Makoto Deushi

List of Publications by Year
in descending order

91 papers	4,822 citations	136740 32 h-index	106150 65 g-index
130 all docs	130 docs citations	130 times ranked	5018 citing authors

#	Article	IF	Citations
1	A New Global Climate Model of the Meteorological Research Institute: MRI-CGCM3 â€”Model Description and Basic Performanceâ€". Journal of the Meteorological Society of Japan, 2012, 90A, 23-64.	0.7	649
2	The Meteorological Research Institute Earth System Model Version 2.0, MRI-ESM2.0: Description and Basic Evaluation of the Physical Component. Journal of the Meteorological Society of Japan, 2019, 97, 931-965.	0.7	434
3	Assessment of temperature, trace species, and ozone in chemistry-climate model simulations of the recent past. Journal of Geophysical Research, 2006, 111, .	3.3	414
4	Multimodel projections of stratospheric ozone in the 21st century. Journal of Geophysical Research, 2007, 112, .	3.3	308
5	Review of the global models used within phase 1 of the Chemistryâ€"Climate Model Initiative (CCMI). Geoscientific Model Development, 2017, 10, 639-671.	1.3	277
6	Coupled chemistry climate model simulations of the solar cycle in ozone and temperature. Journal of Geophysical Research, 2008, 113, .	3.3	134
7	Estimates of ozone return dates from Chemistry-Climate Model Initiative simulations. Atmospheric Chemistry and Physics, 2018, 18, 8409-8438.	1.9	128
8	Ozoneâ€"climate interactions and effects on solar ultraviolet radiation. Photochemical and Photobiological Sciences, 2019, 18, 602-640.	1.6	126
9	Historical and future changes in air pollutants from CMIP6 models. Atmospheric Chemistry and Physics, 2020, 20, 14547-14579.	1.9	105
10	Ozone-induced stomatal sluggishness changes carbon and water balance of temperate deciduous forests. Scientific Reports, 2015, 5, 9871.	1.6	89
11	Tropospheric ozone in CMIP6 simulations. Atmospheric Chemistry and Physics, 2021, 21, 4187-4218.	1.9	89
12	Stratospheric ozone loss over the Eurasian continent induced by the polar vortex shift. Nature Communications, 2018, 9, 206.	5.8	69
13	Development of a Meteorological Research Institute Chemistry-Climate Model version 2 for the Study of Tropospheric and Stratospheric Chemistry. Papers in Meteorology and Geophysics, 2011, 62, 1-46.	0.9	69
14	Basic performance of a new earth system model of the Meteorological Research Institute (MRI-ESM1). Papers in Meteorology and Geophysics, 2013, 64, 1-19.	0.9	66
15	Effective radiative forcing from emissions of reactive gases and aerosols â€" a multi-model comparison. Atmospheric Chemistry and Physics, 2021, 21, 853-874.	1.9	65
16	Development of an MRI Chemical Transport Model for the Study of Stratospheric Chemistry. Papers in Meteorology and Geophysics, 2005, 55, 75-119.	0.9	65
17	Long-term variations and trends in the simulation of the middle atmosphere 1980â€"2004 by the chemistry-climate model of the Meteorological Research Institute. Annales Geophysicae, 2008, 26, 1299-1326.	0.6	56
18	Northern winter stratospheric temperature and ozone responses to ENSO inferred from an ensemble of Chemistry Climate Models. Atmospheric Chemistry and Physics, 2009, 9, 8935-8948.	1.9	56

