

Kostas Tsigaridis

List of Publications by Year in descending order

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103
papers

12,027
citations

41344

49
h-index

30922

102
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198
all docs

198
docs citations

198
times ranked

11494
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of forcing differences and initial conditions on inter-model agreement in the VolMIP volc-pinatubo-full experiment. <i>Geoscientific Model Development</i> , 2022, 15, 2265-2292.	3.6	22
2	Future Climate Change Under SSP Emission Scenarios With GISS-E2.1. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	3.8	22
3	Changes in anthropogenic precursor emissions drive shifts in the ozone seasonal cycle throughout the northern midlatitude troposphere. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 3507-3524.	4.9	10
4	Model evaluation of short-lived climate forcers for the Arctic Monitoring and Assessment Programme: a multi-species, multi-model study. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 5775-5828.	4.9	15
5	Attribution of Stratospheric and Tropospheric Ozone Changes Between 1850 and 2014 in CMIP6 Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	3.3	5
6	CMIP6 Historical Simulations (1850–2014) With GISS-E2.1. <i>Journal of Advances in Modeling Earth Systems</i> , 2021, 13, e2019MS002034.	3.8	49
7	AeroCom phase III multi-model evaluation of the aerosol life cycle and optical properties using ground- and space-based remote sensing as well as surface in situ observations. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 87-128.	4.9	96
8	Reductions in NO ₂ burden over north equatorial Africa from decline in biomass burning in spite of growing fossil fuel use, 2005 to 2017. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	22
9	Intercomparison of the representations of the atmospheric chemistry of pre-industrial methane and ozone in earth system and other global chemistry-transport models. <i>Atmospheric Environment</i> , 2021, 248, 118248.	4.1	5
10	The Toba supervolcano eruption caused severe tropical stratospheric ozone depletion. <i>Communications Earth & Environment</i> , 2021, 2, .	6.8	19
11	The Climate Response to Emissions Reductions Due to COVID-19: Initial Results From CovidMIP. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL091883.	4.0	43
12	Chemical transport models often underestimate inorganic aerosol acidity in remote regions of the atmosphere. <i>Communications Earth & Environment</i> , 2021, 2, .	6.8	32
13	TRAPPIST Habitable Atmosphere Intercomparison (THAI) Workshop Report. <i>Planetary Science Journal</i> , 2021, 2, 106.	3.6	29
14	Investigations on the anthropogenic reversal of the natural ozone gradient between northern and southern midlatitudes. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 9669-9679.	4.9	8
15	Present and future aerosol impacts on Arctic climate change in the GISS-E2.1 Earth system model. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 10413-10438.	4.9	12
16	3D Simulations of the Early Martian Hydrological Cycle Mediated by a H ₂ Greenhouse. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006825.	3.6	12
17	Continental and Ecoregion-Specific Drivers of Atmospheric NO ₂ and NH ₃ Seasonality Over Africa Revealed by Satellite Observations. <i>Global Biogeochemical Cycles</i> , 2021, 35, e2020GB006916.	4.9	5
18	Understanding Top-of-Atmosphere Flux Bias in the AeroCom Phase III Models: A Clear-Sky Perspective. <i>Journal of Advances in Modeling Earth Systems</i> , 2021, 13, e2021MS002584.	3.8	4

