4.9	29

#	Article	IF	Citations
181	Water vapour adjustments and responses differ between climate drivers. Atmospheric Chemistry and Physics, 2019, 19, 12887-12899.	4.9	29
182	Cost-effective implementation of the Paris Agreement using flexible greenhouse gas metrics. Science Advances, 2021, 7, .	10.3	29
183	Operational Dust Prediction. , 2014, , 223-265.		28
184	High predictive skill of global surface temperature a year ahead. Geophysical Research Letters, 2013, 40, 761-767.	4.0	27
185	Increased Global Land Carbon Sink Due to Aerosolâ€Induced Cooling. Global Biogeochemical Cycles, 2019, 33, 439-457.	4.9	27
186	Regional climate engineering by radiation management: Prerequisites and prospects. Earth's Future, 2016, 4, 618-625.	6.3	26
187	Impact of the choice of the satellite aerosol optical depth product in a sub-regional dust emission inversion. Atmospheric Chemistry and Physics, 2017, 17, 7111-7126.	4.9	26
188	Quantifying the Importance of Rapid Adjustments for Global Precipitation Changes. Geophysical Research Letters, 2018, 45, 11399-11405.	4.0	26
189	Impacts of greenhouse gases and aerosol direct and indirect effects on clouds and radiation in atmospheric GCM simulations of the 1930â€"1989 period. Climate Dynamics, 2004, 23, 779-789.	3.8	25
190	Boreal and temperate snow cover variations induced by black carbon emissions in the middle of the 21st century. Cryosphere, 2013, 7, 537-554.	3.9	25
191	Simulations of black carbon (BC) aerosol impact over Hindu Kush Himalayan sites: validation, sources, and implications on glacier runoff. Atmospheric Chemistry and Physics, 2019, 19, 2441-2460.	4.9	25
192	Increased risk of near term global warming due to a recent AMOC weakening. Nature Communications, 2021, 12, 6108.	12.8	25
193	Using Copernicus Atmosphere Monitoring Service Products to Constrain the Aerosol Type in the Atmospheric Correction Processor MAJA. Remote Sensing, 2017, 9, 1230.	4.0	24
194	An interactive ocean surface albedo scheme (OSAv1.0): formulation and evaluation in ARPEGE-Climat (V6.1) and LMDZ (V5A). Geoscientific Model Development, 2018, 11, 321-338.	3.6	24
195	How aerosols and greenhouse gases influence the diurnal temperature range. Atmospheric Chemistry and Physics, 2020, 20, 13467-13480.	4.9	23
196	Modeling the impacts of diffuse light fraction on photosynthesis in ORCHIDEE (v5453) land surface model. Geoscientific Model Development, 2020, 13, 5401-5423.	3.6	23
197	Comment on â€œRethinking the Lower Bound on Aerosol Radiative Forcingâ€• Journal of Climate, 2017, 30, 6579-6584.	3.2	22
198	Comparing different generations of idealized solar geoengineering simulations in the Geoengineering Model Intercomparison Project (GeoMIP). Atmospheric Chemistry and Physics, 2021, 21, 4231-4247.	4.9	22

#	Article	IF	Citations
199	Radiative forcing of climate change from the Copernicus reanalysis of atmospheric composition. Earth System Science Data, 2020, 12, 1649-1677.	9.9	22
200	Extreme wet and dry conditions affected differently by greenhouse gases and aerosols. Npj Climate and Atmospheric Science, 2019, 2, .	6.8	21
201	Comparison of Effective Radiative Forcing Calculations Using Multiple Methods, Drivers, and Models. Journal of Geophysical Research D: Atmospheres, 2019, 124, 4382-4394.	3.3	21
202	Climate impact of aircraft-induced cirrus assessed from satellite observations before and during COVID-19. Environmental Research Letters, 2021, 16, 064051.	5.2	21
