Kostas Tsigaridis

List of Publications by Year
in descending order

103 papers	12,027 citations	41344 49 h-index	30922 102 g-index
198 all docs	198 docs citations	198 times ranked	11494 citing authors

#	Article	IF	Citations
1	Organic aerosol and global climate modelling: a review. Atmospheric Chemistry and Physics, 2005, 5, 1053-1123.	4.9	2,947
2	Radiative forcing of the direct aerosol effect from AeroCom Phase II simulations. Atmospheric Chemistry and Physics, 2013, 13, 1853-1877.	4.9	779
3	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
4	Terrestrial biogeochemical feedbacks in the climate system. Nature Geoscience, 2010, 3, 525-532.	12.9	486
5	The AeroCom evaluation and intercomparison of organic aerosol in global models. Atmospheric Chemistry and Physics, 2014, 14, 10845-10895.	4.9	363
6	Global modelling of secondary organic aerosol in the troposphere: a sensitivity analysis. Atmospheric Chemistry and Physics, 2003, 3, 1849-1869.	4.9	304
7	GISSâ€E2.1: Configurations and Climatology. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002025.	3.8	234
8	Reconciling warming trends. Nature Geoscience, 2014, 7, 158-160.	12.9	224
9	Black carbon vertical profiles strongly affect its radiative forcing uncertainty. Atmospheric Chemistry and Physics, 2013, 13, 2423-2434.	4.9	223
10	Past, Present, and Future Atmospheric Nitrogen Deposition. Journals of the Atmospheric Sciences, 2016, 73, 2039-2047.	1.7	222
11	Secondary organic aerosol importance in the future atmosphere. Atmospheric Environment, 2007, 41, 4682-4692.	4.1	219
12	In-cloud oxalate formation in the global troposphere: a 3-D modeling study. Atmospheric Chemistry and Physics, 2011, 11, 5761-5782.	4.9	218
13	Atmospheric fluxes of organic N and P to the global ocean. Global Biogeochemical Cycles, 2012, 26, .	4.9	179
14	The influence of natural and anthropogenic secondary sources on the glyoxal global distribution. Atmospheric Chemistry and Physics, 2008, 8, 4965-4981.	4.9	174
15	Change in global aerosol composition since preindustrial times. Atmospheric Chemistry and Physics, 2006, 6, 5143-5162.	4.9	168
16	Modelled black carbon radiative forcing and atmospheric lifetime in AeroCom Phase II constrained by aircraft observations. Atmospheric Chemistry and Physics, 2014, 14, 12465-12477.	4.9	157
17	Significant atmospheric aerosol pollution caused by world food cultivation. Geophysical Research Letters, 2016, 43, 5394-5400.	4.0	155
18	Temporal variations of surface regional background ozone over Crete Island in the southeast Mediterranean. Journal of Geophysical Research, 2000, 105, 4399-4407.	3.3	149

