Georgiy L Stenchikov

List of Publications by Year
in descending order

119 papers	9,157 citations	44069 48 h-index	43889 91 g-index
156 all docs	156 docs citations	156 times ranked	7810 citing authors

#	Article	IF	Citations
1	The Impact of Aerosols on Solar Ultraviolet Radiation and Photochemical Smog. Science, 1997, 278, 827-830.	12.6	578
2	Global Cooling After the Eruption of Mount Pinatubo: A Test of Climate Feedback by Water Vapor. Science, 2002, 296, 727-730.	12.6	424
3	Regional climate responses to geoengineering with tropical and Arctic SO₂ injections. Journal of Geophysical Research, 2008, 113, .	3.3	339
4	Radiative forcing from the 1991 Mount Pinatubo volcanic eruption. Journal of Geophysical Research, 1998, 103, 13837-13857.	3.3	328
5	The Geoengineering Model Intercomparison Project (GeoMIP). Atmospheric Science Letters, 2011, 12, 162-167.	1.9	314
6	Spectral nudging to eliminate the effects of domain position and geometry in regional climate model simulations. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	279
7	Benefits, risks, and costs of stratospheric geoengineering. Geophysical Research Letters, 2009, 36, .	4.0	275
8	An overview of geoengineering of climate using stratospheric sulphate aerosols. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 4007-4037.	3.4	251
9	Remote Sensing the Phytoplankton Seasonal Succession of the Red Sea. PLoS ONE, 2013, 8, e64909.	2.5	240
10	Coupled Model Intercomparison Project 5 (CMIP5) simulations of climate following volcanic eruptions. Journal of Geophysical Research, 2012, 117, .	3.3	231
11	Arctic Oscillation response to the 1991 Mount Pinatubo eruption: Effects of volcanic aerosols and ozone depletion. Journal of Geophysical Research, 2002, 107, ACL 28-1.	3.3	210
12	The impact of dust storms on the Arabian Peninsula and the Red Sea. Atmospheric Chemistry and Physics, 2015, 15, 199-222.	4.9	209
13	Assessment of Twentieth-Century Regional Surface Temperature Trends Using the GFDL CM2 Coupled Models. Journal of Climate, 2006, 19, 1624-1651.	3.2	206
14	Arctic Oscillation response to volcanic eruptions in the IPCC AR4 climate models. Journal of Geophysical Research, 2006, 111, .	3.3	199
15	Production of lightning NO_{<i>x</i>} and its vertical distribution calculated from threeâ€dimensional cloudâ€scale chemical transport model simulations. Journal of Geophysical Research, 2010, 115, .	3.3	194
16	Climate model simulation of winter warming and summer cooling following the 1991 Mount Pinatubo volcanic eruption. Journal of Geophysical Research, 1999, 104, 19039-19055.	3.3	181
17	Volcanic signals in oceans. Journal of Geophysical Research, 2009, 114, .	3.3	181
18	Aerosol optical depth trend over the Middle East. Atmospheric Chemistry and Physics, 2016, 16, 5063-5073.	4.9	163