203	Implications of delayed actions in addressing carbon dioxide emission reduction in the context of geo-engineering. Climatic Change, 2009, 92, 261-273.	3.6	20
204	Subregional inversion of North African dust sources. Journal of Geophysical Research D: Atmospheres, 2016, 121, 8549-8566.	3.3	20
205	Improved Representation of Clouds in the Atmospheric Component LMDZ6A of the IPSLâ€CM6A Earth System Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002046.	3.8	20
206	Estimating the direct aerosol radiative perturbation: Impact of ocean surface representation and aerosol non-sphericity. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 2217-2232.	2.7	19
207	Sensitivity of global sulphate aerosol production to changes in oxidant concentrations and climate. Journal of Geophysical Research, 2007, 112, .	3.3	19
208	Tropospheric distribution of sulphate aerosols mass and number concentration during INDOEX-IFP and its transport over the Indian Ocean: a GCM study. Atmospheric Chemistry and Physics, 2012, 12, 6185-6196.	4.9	19
209	The climate effects of increasing ocean albedo: an idealized representation of solar geoengineering. Atmospheric Chemistry and Physics, 2018, 18, 13097-13113.	4.9	19
210	Forcings and feedbacks in the GeoMIP ensemble for a reduction in solar irradiance and increase in CO₂. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5226-5239.	3.3	19
211	Stratospheric ozone response to sulfate aerosol and solar dimming climate interventions based on the G6 Geoengineering Model Intercomparison Project (GeoMIP) simulations. Atmospheric Chemistry and Physics, 2022, 22, 4557-4579.	4.9	19
212	Spatial Representativeness Error in the Groundâ€Level Observation Networks for Black Carbon Radiation Absorption. Geophysical Research Letters, 2018, 45, 2106-2114.	4.0	18
213	Fast responses on pre-industrial climate from present-day aerosols in a CMIP6 multi-model study. Atmospheric Chemistry and Physics, 2020, 20, 8381-8404.	4.9	18
214	Presentation and Evaluation of the IPSLâ€CM6Aâ€LR Ensemble of Extended Historical Simulations. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002565.	3.8	18
215	The sulfur cycle at high-southern latitudes in the LMD-ZT General Circulation Model. Journal of Geophysical Research, 2002, 107, ACH 7-1-ACH 7-19.	3.3	17
216	Simplified aerosol modeling for variational data assimilation. Geoscientific Model Development, 2009, 2, 213-229.	3.6	17

#	Article	IF	Citations
217	Corrigendum to "Evaluation of black carbon estimations in global aerosol models" published in Atmos. Chem. Phys., 9, 9001-9026, 2009. Atmospheric Chemistry and Physics, 2010, 10, 79-81.	4.9	17
218	Seeing through contrails. Nature Climate Change, 2011, 1, 24-25.	18.8	17
219	Diversity of greenhouse gas emission drivers across European countries since the 2008 crisis. Climate Policy, 2019, 19, 1067-1087.	5.1	17
220	Carbon Cycle Response to Temperature Overshoot Beyond 2Â°C: An Analysis of CMIP6 Models. Earth's Future, 2021, 9, e2020EF001967.	6.3	17
221	Three-dimensional solar radiation effects on the actinic flux field in a biomass-burning plume. Journal of Geophysical Research, 2003, 108, .	3.3	16
222	Modeling and analysis of aerosol processes in an interactive chemistry general circulation model. Journal of Geophysical Research, 2007, 112, .	3.3	16
223	Predicting the effect of confinement on the COVID-19 spread using machine learning enriched with satellite air pollution observations. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	16