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19	Climate-driven chemistry and aerosol feedbacks in CMIP6 Earth system models. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 1105-1126.	4.9	39
20	Aerosol absorption in global models from AeroCom phase III. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 15929-15947.	4.9	27
21	Changes in satellite retrievals of atmospheric composition over eastern China during the 2020 COVID-19 lockdowns. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 18333-18350.	4.9	8
22	The Role of the SO Radiative Effect in Sustaining the Volcanic Winter and Soothing the Toba Impact on Climate. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031726.	3.3	13
23	Reappraisal of the Climate Impacts of Ozone-Depleting Substances. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088295.	4.0	16
24	Fast responses on pre-industrial climate from present-day aerosols in a CMIP6 multi-model study. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 8381-8404.	4.9	18
25	Historical (1850–2014) Aerosol Evolution and Role on Climate Forcing Using the GISS ModelE2.1 Contribution to CMIP6. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001978.	3.8	69
26	GISS-E2.1: Configurations and Climatology. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS002025.	3.8	234
27	Black Carbon and Precipitation: An Energetics Perspective. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD032239.	3.3	8
28	TRAPPIST-1 Habitable Atmosphere Intercomparison (THAI): motivations and protocol version 1.0. <i>Geoscientific Model Development</i> , 2020, 13, 707-716.	3.6	52
29	Characterization of organic aerosol across the global remote troposphere: a comparison of ATom measurements and global chemistry models. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 4607-4635.	4.9	66
30	GISS Model E2.2: A Climate Model Optimized for the Middle Atmosphere ² . Validation of Large-Scale Transport and Evaluation of Climate Response. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD033151.	3.3	14
31	Historical and future changes in air pollutants from CMIP6 models. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 14547-14579.	4.9	105
32	Climate and air quality impacts due to mitigation of non-methane near-term climate forcers. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 9641-9663.	4.9	30
33	The interactive global fire module pyrE (v1.0). <i>Geoscientific Model Development</i> , 2020, 13, 3091-3118.	3.6	1
34	Evaluation of global simulations of aerosol particle and cloud condensation nuclei number, with implications for cloud droplet formation. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 8591-8617.	4.9	60
35	The Response of the Ozone Layer to Quadrupled CO ₂ Concentrations: Implications for Climate. <i>Journal of Climate</i> , 2019, 32, 7629-7642.	3.2	17
36	Modeling a Transient Secondary Paleolunar Atmosphere: 3D Simulations and Analysis. <i>Geophysical Research Letters</i> , 2019, 46, 5107-5116.	4.0	16

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37	Asian and Trans-Pacific Dust: A Multimodel and Multiremote Sensing Observation Analysis. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 13534-13559.	3.3	24
38	Southeast Atmosphere Studies: learning from model-observation syntheses. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 2615-2651.	4.9	36
39	Multi-model comparison of the volcanic sulfate deposition from the 1815 eruption of Mt. Tambora. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 2307-2328.	4.9	41
40	The Present and Future of Secondary Organic Aerosol Direct Forcing on Climate. <i>Current Climate Change Reports</i> , 2018, 4, 84-98.	8.6	51
41	Can semi-volatile organic aerosols lead to fewer cloud particles?. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 14243-14251.	4.9	1
42	Aerosols in atmospheric chemistry and biogeochemical cycles of nutrients. <i>Environmental Research Letters</i> , 2018, 13, 063004.	5.2	74
43	The Response of the Ozone Layer to Quadrupled CO ₂ Concentrations. <i>Journal of Climate</i> , 2018, 31, 3893-3907.	3.2	32
44	Fire and deforestation dynamics in Amazonia (1973–2014). <i>Global Biogeochemical Cycles</i> , 2017, 31, 24-38.	4.9	66
45	Interactive nature of climate change and aerosol forcing. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 3457-3480.	3.3	25
46	Resolving Orbital and Climate Keys of Earth and Extraterrestrial Environments with Dynamics (ROCKE-3D) 1.0: A General Circulation Model for Simulating the Climates of Rocky Planets. <i>Astrophysical Journal, Supplement Series</i> , 2017, 231, 12.	7.7	106
47	Aerosols at the poles: an AeroCom Phase II multi-model evaluation. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 12197-12218.	4.9	58
48	Investigation of global particulate nitrate from the AeroCom phase III experiment. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 12911-12940.	4.9	99
49	MATRIX-VBS (v1.0): implementing an evolving organic aerosol volatility in an aerosol microphysics model. <i>Geoscientific Model Development</i> , 2017, 10, 751-764.	3.6	8
50	The Model Intercomparison Project on the climatic response to Volcanic forcing (VolMIP): experimental design and forcing input data for CMIP6. <i>Geoscientific Model Development</i> , 2016, 9, 2701-2719.	3.6	138
51	Evaluation of the aerosol vertical distribution in global aerosol models through comparison against CALIOP measurements: AeroCom phase II results. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 7254-7283.	3.3	80
52	Role of atmospheric chemistry in the climate impacts of stratospheric volcanic injections. <i>Nature Geoscience</i> , 2016, 9, 652-655.	12.9	61
53	Evaluating secondary inorganic aerosols in three dimensions. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 10651-10669.	4.9	17
54	Evaluation of observed and modelled aerosol lifetimes using radioactive tracers of opportunity and an ensemble of 19 global models. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 3525-3561.	4.9	75