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19	Lightning-generated NOXand its impact on tropospheric ozone production: A three-dimensional modeling study of a Stratosphere-Troposphere Experiment: Radiation, Aerosols and Ozone (STERAO-A) thunderstorm. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	162
20	Climatic response to high-latitude volcanic eruptions. Journal of Geophysical Research, 2005, 110, .	3.3	157
21	High-latitude eruptions cast shadow over the African monsoon and the flow of the Nile. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	144
22	Did the Toba volcanic eruption of âˆ¼74 ka B.P. produce widespread glaciation?. Journal of Geophysical Research, 2009, 114, .	3.3	136
23	Regional Climate Simulations over North America: Interaction of Local Processes with Improved Large-Scale Flow. Journal of Climate, 2005, 18, 1227-1246.	3.2	135
24	Climate Change and Weather Extremes in the Eastern Mediterranean and Middle East. Reviews of Geophysics, 2022, 60, .	23.0	131
25	Nuclear winter revisited with a modern climate model and current nuclear arsenals: Still catastrophic consequences. Journal of Geophysical Research, 2007, 112, .	3.3	120
26	A Test for Geoengineering?. Science, 2010, 327, 530-531.	12.6	115
27	Modeling the distribution of the volcanic aerosol cloud from the 1783â€"1784 Laki eruption. Journal of Geophysical Research, 2006, 111, .	3.3	112
28	A cloud-scale model study of lightning-generated NOxin an individual thunderstorm during STERAO-A. Journal of Geophysical Research, 2000, 105, 11601-11616.	3.3	106
29	Cloud-scale model intercomparison of chemical constituent transport in deep convection. Atmospheric Chemistry and Physics, 2007, 7, 4709-4731.	4.9	96
30	Ocean response to volcanic eruptions in <scp>C</scp>oupled <scp>M</scp>odel <scp>I</scp>ntercomparison <scp>P</scp>roject 5 simulations. Journal of Geophysical Research: Oceans, 2014, 119, 5622-5637.	2.6	90
31	Impacts of brown carbon from biomass burning on surface UV and ozone photochemistry in the Amazon Basin. Scientific Reports, 2016, 6, 36940.	3.3	90
32	Modeling a typical winter-time dust event over the Arabian Peninsula and the Red Sea. Atmospheric Chemistry and Physics, 2013, 13, 1999-2014.	4.9	88
33	Radiative impact of the Mount Pinatubo volcanic eruption: Lower stratospheric response. Journal of Geophysical Research, 2000, 105, 24409-24429.	3.3	80
34	Impacts of a Pinatuboâ€size volcanic eruption on ENSO. Journal of Geophysical Research D: Atmospheres, 2017, 122, 925-947.	3.3	76
35	Radiative forcing by volcanic aerosols from 1850 to 1994. Journal of Geophysical Research, 1999, 104, 16807-16826.	3.3	75
36	Sulfuric acid deposition from stratospheric geoengineering with sulfate aerosols. Journal of Geophysical Research, 2009, 114, .	3.3	74

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37	BATAL: The Balloon Measurement Campaigns of the Asian Tropopause Aerosol Layer. Bulletin of the American Meteorological Society, 2018, 99, 955-973.	3.3	74
38	Effects of lightning NOxproduction during the 21 July European Lightning Nitrogen Oxides Project storm studied with a three-dimensional cloud-scale chemical transport model. Journal of Geophysical Research, 2007, 112, .	3.3	72
39	Atmospheric volcanic loading derived from bipolar ice cores: Accounting for the spatial distribution of volcanic deposition. Journal of Geophysical Research, 2007, 112, .	3.3	72
40	Arctic oscillation response to the 1991 Pinatubo eruption in the SKYHI general circulation model with a realistic quasi-biennial oscillation. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	71
41	Assessment of natural and anthropogenic aerosol air pollution in the Middle East using MERRA-2, CAMS data assimilation products, and high-resolution WRF-Chem model simulations. Atmospheric Chemistry and Physics, 2020, 20, 9281-9310.	4.9	71
42	Evaluation of aerosol distribution and optical depth in the Geophysical Fluid Dynamics Laboratory coupled model CM2.1 for present climate. Journal of Geophysical Research, 2006, 111, .	3.3	68
43	The impact of aerosols on simulated ocean temperature and heat content in the 20th century. Geophysical Research Letters, 2005, 32, .	4.0	67
44	Response of the middle atmosphere to anthropogenic and natural forcings in the CMIP5 simulations with the Max Planck Institute Earth system model. Journal of Advances in Modeling Earth Systems, 2013, 5, 98-116.	3.8	66
45	Business-as-usual will lead to super and ultra-extreme heatwaves in the Middle East and North Africa. Npj Climate and Atmospheric Science, 2021, 4, .	6.8	61
46	Stratosphere-troposphere exchange in a midlatitude mesoscale convective complex: 2. Numerical simulations. Journal of Geophysical Research, 1996, 101, 6837-6851.	3.3	59
47	Abrupt recent trend changes in atmospheric nitrogen dioxide over the Middle East. Science Advances, 2015, 1, e1500498.	10.3	59
48	Radiative Forcing of Climate: The Historical Evolution of the Radiative Forcing Concept, the Forcing Agents and their Quantification, and Applications. Meteorological Monographs, 2019, 59, 14.1-14.101.	5.0	52
49	Dust Emission Modeling Using a New Highâ€Resolution Dust Source Function in WRFâ€Chem With Implications for Air Quality. Journal of Geophysical Research D: Atmospheres, 2019, 124, 10109-10133.	3.3	52
50	Consequences of Regional-Scale Nuclear Conflicts. Science, 2007, 315, 1224-1225.	12.6	51
51	Simulation of Flash-Flood-Producing Storm Events in Saudi Arabia Using the Weather Research and Forecasting Model*. Journal of Hydrometeorology, 2015, 16, 615-630.	1.9	51
52	Southern Hemisphere atmospheric circulation effects of the 1991 Mount Pinatubo eruption. Geophysical Research Letters, 2007, 34, .	4.0	49
53	Highâ€resolution regional modeling of summertime transport and impact of African dust over the Red Sea and Arabian Peninsula. Journal of Geophysical Research D: Atmospheres, 2016, 121, 6435-6458.	3.3	48
54	West African Monsoon: current state and future projections in a high-resolution AGCM. Climate Dynamics, 2019, 52, 6441-6461.	3.8	44