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19	Global and Arctic effective radiative forcing of anthropogenic gases and aerosols in MRI-ESM2.0. Progress in Earth and Planetary Science, 2020, 7, .	1.1	56
20	Development of the RAQM2 aerosol chemical transport model and predictions of the Northeast Asian aerosol mass, size, chemistry, and mixing type. Atmospheric Chemistry and Physics, 2012, 12, 11833-11856.	1.9	55
21	Evaluating stratospheric ozone and water vapour changes in CMIP6 models from 1850 to 2100. Atmospheric Chemistry and Physics, 2021, 21, 5015-5061.	1.9	54
22	Inter-model comparison of global hydroxyl radical (OH) distributions and their impact on atmospheric methane over the 2000â€“2016 period. Atmospheric Chemistry and Physics, 2019, 19, 13701-13723.	1.9	52
23	Tropospheric Ozone Assessment Report. Elementa, 2020, 8, .	1.1	52
24	Revisiting the Mystery of Recent Stratospheric Temperature Trends. Geophysical Research Letters, 2018, 45, 9919-9933.	1.5	51
25	Partitioning between resolved wave forcing and unresolved gravity wave forcing to the quasi-biennial oscillation as revealed with a coupled chemistry-climate model. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	48
26	Mapping Yearly Fine Resolution Global Surface Ozone through the Bayesian Maximum Entropy Data Fusion of Observations and Model Output for 1990â€“2017. Environmental Science & Technology, 2021, 55, 4389-4398.	4.6	47
27	Historical total ozone radiative forcing derived from CMIP6 simulations. Npj Climate and Atmospheric Science, 2020, 3, .	2.6	44
28	The Climate Response to Emissions Reductions Due to COVIDâ€19: Initial Results From CovidMIP. Geophysical Research Letters, 2021, 48, e2020GL091883.	1.5	43
29	No robust evidence of future changes in major stratospheric sudden warmings: a multi-model assessment from CCMI. Atmospheric Chemistry and Physics, 2018, 18, 11277-11287.	1.9	41
30	Clear sky UV simulations for the 21st century based on ozone and temperature projections from Chemistry-Climate Models. Atmospheric Chemistry and Physics, 2009, 9, 1165-1172.	1.9	40
31	Tropospheric jet response to Antarctic ozone depletion: An update with Chemistry-Climate Model Initiative (CCMI) models. Environmental Research Letters, 2018, 13, 054024.	2.2	38
32	NHM-Chem, the Japan Meteorological Agency's Regional Meteorology â€“ Chemistry Model: Model Evaluations toward the Consistent Predictions of the Chemical, Physical, and Optical Properties of Aerosols. Journal of the Meteorological Society of Japan, 2019, 97, 337-374.	0.7	37
33	Stratospheric Injection of Brominated Very Shortâ€Lived Substances: Aircraft Observations in the Western Pacific and Representation in Global Models. Journal of Geophysical Research D: Atmospheres, 2018, 123, 5690-5719.	1.2	36
34	Anthropogenic forcing of the Northern Annular Mode in CCMValâ€2 models. Journal of Geophysical Research, 2010, 115, .	3.3	32
35	Large-scale tropospheric transport in the Chemistryâ€“Climate Model Initiative (CCMI) simulations. Atmospheric Chemistry and Physics, 2018, 18, 7217-7235.	1.9	32
36	Quantifying the effect of mixing on the mean age of air in CCMVal-2 and CCMI-1 models. Atmospheric Chemistry and Physics, 2018, 18, 6699-6720.	1.9	32

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37	Climate and air quality impacts due to mitigation of non-methane near-term climate forcers. Atmospheric Chemistry and Physics, 2020, 20, 9641-9663.	1.9	30
38	Seasonal and interannual variability of tropospheric ozone over an urban site in India: A study based on MOZAIC and CCM vertical profiles over Hyderabad. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3615-3641.	1.2	29
39	The influence of mixing on the stratospheric age of air changes in the 21st century. Atmospheric Chemistry and Physics, 2019, 19, 921-940.	1.9	29
40	Large Impacts, Past and Future, of Ozoneâ€Depleting Substances on Brewerâ€Dobson Circulation Trends: A Multimodel Assessment. Journal of Geophysical Research D: Atmospheres, 2019, 124, 6669-6680.	1.2	28
41	Tropospheric ozone in CCMI models and Gaussian process emulation to understand biases in the SOCOLv3 chemistryâ€“climate model. Atmospheric Chemistry and Physics, 2018, 18, 16155-16172.	1.9	27
42	The effect of atmospheric nudging on the stratospheric residual circulation in chemistryâ€“climate models. Atmospheric Chemistry and Physics, 2019, 19, 11559-11586.	1.9	27
43	Climate change penalty and benefit on surface ozone: a global perspective based on CMIP6 earth system models. Environmental Research Letters, 2022, 17, 024014.	2.2	27
44	Seasonal and interannual variability of carbon monoxide based on MOZAIC observations, MACC reanalysis, and model simulations over an urban site in India. Journal of Geophysical Research D: Atmospheres, 2014, 119, 9123-9141.	1.2	25
45	A machine learning examination of hydroxyl radical differences among model simulations for CCMI-1. Atmospheric Chemistry and Physics, 2020, 20, 1341-1361.	1.9	24
46	Contribution of different processes to changes in tropical lower-stratospheric water vapor in chemistryâ€“climate models. Atmospheric Chemistry and Physics, 2017, 17, 8031-8044.	1.9	23
47	A new method (M³Fusion v1) for combining observations and multiple model output for an improved estimate of the global surface ozone distribution. Geoscientific Model Development, 2019, 12, 955-978.	1.3	23
48	Role of solar activity in the troposphereâ€stratosphere coupling in the Southern Hemisphere winter. Geophysical Research Letters, 2007, 34, .	1.5	22
49	Clear-sky ultraviolet radiation modelling using output from the Chemistry Climate Model Initiative. Atmospheric Chemistry and Physics, 2019, 19, 10087-10110.	1.9	22
50	Seasonality of the lower tropospheric ozone over China observed by the Ozone Monitoring Instrument. Atmospheric Environment, 2018, 184, 244-253.	1.9	20
51	Roles of transport in the seasonal variation of the total ozone amount. Journal of Geophysical Research, 2005, 110, .	3.3	19
52	Modeling wet deposition and concentration of inorganics over Northeast Asia with MRI-PM/c. Geoscientific Model Development, 2012, 5, 1363-1375.	1.3	18
53	The representation of solar cycle signals in stratospheric ozone â€“ PartÂ2: Analysis of global models. Atmospheric Chemistry and Physics, 2018, 18, 11323-11343.	1.9	18
54	Fast responses on pre-industrial climate from present-day aerosols in a CMIP6 multi-model study. Atmospheric Chemistry and Physics, 2020, 20, 8381-8404.	1.9	18