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19	Intercomparison and evaluation of global aerosol microphysical properties among AeroCom models of a range of complexity. Atmospheric Chemistry and Physics, 2014, 14, 4679-4713.	4.9	148
20	A global modeling study on carbonaceous aerosol microphysical characteristics and radiative effects. Atmospheric Chemistry and Physics, 2010, 10, 7439-7456.	4.9	143
21	The Model Intercomparison Project on the climatic response to Volcanic forcing (VolMIP): experimental design and forcing input data for CMIP6. Geoscientific Model Development, 2016, 9, 2701-2719.	3.6	138
22	CMIP5 historical simulations (1850â€"2012) with GISS ModelE2. Journal of Advances in Modeling Earth Systems, 2014, 6, 441-478.	3.8	133
23	Human-activity-enhanced formation of organic aerosols by biogenic hydrocarbon oxidation. Journal of Geophysical Research, 2000, 105, 9243-9354.	3.3	121
24	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
25	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
26	Future climate change under RCP emission scenarios with GISS <scp>M</scp>odelE2. Journal of Advances in Modeling Earth Systems, 2015, 7, 244-267.	3.8	112
27	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. Astrophysical Journal, Supplement Series, 2017, 231, 12.	7.7	106
28	Historical and future changes in air pollutants from CMIP6 models. Atmospheric Chemistry and Physics, 2020, 20, 14547-14579.	4.9	105
29	Investigation of global particulate nitrate from the AeroCom phaseÂIII experiment. Atmospheric Chemistry and Physics, 2017, 17, 12911-12940.	4.9	99
30	Analysis of fine-mode aerosol retrieval capabilities by different passive remote sensing instrument designs. Optics Express, 2012, 20, 21457.	3.4	96
31	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. Atmospheric Chemistry and Physics, 2021, 21, 87-128.	4.9	96
32	Global Modeling of the Oceanic Source of Organic Aerosols. Advances in Meteorology, 2010, 2010, 1-16.	1.6	93
33	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
34	Evidence of a natural marine source of oxalic acid and a possible link to glyoxal. Journal of Geophysical Research, 2011, 116, .	3.3	86
35	An AeroCom assessment of black carbon in Arctic snow and sea ice. Atmospheric Chemistry and Physics, 2014, 14, 2399-2417.	4.9	86
36	What controls the vertical distribution of aerosol? Relationships between process sensitivity in HadGEM3â€"UKCA and inter-model variation from AeroCom Phase II. Atmospheric Chemistry and Physics, 2016, 16, 2221-2241.	4.9	82

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37	Estimating the direct and indirect effects of secondary organic aerosols using ECHAM5-HAM. Atmospheric Chemistry and Physics, 2011, 11, 8635-8659.	4.9	81
38	Evaluation of the aerosol vertical distribution in global aerosol models through comparison against CALIOP measurements: AeroCom phase II results. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7254-7283.	3.3	80
39	Evaluation of observed and modelled aerosol lifetimes using radioactive tracers of opportunity and an ensemble of 19 global models. Atmospheric Chemistry and Physics, 2016, 16, 3525-3561.	4.9	75
40	Aerosols in atmospheric chemistry and biogeochemical cycles of nutrients. Environmental Research Letters, 2018, 13, 063004.	5.2	74
41	Historical (1850â€“2014) Aerosol Evolution and Role on Climate Forcing Using the GISS ModelE2.1 Contribution to CMIP6. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001978.	3.8	69
42	Fire and deforestation dynamics in Amazonia (1973â€“2014). Global Biogeochemical Cycles, 2017, 31, 24-38.	4.9	66
43	Characterization of organic aerosol across the global remote troposphere: a comparison of ATom measurements and global chemistry models. Atmospheric Chemistry and Physics, 2020, 20, 4607-4635.	4.9	66
44	Historical and future black carbon deposition on the three ice caps: Ice core measurements and model simulations from 1850 to 2100. Journal of Geophysical Research D: Atmospheres, 2013, 118, 7948-7961.	3.3	65
45	Uncertainties and importance of sea spray composition on aerosol direct and indirect effects. Journal of Geophysical Research D: Atmospheres, 2013, 118, 220-235.	3.3	62
46	Role of atmospheric chemistry in the climate impacts of stratospheric volcanic injections. Nature Geoscience, 2016, 9, 652-655.	12.9	61
47	Naturally driven variability in the global secondary organic aerosol over a decade. Atmospheric Chemistry and Physics, 2005, 5, 1891-1904.	4.9	60
48	Evaluation of global simulations of aerosol particle and cloud condensation nuclei number, with implications for cloud droplet formation. Atmospheric Chemistry and Physics, 2019, 19, 8591-8617.	4.9	60
49	Aerosols at the poles: an AeroCom Phase II multi-model evaluation. Atmospheric Chemistry and Physics, 2017, 17, 12197-12218.	4.9	58
50	TRAPPIST-1 Habitable Atmosphere Intercomparison (THAI): motivations and protocol version 1.0. Geoscientific Model Development, 2020, 13, 707-716.	3.6	52
51	The Present and Future of Secondary Organic Aerosol Direct Forcing on Climate. Current Climate Change Reports, 2018, 4, 84-98.	8.6	51
52	CMIP6 Historical Simulations (1850â€“2014) With GISSâ€E2.1. Journal of Advances in Modeling Earth Systems, 2021, 13, e2019MS002034.	3.8	49
53	Sensitivity of air quality to potential future climate change and emissions in the United States and major cities. Atmospheric Environment, 2014, 94, 552-563.	4.1	48
54	Regional and global temperature response to anthropogenic SO₂ emissions from China in three climate models. Atmospheric Chemistry and Physics, 2016, 16, 9785-9804.	4.9	46