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55	Wind resource characterization in the Arabian Peninsula. Applied Energy, 2016, 164, 826-836.	10.1	43
56	Surface boxplots. Stat, 2014, 3, 1-11.	0.4	41
57	Simulation of the climate impact of Mt. Pinatubo eruption using ECHAM5 â€“ Part 1: Sensitivity to the modes of atmospheric circulation and boundary conditions. Atmospheric Chemistry and Physics, 2009, 9, 757-769.	4.9	40
58	Simulation of the climate impact of Mt. Pinatubo eruption using ECHAM5 â€“ Part 2: Sensitivity to the phase of the QBO and ENSO. Atmospheric Chemistry and Physics, 2009, 9, 3001-3009.	4.9	39
59	Revised mineral dust emissions in the atmospheric chemistryâ€“climate model EMAC (MESSy 2.52) Tj ETQq1 1 0.784314 rgBT /Overlo	3.6	39
60	Synergy processing of diverse ground-based remote sensing and in situ data using the GRASP algorithm: applications to radiometer, lidar and radiosonde observations. Atmospheric Measurement Techniques, 2021, 14, 2575-2614.	3.1	38
61	Diurnal cycle of the dust instantaneous direct radiative forcing over the Arabian Peninsula. Atmospheric Chemistry and Physics, 2015, 15, 9537-9553.	4.9	37
62	Lidar validation of SAGE II aerosol measurements after the 1991 Mount Pinatubo eruption. Journal of Geophysical Research, 2002, 107, ACL 3-1.	3.3	35
63	Satellite retrievals of dust aerosol over the Red Sea and the Persian Gulf (2005â€“2015). Atmospheric Chemistry and Physics, 2017, 17, 3987-4003.	4.9	34
64	Physical and chemical properties of deposited airborne particulates over the Arabian Red Sea coastal plain. Atmospheric Chemistry and Physics, 2017, 17, 11467-11490.	4.9	32
65	Sensitivity of transatlantic dust transport to chemical aging and related atmospheric processes. Atmospheric Chemistry and Physics, 2017, 17, 3799-3821.	4.9	31
66	Analysis of Convective Transport and Parameter Sensitivity in a Single Column Version of the Goddard Earth Observation System, Version 5, General Circulation Model. Journals of the Atmospheric Sciences, 2009, 66, 627-646.	1.7	30
67	Constraining Transient Climate Sensitivity Using Coupled Climate Model Simulations of Volcanic Eruptions. Journal of Climate, 2014, 27, 7781-7795.	3.2	30
68	Arabian Red Sea coastal soils as potential mineral dust sources. Atmospheric Chemistry and Physics, 2016, 16, 11991-12004.	4.9	30
69	Role of dust direct radiative effect on the tropical rain belt over Middle East and North Africa: A highâ€resolution AGCM study. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4564-4584.	3.3	29
70	New insights into the windâ€dust relationship in sandblasting and direct aerodynamic entrainment from wind tunnel experiments. Journal of Geophysical Research D: Atmospheres, 2016, 121, 1776-1792.	3.3	29
71	Multi-decadal classification of synoptic weather types, observed trends and links to rainfall characteristics over Saudi Arabia. Frontiers in Environmental Science, 2014, 2, .	3.3	28
72	Sensitivity of the regional climate in the Middle East and North Africa to volcanic perturbations. Journal of Geophysical Research D: Atmospheres, 2017, 122, 7922-7948.	3.3	27