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55	On the role of trend and variability in the hydroxyl radical (OH) in the global methane budget. Atmospheric Chemistry and Physics, 2020, 20, 13011-13022.	1.9	18
56	The Impact of Changing Meteorological Variables to Be Assimilated into GCM on Ozone Simulation with MRI CTM. Journal of the Meteorological Society of Japan, 2005, 83, 909-918.	0.7	17
57	DIAL measurement of lower tropospheric ozone over Saga (33.24Â° N, 130.29Â° E), Japan, and comparison with a chemistryâ€“climate model. Atmospheric Measurement Techniques, 2014, 7, 1385-1394.	1.2	16
58	Reappraisal of the Climate Impacts of Ozoneâ€Depleting Substances. Geophysical Research Letters, 2020, 47, e2020GL088295.	1.5	16
59	Description and Evaluation of the specified-dynamics experiment in the Chemistry-Climate Model Initiative. Atmospheric Chemistry and Physics, 2020, 20, 3809-3840.	1.9	16
60	Comparison of three aerosol representations of NHM-Chem (v1.0) for the simulations of air quality and climate-relevant variables. Geoscientific Model Development, 2021, 14, 2235-2264.	1.3	16
61	Projecting ozone hole recovery using an ensemble of chemistryâ€“climate models weighted by model performance and independence. Atmospheric Chemistry and Physics, 2020, 20, 9961-9977.	1.9	16
62	Influence of Arctic stratospheric ozone on surface climate in CCMI models. Atmospheric Chemistry and Physics, 2019, 19, 9253-9268.	1.9	15
63	Radiative effect of ozone on the quasi-biennial oscillation in the equatorial stratosphere. Geophysical Research Letters, 2005, 32, .	1.5	14
64	Significant climate benefits from near-term climate forcer mitigation in spite of aerosol reductions. Environmental Research Letters, 0, , .	2.2	14
65	Evaluating the Relationship between Interannual Variations in the Antarctic Ozone Hole and Southern Hemisphere Surface Climate in Chemistryâ€“Climate Models. Journal of Climate, 2019, 32, 3131-3151.	1.2	13
66	Transport of tropospheric and stratospheric ozone over India: Balloon-borne observations and modeling analysis. Atmospheric Environment, 2016, 131, 228-242.	1.9	12
67	Impacts of increases in greenhouse gases and ozone recovery on lower stratospheric circulation and the age of air: Chemistry-climate model simulations up to 2100. Journal of Geophysical Research, 2011, 116, .	3.3	11
68	Stratospheric ozone variation induced by the 11-year solar cycle: Recent 22-year simulation using 3-D chemical transport model with reanalysis data. Geophysical Research Letters, 2006, 33, .	1.5	10
69	Impact of interactive chemistry of stratospheric ozone on Southern Hemisphere paleoclimate simulation. Journal of Geophysical Research D: Atmospheres, 2017, 122, 878-895.	1.2	10
70	Impact of tropical convection and ENSO variability in vertical distributions of CO and O3 over an urban site of India. Climate Dynamics, 2017, 49, 449-469.	1.7	10
71	Mitigation of Global Cooling by Stratospheric Chemistry Feedbacks in a Simulation of the Last Glacial Maximum. Journal of Geophysical Research D: Atmospheres, 2018, 123, 9378-9390.	1.2	10
72	Operation-Oriented Ensemble Data Assimilation of Total Column Ozone. Scientific Online Letters on the Atmosphere, 2011, 7, 41-44.	0.6	10