224	The impact of stratospheric aerosol intervention on the North Atlantic and Quasi-Biennial Oscillations in the Geoengineering Model Intercomparison Project (GeoMIP) G6sulfur experiment. Atmospheric Chemistry and Physics, 2022, 22, 2999-3016.	4.9	15
225	FAMOUS, faster: using parallel computing techniques to accelerate the FAMOUS/HadCM3 climate model with a focus on the radiative transfer algorithm. Geoscientific Model Development, 2011, 4, 835-844.	3.6	14
226	The Sectional Stratospheric Sulfate Aerosol module (S3A-v1) within the LMDZ general circulation model: description and evaluation against stratospheric aerosol observations. Geoscientific Model Development, 2017, 10, 3359-3378.	3.6	14
227	Stratospheric ozone, ultraviolet radiation and climate change. Weather, 2010, 65, 105-110.	0.7	13
228	A quality-controlled global runoff data set (Reply). Nature, 2006, 444, E14-E15.	27.8	12
229	Sulfate aerosols forcing: An estimate using a three-dimensional interactive chemistry scheme. Atmospheric Environment, 2006, 40, 7953-7962.	4.1	12
230	Quasiâ€Additivity of the Radiative Effects of Marine Cloud Brightening and Stratospheric Sulfate Aerosol Injection. Geophysical Research Letters, 2017, 44, 11,158.	4.0	12
231	Key factors governing uncertainty in the response to sunshade geoengineering from a comparison of the GeoMIP ensemble and a perturbed parameter ensemble. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7946-7962.	3.3	11
232	Disentangling the Impacts of Anthropogenic Aerosols on Terrestrial Carbon Cycle During 1850â€“2014. Earth's Future, 2021, 9, e2021EF002035.	6.3	11
233	Oneâ€dimensional variational retrieval of aerosol extinction coefficient from synthetic LIDAR and radiometric measurements. Journal of Geophysical Research, 2007, 112, .	3.3	10
234	The Tuning Strategy of IPSLâ€CM6Aâ€LR. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002340.	3.8	10

#	Article	IF	Citations
235	Better representation of dust can improve climate models with too weak an African monsoon. Atmospheric Chemistry and Physics, 2021, 21, 11423-11435.	4.9	10
236	Which of satellite- or model-based estimates is closer to reality for aerosol indirect forcing?. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, E1099-E1099.	7.1	9
237	Standardizing experiments in geoengineering. Eos, 2011, 92, 197-197.	0.1	8
238	Constrained simulation of aerosol species and sources during pre-monsoon season over the Indian subcontinent. Atmospheric Research, 2018, 214, 91-108.	4.1	8
239	Impact of bioenergy crop expansion on climateâ€“carbon cycle feedbacks in overshoot scenarios. Earth System Dynamics, 2022, 13, 779-794.	7.1	8
240	Inter-annual variability in fossil-fuel CO 2 emissions due to temperature anomalies. Environmental Research Letters, 2017, 12, 074009.	5.2	7
241	Decreased Aviation Leads to Increased Ice Crystal Number and a Positive Radiative Effect in Cirrus Clouds. AGU Advances, 2022, 3, .	5.4	7
242	Paris Agreement requires substantial, broad, and sustained policy efforts beyond COVID-19 public stimulus packages. Climatic Change, 2022, 172, 1.	3.6	7
243	Les besoins en observations pour la climatologie. La MÃ©tÃ©orologie, 2002, 8, 36.	0.5	6
244	On the contribution of global aviation to the CO2 radiative forcing of climate. Atmospheric Environment, 2021, 267, 118762.	4.1	6
245	A benchmark for testing the accuracy and computational cost of shortwave top-of-atmosphere reflectance calculations in clear-sky aerosol-laden atmospheres. Geoscientific Model Development, 2019, 12, 805-827.	3.6	5