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55	Large gain in air quality compared to an alternative anthropogenic emissions scenario. Atmospheric Chemistry and Physics, 2016, 16, 9771-9784.	4.9	30
56	What controls the vertical distribution of aerosol? Relationships between process sensitivity in HadGEM3<sup>UKCA</sup> and inter-model variation from AeroCom Phase II. Atmospheric Chemistry and Physics, 2016, 16, 2221-2241.	4.9	82
57	Regional and global temperature response to anthropogenic SO ₂ emissions from China in three climate models. Atmospheric Chemistry and Physics, 2016, 16, 9785-9804.	4.9	46
58	Non-OH chemistry in oxidation flow reactors for the study of atmospheric chemistry systematically examined by modeling. Atmospheric Chemistry and Physics, 2016, 16, 4283-4305.	4.9	117
59	Significant atmospheric aerosol pollution caused by world food cultivation. Geophysical Research Letters, 2016, 43, 5394-5400.	4.0	155
60	Past, Present, and Future Atmospheric Nitrogen Deposition. Journals of the Atmospheric Sciences, 2016, 73, 2039-2047.	1.7	222
61	New Statistical Model for Variability of Aerosol Optical Thickness: Theory and Application to MODIS Data over Ocean*. Journals of the Atmospheric Sciences, 2016, 73, 821-837.	1.7	13
62	Interannual variability of tropospheric trace gases and aerosols: The role of biomass burning emissions. Journal of Geophysical Research D: Atmospheres, 2015, 120, 7157-7173.	3.3	41
63	A multi-model evaluation of aerosols over South Asia: common problems and possible causes. Atmospheric Chemistry and Physics, 2015, 15, 5903-5928.	4.9	113
64	Do responses to different anthropogenic forcings add linearly in climate models?. Environmental Research Letters, 2015, 10, 104010.	5.2	32
65	Future climate change under RCP emission scenarios with GISS ModelE2. Journal of Advances in Modeling Earth Systems, 2015, 7, 244-267.	3.8	112
66	Reforestation and crop land conversion impacts on future regional air quality in the Southeastern U.S.. Agricultural and Forest Meteorology, 2015, 209-210, 78-86.	4.8	5
67	Impacts of Potential CO ₂ -Reduction Policies on Air Quality in the United States. Environmental Science & Technology, 2015, 49, 5133-5141.	10.0	25
68	Model-based estimation of sampling-caused uncertainty in aerosol remote sensing for climate research applications. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 2353-2363.	2.7	11
69	Reconciling warming trends. Nature Geoscience, 2014, 7, 158-160.	12.9	224
70	CMIP5 historical simulations (1850<sup>–</sup>2012) with GISS ModelE2. Journal of Advances in Modeling Earth Systems, 2014, 6, 441-478.	3.8	133
71	Configuration and assessment of the GISS ModelE2 contributions to the CMIP5 archive. Journal of Advances in Modeling Earth Systems, 2014, 6, 141-184.	3.8	597
72	Sources, sinks, and transatlantic transport of North African dust aerosol: A multimodel analysis and comparison with remote sensing data. Journal of Geophysical Research D: Atmospheres, 2014, 119, 6259-6277.	3.3	88