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73	No Robust Evidence of Future Changes in Major Stratospheric Sudden Warmings: A Multi-model Assessment from CCMI. Atmospheric Chemistry and Physics, 2018, 18, 11277-11287.	1.9	10
74	Changes in anthropogenic precursor emissions drive shifts in the ozone seasonal cycle throughout the northern midlatitude troposphere. Atmospheric Chemistry and Physics, 2022, 22, 3507-3524.	1.9	10
75	Future Changes in the Ozone Quasi-Biennial Oscillation with Increasing GHGs and Ozone Recovery in CCMI Simulations. Journal of Climate, 2017, 30, 6977-6997.	1.2	9
76	Influence of the El NiÃ±oâ€"Southern Oscillation on entry stratospheric water vapor in coupled chemistryâ€"ocean CCMI and CMIP6 models. Atmospheric Chemistry and Physics, 2021, 21, 3725-3740.	1.9	8
77	Investigations on the anthropogenic reversal of the natural ozone gradient between northern and southern midlatitudes. Atmospheric Chemistry and Physics, 2021, 21, 9669-9679.	1.9	8
78	Lidar detection of high concentrations of ozone and aerosol transported from northeastern Asia over Saga, Japan. Atmospheric Chemistry and Physics, 2017, 17, 1865-1879.	1.9	7
79	Impact of the tropical cyclone Nilam on the vertical distribution of carbon monoxide over Chennai on the Indian peninsula. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 1091-1105.	1.0	6
80	Detectability assessment of a satellite sensor for lower tropospheric ozone responses to its precursors emission changes in East Asian summer. Scientific Reports, 2019, 9, 19629.	1.6	6
81	Attribution of Chemistry-Climate Model Initiative (CCMI) ozone radiative flux bias from satellites. Atmospheric Chemistry and Physics, 2020, 20, 281-301.	1.9	6
82	A New Empirical Formula for the Aerodynamic Roughness of Water Surface Waves. Journal of Oceanography, 2003, 59, 819-831.	0.7	5
83	Future Changes in the Quasi-Biennial Oscillation Under a Greenhouse Gas Increase and Ozone Recovery in Transient Simulations by a Chemistry-Climate Model. , 0, , .		5
84	Intercomparison of the representations of the atmospheric chemistry of pre-industrial methane and ozone in earth system and other global chemistry-transport models. Atmospheric Environment, 2021, 248, 118248.	1.9	5
85	Air quality improvements are projected to weaken the Atlantic meridional overturning circulation through radiative forcing effects. Communications Earth & Environment, 2022, 3, .	2.6	5
86	Attribution of Stratospheric and Tropospheric Ozone Changes Between 1850 and 2014 in CMIP6 Models. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	5
87	A multimodel comparison of stratospheric ozone data assimilation based on an ensemble Kalman filter approach. Journal of Geophysical Research D: Atmospheres, 2013, 118, 3848-3868.	1.2	4
88	Influence of the solar cycle on the Polarâ€night Jet Oscillation in the Southern Hemisphere. Journal of Geophysical Research D: Atmospheres, 2016, 121, 11,575.	1.2	2
89	Study of Lower Tropospheric Ozone over Central and Eastern China: Comparison of Satellite Observation with Model Simulation. Springer Remote Sensing/photogrammetry, 2018, , 255-275.	0.4	1
90	Bias Correction of Multi-sensor Total Column Ozone Satellite Data for 1978â€"2017. Journal of the Meteorological Society of Japan, 2020, 98, 353-377.	0.7	1

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91	Diurnal and daily variations in surface ultraviolet radiation due to ozone variations in the troposphere at Tsukuba, Japan: Lidar observations and chemistry-climate model simulation. , 2013, , .		0