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73	Quantifying local-scale dust emission from the Arabian Red Sea coastal plain. Atmospheric Chemistry and Physics, 2017, 17, 993-1015.	4.9	27
74	El NiÃ±o/Southern Oscillation response to low-latitude volcanic eruptions depends on ocean pre-conditions and eruption timing. Communications Earth & Environment, 2020, 1, .	6.8	26
75	Study of SO Pollution in the Middle East Using MERRAâ€2, CAMS Data Assimilation Products, and Highâ€Resolution WRFâ€Chem Simulations. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031993.	3.3	26
76	Spatial and temporal variability of the stratospheric aerosol cloud produced by the 1991 Mount Pinatubo eruption. Journal of Geophysical Research, 2003, 108, .	3.3	25
77	Direct radiative effect of dustâ€"pollution interactions. Atmospheric Chemistry and Physics, 2019, 19, 7397-7408.	4.9	25
78	GCM evaluation of a mechanism for El NiÃ±o triggering by the El ChichÃ³n ash cloud. Geophysical Research Letters, 1995, 22, 2369-2372.	4.0	24
79	A Uniform- and Variable-Resolution Stretched-Grid GCM Dynamical Core with Realistic Orography. Monthly Weather Review, 2000, 128, 1883-1898.	1.4	24
80	An assessment of the quality of aerosol retrievals over the Red Sea and evaluation of the climatological cloud-free dust direct radiative effect in the region. Journal of Geophysical Research D: Atmospheres, 2015, 120, 10,862-10,878.	3.3	24
81	Aerosol vertical distribution and interactions with land/sea breezes over the eastern coast of the Red Sea from lidar data and high-resolution WRF-Chem simulations. Atmospheric Chemistry and Physics, 2020, 20, 16089-16116.	4.9	24
82	Measurement and modeling of urban atmospheric PCB concentrations on a small (8km) spatial scale. Atmospheric Environment, 2006, 40, 7940-7952.	4.1	23
83	Dust plume formation in the free troposphere and aerosol size distribution during the Saharan Mineral Dust Experiment in North Africa. Tellus, Series B: Chemical and Physical Meteorology, 2022, 67, 27170.	1.6	23
84	Regional Hydrological Cycle over the Red Sea in ERA-Interim. Journal of Hydrometeorology, 2017, 18, 65-83.	1.9	23
85	Simulating the Regional Impact of Dust on the Middle East Climate and the Red Sea. Journal of Geophysical Research: Oceans, 2018, 123, 1032-1047.	2.6	23
86	Improving dust simulations in WRF-Chem v4.1.3 coupled with the GOCART aerosol module. Geoscientific Model Development, 2021, 14, 473-493.	3.6	23
87	Water management during climate change using aquifer storage and recovery of stormwater in a dunefield in western Saudi Arabia. Environmental Research Letters, 2014, 9, 075008.	5.2	22
88	The Toba supervolcano eruption caused severe tropical stratospheric ozone depletion. Communications Earth & Environment, 2021, 2, .	6.8	19
89	The impact of North American anthropogenic emissions and lightning on long-range transport of trace gases and their export from the continent during summers 2002 and 2004. Journal of Geophysical Research, 2011, 116, .	3.3	18
90	How Does a Pinatuboâ€Size Volcanic Cloud Reach the Middle Stratosphere?. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033829.	3.3	18