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73	Sensitivity of air quality to potential future climate change and emissions in the United States and major cities. <i>Atmospheric Environment</i> , 2014, 94, 552-563.	4.1	48
74	The AeroCom evaluation and intercomparison of organic aerosol in global models. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 10845-10895.	4.9	363
75	Modelled black carbon radiative forcing and atmospheric lifetime in AeroCom Phase II constrained by aircraft observations. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 12465-12477.	4.9	157
76	An AeroCom assessment of black carbon in Arctic snow and sea ice. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 2399-2417.	4.9	86
77	Intercomparison and evaluation of global aerosol microphysical properties among AeroCom models of a range of complexity. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 4679-4713.	4.9	148
78	Uncertainties and importance of sea spray composition on aerosol direct and indirect effects. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 220-235.	3.3	62
79	Downscaling a global climate model to simulate climate change over the US and the implication on regional and urban air quality. <i>Geoscientific Model Development</i> , 2013, 6, 1429-1445.	3.6	38
80	Radiative forcing of the direct aerosol effect from AeroCom Phase II simulations. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 1853-1877.	4.9	779
81	Black carbon vertical profiles strongly affect its radiative forcing uncertainty. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 2423-2434.	4.9	223
82	Historical and future black carbon deposition on the three ice caps: Ice core measurements and model simulations from 1850 to 2100. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 7948-7961.	3.3	65
83	Potential impact of land use change on future regional climate in the Southeastern U.S.: Reforestation and crop land conversion. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 11,577.	3.3	29
84	Analysis of fine-mode aerosol retrieval capabilities by different passive remote sensing instrument designs. <i>Optics Express</i> , 2012, 20, 21457.	3.4	96
85	Atmospheric fluxes of organic N and P to the global ocean. <i>Global Biogeochemical Cycles</i> , 2012, 26, .	4.9	179
86	Evidence of a natural marine source of oxalic acid and a possible link to glyoxal. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	86
87	In-cloud oxalate formation in the global troposphere: a 3-D modeling study. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 5761-5782.	4.9	218
88	Estimating the direct and indirect effects of secondary organic aerosols using ECHAM5-HAM. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 8635-8659.	4.9	81
89	A global modeling study on carbonaceous aerosol microphysical characteristics and radiative effects. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 7439-7456.	4.9	143
90	Terrestrial biogeochemical feedbacks in the climate system. <i>Nature Geoscience</i> , 2010, 3, 525-532.	12.9	486

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91	Global Modeling of the Oceanic Source of Organic Aerosols. <i>Advances in Meteorology</i> , 2010, 2010, 1-16.	1.6	93
92	Formation of secondary organic aerosol from isoprene oxidation over Europe. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 7003-7030.	4.9	25
93	The influence of natural and anthropogenic secondary sources on the glyoxal global distribution. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 4965-4981.	4.9	174
94	Global Modelling Of Secondary Organic Aerosol (Soa) Formation: Knowledge And Challenges. <i>NATO Science for Peace and Security Series C: Environmental Security</i> , 2008, , 149-165.	0.2	2
95	Secondary organic aerosol importance in the future atmosphere. <i>Atmospheric Environment</i> , 2007, 41, 4682-4692.	4.1	219
96	Change in global aerosol composition since preindustrial times. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 5143-5162.	4.9	168
97	Naturally driven variability in the global secondary organic aerosol over a decade. <i>Atmospheric Chemistry and Physics</i> , 2005, 5, 1891-1904.	4.9	60
98	Organic aerosol and global climate modelling: a review. <i>Atmospheric Chemistry and Physics</i> , 2005, 5, 1053-1123.	4.9	2,947
99	Global modelling of secondary organic aerosol in the troposphere: a sensitivity analysis. <i>Atmospheric Chemistry and Physics</i> , 2003, 3, 1849-1869.	4.9	304
100	Importance of volatile organic compounds photochemistry over a forested area in central Greece. <i>Atmospheric Environment</i> , 2002, 36, 3137-3146.	4.1	40
101	Factors controlling the diurnal variation of CO above a forested area in southeast Europe. <i>Atmospheric Environment</i> , 2002, 36, 3127-3135.	4.1	11
102	Temporal variations of surface regional background ozone over Crete Island in the southeast Mediterranean. <i>Journal of Geophysical Research</i> , 2000, 105, 4399-4407.	3.3	149
103	Human-activity-enhanced formation of organic aerosols by biogenic hydrocarbon oxidation. <i>Journal of Geophysical Research</i> , 2000, 105, 9243-9354.	3.3	121