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55	The Climate Response to Emissions Reductions Due to COVIDâ€19: Initial Results From CovidMIP. Geophysical Research Letters, 2021, 48, e2020GL091883.	4.0	43
56	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
57	Multi-model comparison of the volcanic sulfate deposition from the 1815 eruption of Mt.ÂTambora. Atmospheric Chemistry and Physics, 2018, 18, 2307-2328.	4.9	41
58	Importance of volatile organic compounds photochemistry over a forested area in central Greece. Atmospheric Environment, 2002, 36, 3137-3146.	4.1	40
59	Climate-driven chemistry and aerosol feedbacks in CMIP6 Earth system models. Atmospheric Chemistry and Physics, 2021, 21, 1105-1126.	4.9	39
60	Downscaling a global climate model to simulate climate change over the US and the implication on regional and urban air quality. Geoscientific Model Development, 2013, 6, 1429-1445.	3.6	38
61	Southeast Atmosphere Studies: learning from model-observation syntheses. Atmospheric Chemistry and Physics, 2018, 18, 2615-2651.	4.9	36
62	Do responses to different anthropogenic forcings add linearly in climate models?. Environmental Research Letters, 2015, 10, 104010.	5.2	32
63	The Response of the Ozone Layer to Quadrupled CO2 Concentrations. Journal of Climate, 2018, 31, 3893-3907.	3.2	32
64	Chemical transport models often underestimate inorganic aerosol acidity in remote regions of the atmosphere. Communications Earth & Environment, 2021, 2, .	6.8	32
65	Large gain in air quality compared to an alternative anthropogenic emissions scenario. Atmospheric Chemistry and Physics, 2016, 16, 9771-9784.	4.9	30
66	Climate and air quality impacts due to mitigation of non-methane near-term climate forcers. Atmospheric Chemistry and Physics, 2020, 20, 9641-9663.	4.9	30
67	Potential impact of land use change on future regional climate in the Southeastern U.S.: Reforestation and crop land conversion. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,577.	3.3	29
68	TRAPPIST Habitable Atmosphere Intercomparison (THAI) Workshop Report. Planetary Science Journal, 2021, 2, 106.	3.6	29
69	Aerosol absorption in global models from AeroCom phase III. Atmospheric Chemistry and Physics, 2021, 21, 15929-15947.	4.9	27
70	Formation of secondary organic aerosol from isoprene oxidation over Europe. Atmospheric Chemistry and Physics, 2009, 9, 7003-7030.	4.9	25
71	Impacts of Potential CO₂-Reduction Policies on Air Quality in the United States. Environmental Science & Technology, 2015, 49, 5133-5141.	10.0	25
72	Interactive nature of climate change and aerosol forcing. Journal of Geophysical Research D: Atmospheres, 2017, 122, 3457-3480.	3.3	25