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91	Multiscale Plume Transport from the Collapse of the World Trade Center on September 11, 2001. Environmental Fluid Mechanics, 2006, 6, 425-450.	1.6	16
92	Future intensification of hydro-meteorological extremes: downscaling using the weather research and forecasting model. Climate Dynamics, 2017, 49, 3765-3785.	3.8	16
93	Observations and Cloudâ€Resolving Modeling of Haboob Dust Storms Over the Arabian Peninsula. Journal of Geophysical Research D: Atmospheres, 2018, 123, 12,147.	3.3	16
94	Weaker cooling by aerosols due to dustâ€"pollution interactions. Atmospheric Chemistry and Physics, 2020, 20, 15285-15295.	4.9	14
95	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
96	Regional Effects of the Mount Pinatubo Eruption on the Middle East and the Red Sea. Journal of Geophysical Research: Oceans, 2017, 122, 8894-8912.	2.6	11
97	The Role of Volcanic Activity in Climate and Global Change. , 2016, , 419-447.		10
98	Seasonal and Regional Patterns of Future Temperature Extremes: Highâ€Resolution Dynamic Downscaling Over a Complex Terrain. Journal of Geophysical Research D: Atmospheres, 2018, 123, 6669-6689.	3.3	10
99	A highâ€resolution bilevel skewâ€•t stochastic generator for assessing Saudi Arabia's wind energy resources. Environmetrics, 2020, 31, e2628.	1.4	10
100	Simulation of the fine structure of the 12 July 1996 Stratosphere-Troposphere Experiment: Radiation, Aerosols and Ozone (STERAO-A) storm accounting for effects of terrain and interaction with mesoscale flow. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	9
101	Effects of unsteady mountainâ€gap winds on eddies in the Red Sea. Atmospheric Science Letters, 2015, 16, 279-284.	1.9	7
102	Sensitivity of the Middle Eastâ€"North African Tropical Rainbelt to Dust Shortwave Absorption: A High-Resolution AGCM Experiment. Journal of Climate, 2016, 29, 7103-7126.	3.2	7
103	Evaluation of thermal and dynamic impacts of summer dust aerosols on the Red Sea. Journal of Geophysical Research: Oceans, 2017, 122, 1325-1346.	2.6	7
104	The role of volcanic activity in climate and global changes. , 2021, , 607-643.		7
105	Molecular Dynamics Modeling of Kaolinite Particle Associations. Journal of Physical Chemistry C, 2021, 125, 24126-24136.	3.1	7
106	Effect of dust on rainfall over the Red Sea coast based on WRF-Chem model simulations. Atmospheric Chemistry and Physics, 2022, 22, 8659-8682.	4.9	7
107	Quantifying the impacts of landscape heterogeneity and model resolution on dust emissions in the Arabian Peninsula. Environmental Modelling and Software, 2016, 78, 106-119.	4.5	6
108	High-altitude wind resources in the Middle East. Scientific Reports, 2017, 7, 9885.	3.3	6

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109	Evaluation of minerals being deposited in the Red Sea using gravimetric, size distribution, and mineralogical analysis of dust deposition samples collected along the Red Sea coastal plain. Aeolian Research, 2021, 52, 100717.	2.7	6
110	Sea Breeze Geoengineering to Increase Rainfall over the Arabian Red Sea Coastal Plains. Journal of Hydrometeorology, 2022, 23, 3-24.	1.9	6
111	The Role of Volcanic Activity in Climate and Global Change. , 2009, , 77-102.		5
112	Correction to â€œSulfuric acid deposition from stratospheric geoengineering with sulfate aerosolsâ€ Journal of Geophysical Research, 2010, 115, .	3.3	4
113	Potential ozone production following convective transport based on future emission scenarios. Atmospheric Environment, 1996, 30, 667-672.	4.1	3
114	A cyclostationary model for temporal forecasting and simulation of solar global horizontal irradiance. Environmetrics, 2021, 32, e2700.	1.4	3
115	Environmental and Biospheric Impacts of Nuclear War. , 2008, , 1314-1320.		2
116	Rejoinder to the discussion on A highâ€resolution bilevel skewâ€<i>t</i> stochastic generator for assessing Saudi Arabia's wind energy resources. Environmetrics, 2020, 31, .	1.4	1
117	A model study of the effect of Pinatubo volcanic aerosols on stratospheric temperatures. , 0, , 152-178.		0
118	Environmental and Biospheric Impacts of Nuclear War. , 2008, , 80-85.		0
119	Pathways, Impacts, and Policies on Severe Aerosol Injections into the Atmosphere: 2011 Severe Atmospheric Aerosols Events Conference. Bulletin of the American Meteorological Society, 2012, 93, ES85-ES88.	3.3	0