246	Scientific data from precipitation driver response model intercomparison project. Scientific Data, 2022, 9, 123.	5.3	5
247	Future Directions in Simulating Solar Geoengineering. Eos, 2014, 95, 280-280.	0.1	4
248	Climate Symposium 2014: Findings and Recommendations. Bulletin of the American Meteorological Society, 2015, 96, ES145-ES147.	3.3	4
249	Variations in sulphate aerosols concentration during winter monsoon season for two consecutive years using a general circulation model. Atmosfera, 2013, 26, 359-367.	0.8	3
250	Physical, Chemical and Optical Aerosol Properties. , 2015, , 25-49.		3
251	Nations' Pledges to Reduce Emissions and the 2Â°C Objective. Eos, 2016, 97, .	0.1	3
252	The Southern Hemisphere Midlatitude Circulation Response to Rapid Adjustments and Sea Surface Temperature Driven Feedbacks. Journal of Climate, 2020, 33, 9673-9690.	3.2	3

#	Article	IF	Citations
253	Substantial Climate Response outside the Target Area in an Idealized Experiment of Regional Radiation Management. Climate, 2021, 9, 66.	2.8	2
254	How to reconstruct aerosol-induced diffuse radiation scenario for simulating GPP in land surface models? An evaluation of reconstruction methods with ORCHIDEE_DFv1.0_DFforc. Geoscientific Model Development, 2021, 14, 2029-2039.	3.6	2
255	Quel rÃ1e pour les rÃ©ductions d'Ã©mission de mÃ©thane dans la lutte contre le changement climatique ?. La MÃ©tÃ©orologie, 2010, 8, 35.	0.5	2
256	Aerosol and greenhouse gases forcing: Cloud feedbacks associated to the climate response. , 1996, , 267-280.		2
257	Biogeochemical Effects and Climate Feedbacks of Aerosols. , 2015, , 247-269.		1
258	Aerosol Analysis and Forecast in the ECMWF Integrated Forecast System: Evaluation by Means of Case Studies. NATO Science for Peace and Security Series C: Environmental Security, 2011, , 525-528.	0.2	1
259	Analyse prÃ©liminaire de l'Ã©pisode de pollution francilien de dÃ©cembre 2016. La MÃ©tÃ©orologie, 2017, , 11	0.5	1
260	Sensitivity of bias adjustment methods to low-frequency internal climate variability over the reference period: an ideal model study. , 0, , .		1
261	L'influence climatique des aÃ©rosols (prix Prud'homme 1996). La MÃ©tÃ©orologie, 1997, 8, 11.	0.5	0
262	Lu pour vous : "AtmosphÃ¨res planÃ©taires - Origine et Ã©volution" Par ThÃ©rÃ¨se Encrenaz.. La MÃ©tÃ©orologie, 2001, 8, 60.	0.5	0
263	MÃ©tÃ©orologie et climatologie. La MÃ©tÃ©orologie, 2002, 8, 1.	0.5	0
264	Les aÃ©rosols atmosphÃ©riques. IngÃ©nierie Et DÃ©veloppement Durable, 2012, , 7-16.	0.2	0
265	ModÃ©lisation des aÃ©rosols. IngÃ©nierie Et DÃ©veloppement Durable, 2012, , 37-60.	0.2	0
266	Interactions matiÃ¨re-rayonnement et transfert radiatif. IngÃ©nierie Et DÃ©veloppement Durable, 2012, , 61-99.	0.2	0
267	Effets radiatifs des aÃ©rosols. IngÃ©nierie Et DÃ©veloppement Durable, 2012, , 125-140.	0.2	0
268	Effets indirects des aÃ©rosols. IngÃ©nierie Et DÃ©veloppement Durable, 2012, , 141-162.	0.2	0
269	Commentary on â€˜A case study of high sea salt aerosol (SSA) concentrations as a hazard to aviationâ€™ by Tony Tighe. Meteorological Applications, 2016, 23, 749-752.	2.1	0
270	The Parameterization of the Precipitation Process in the LMD General Circulation Model. , 1994, , 379-386.		0

#	Article	IF	Citations
271	Introduction au numÃ©ro spÃ©cial "Climat". La MÃ©tÃ©orologie, 2015, 8, 20.	0.5	0
272	Aerosol-Based Climate Engineering. , 2015, , 287-294.		0
273	Aerosol Modelling. , 2015, , 51-81.		0