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73	Asian and Transâ€Pacific Dust: A Multimodel and Multiremote Sensing Observation Analysis. Journal of Geophysical Research D: Atmospheres, 2019, 124, 13534-13559.	3.3	24
74	Reductions in NO ₂ burden over north equatorial Africa from decline in biomass burning in spite of growing fossil fuel use, 2005 to 2017. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	22
75	Effects of forcing differences and initial conditions on inter-model agreement in the VolMIP volc-pinatubo-full experiment. Geoscientific Model Development, 2022, 15, 2265-2292.	3.6	22
76	Future Climate Change Under SSP Emission Scenarios With GISSâ€E2.1. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	22
77	The Toba supervolcano eruption caused severe tropical stratospheric ozone depletion. Communications Earth & Environment, 2021, 2, .	6.8	19
78	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
79	Evaluating secondary inorganic aerosols in three dimensions. Atmospheric Chemistry and Physics, 2016, 16, 10651-10669.	4.9	17
80	The Response of the Ozone Layer to Quadrupled CO2 Concentrations: Implications for Climate. Journal of Climate, 2019, 32, 7629-7642.	3.2	17
81	Modeling a Transient Secondary Paleolunar Atmosphere: 3â€D Simulations and Analysis. Geophysical Research Letters, 2019, 46, 5107-5116.	4.0	16
82	Reappraisal of the Climate Impacts of Ozoneâ€Depleting Substances. Geophysical Research Letters, 2020, 47, e2020GL088295.	4.0	16
83	Model evaluation of short-lived climate forcers for the Arctic Monitoring and Assessment Programme: a multi-species, multi-model study. Atmospheric Chemistry and Physics, 2022, 22, 5775-5828.	4.9	15
84	GISS Model E2.2: A Climate Model Optimized for the Middle Atmosphereâ€"2. Validation of Largeâ€Scale Transport and Evaluation of Climate Response. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD033151.	3.3	14
85	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
86	The Role of the SO Radiative Effect in Sustaining the Volcanic Winter and Soothing the Toba Impact on Climate. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031726.	3.3	13
87	Present and future aerosol impacts on Arctic climate change in the GISS-E2.1 Earth system model. Atmospheric Chemistry and Physics, 2021, 21, 10413-10438.	4.9	12
88	3D Simulations of the Early Martian Hydrological Cycle Mediated by a H₂â€CO₂Greenhouse. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006825.	3.6	12
89	Factors controlling the diurnal variation of CO above a forested area in southeast Europe. Atmospheric Environment, 2002, 36, 3127-3135.	4.1	11
90	Modelâ€based estimation of samplingâ€caused uncertainty in aerosol remote sensing for climate research applications. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 2353-2363.	2.7	11

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91	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.	4.9	10
92	MATRIX-VBS (v1.0): implementing an evolving organic aerosol volatility in an aerosol microphysics model. Geoscientific Model Development, 2017, 10, 751-764.	3.6	8
93	Black Carbon and Precipitation: An Energetics Perspective. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032239.	3.3	8
94	Investigations on the anthropogenic reversal of the natural ozone gradient between northern and southern midlatitudes. Atmospheric Chemistry and Physics, 2021, 21, 9669-9679.	4.9	8
95	Changes in satellite retrievals of atmospheric composition over eastern China during the 2020 COVID-19 lockdowns. Atmospheric Chemistry and Physics, 2021, 21, 18333-18350.	4.9	8
96	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
97	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.	4.1	5
98	Continental and Ecoregionâ€Specific Drivers of Atmospheric NO₂ and NH₃ Seasonality Over Africa Revealed by Satellite Observations. Global Biogeochemical Cycles, 2021, 35, e2020GB006916.	4.9	5
99	Attribution of Stratospheric and Tropospheric Ozone Changes Between 1850 and 2014 in CMIP6 Models. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	5
100	Understanding Topâ€ofâ€Atmosphere Flux Bias in the AeroCom Phase III Models: A Clearâ€Sky Perspective. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002584.	3.8	4
101	Global Modelling Of Secondary Organic Aerosol (Soa) Formation: Knowledge And Challenges. NATO Science for Peace and Security Series C: Environmental Security, 2008, , 149-165.	0.2	2
102	Can semi-volatile organic aerosols lead to fewer cloud particles?. Atmospheric Chemistry and Physics, 2018, 18, 14243-14251.	4.9	1
103	The interactive global fire module pyrE (v1.0). Geoscientific Model Development, 2020, 13, 3091-3118.	3.6	1