Andrew A Lacis

List of Publications by Year
in descending order

73 papers	13,468 citations	76326 40 h-index	91884 69 g-index
75 all docs	75 docs citations	75 times ranked	10096 citing authors

#	Article	IF	Citations
1	Efficacy of climate forcings. Journal of Geophysical Research, 2005, 110, .	3.3	1,104
2	Efficient Three-Dimensional Global Models for Climate Studies: Models I and II. Monthly Weather Review, 1983, 111, 609-662.	1.4	1,022
3	Calculation of radiative fluxes from the surface to top of atmosphere based on ISCCP and other global data sets: Refinements of the radiative transfer model and the input data. Journal of Geophysical Research, 2004, 109, .	3.3	920
4	Climate Impact of Increasing Atmospheric Carbon Dioxide. Science, 1981, 213, 957-966.	12.6	911
5	The influence on climate forcing of mineral aerosols from disturbed soils. Nature, 1996, 380, 419-422.	27.8	909
6	Global warming in the twenty-first century: An alternative scenario. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 9875-9880.	7.1	872
7	Global climate changes as forecast by Goddard Institute for Space Studies threeâ€dimensional model. Journal of Geophysical Research, 1988, 93, 9341-9364.	3.3	820
8	Earth's Energy Imbalance: Confirmation and Implications. Science, 2005, 308, 1431-1435.	12.6	728
9	Near-Global Survey of Effective Droplet Radii in Liquid Water Clouds Using ISCCP Data. Journal of Climate, 1994, 7, 465-497.	3.2	488
10	Atmospheric CO ₂ : Principal Control Knob Governing Earthâ€™s Temperature. Science, 2010, 330, 356-359.	12.6	443
11	Potential climate impact of Mount Pinatubo eruption. Geophysical Research Letters, 1992, 19, 215-218.	4.0	374
12	Climate forcings in Goddard Institute for Space Studies SI2000 simulations. Journal of Geophysical Research, 2002, 107, ACL 2-1.	3.3	302
13	Sun and dust versus greenhouse gases: an assessment of their relative roles in global climate change. Nature, 1990, 346, 713-719.	27.8	297
14	Climate Response Times: Dependence on Climate Sensitivity and Ocean Mixing. Science, 1985, 229, 857-859.	12.6	275
15	GISSâ€E2.1: Configurations and Climatology. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002025.	3.8	234
16	Climate forcing by stratospheric aerosols. Geophysical Research Letters, 1992, 19, 1607-1610.	4.0	230
17	Climateâ€chemical interactions and effects of changing atmospheric trace gases. Reviews of Geophysics, 1987, 25, 1441-1482.	23.0	229
18	Climate simulations for 1880â€“2003 with GISS modelE. Climate Dynamics, 2007, 29, 661-696.	3.8	227

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19	Dangerous human-made interference with climate: a GISS modelE study. Atmospheric Chemistry and Physics, 2007, 7, 2287-2312.	4.9	211
20	Long-Term Satellite Record Reveals Likely Recent Aerosol Trend. Science, 2007, 315, 1543-1543.	12.6	206
21	Global atmospheric black carbon inferred from AERONET. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6319-6324.	7.1	204
22	Greenhouse effect of trace gases, 1970â€1980. Geophysical Research Letters, 1981, 8, 1035-1038.	4.0	202
23	Young people's burden: requirement of negative CO₂ emissions. Earth System Dynamics, 2017, 8, 577-616.	7.1	189
24	Forcings and chaos in interannual to decadal climate change. Journal of Geophysical Research, 1997, 102, 25679-25720.	3.3	164
25	Possible role of dust-induced regional warming in abrupt climate change during the last glacial period. Nature, 1996, 384, 447-449.	27.8	163
26	The GISS Global Climate-Middle Atmosphere Model. Part I: Model Structure and Climatology. Journals of the Atmospheric Sciences, 1988, 45, 329-370.	1.7	159
27	On the variability of the net longwave radiation at the ocean surface. Reviews of Geophysics, 1984, 22, 177-193.	23.0	126
28	Past, present, and future of global aerosol climatologies derived from satellite observations: A perspective. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 106, 325-347.	2.3	117
29	Global, Seasonal Cloud Variations from Satellite Radiance Measurements. Part II. Cloud Properties and Radiative Effects. Journal of Climate, 1990, 3, 1204-1253.	3.2	115
30	Global, Seasonal Cloud Variations from Satellite Radiance Measurements. Part I: Sensitivity of Analysis. Journal of Climate, 1989, 2, 419-458.	3.2	108
31	Global Two-Channel AVHRR Retrievals of Aerosol Properties over the Ocean for the Period ofNOAA-9Observations and Preliminary Retrievals UsingNOAA-7andNOAA-11Data. Journals of the Atmospheric Sciences, 2002, 59, 262-278.	1.7	85
32	Absorption within Inhomogeneous Clouds and Its Parameterization in General Circulation Models. Journals of the Atmospheric Sciences, 2000, 57, 700-714.	1.7	82
33	Toward unified satellite climatology of aerosol properties.. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 540-552.	2.3	73
34	Simulations of the effect of a warmer climate on atmospheric humidity. Nature, 1991, 351, 382-385.	27.8	71
35	Scattering and radiative properties of semi-external versus external mixtures of different aerosol types. Journal of Quantitative Spectroscopy and Radiative Transfer, 2004, 88, 139-147.	2.3	67
36	Remote Sensing of Atmospheric Aerosols and Trace Gases by Means of Multifilter Rotating Shadowband Radiometer. Part I: Retrieval Algorithm. Journals of the Atmospheric Sciences, 2002, 59, 524-543.	1.7	64

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37	Using singleâ€scattering albedo spectral curvature to characterize East Asian aerosol mixtures. Journal of Geophysical Research D: Atmospheres, 2015, 120, 2037-2052.	3.3	50
38	CMIP6 Historical Simulations (1850â€“2014) With GISSâ€E2.1. Journal of Advances in Modeling Earth Systems, 2021, 13, e2019MS002034.	3.8	49
39	Application of spectral analysis techniques in the intercomparison of aerosol data: 1. An EOF approach to analyze the spatialâ€temporal variability of aerosol optical depth using multiple remote sensing data sets. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8640-8648.	3.3	48
40	The abundance and distribution of water vapor in the Jovian troposphere as inferred from Voyager IRIS observations. Astrophysical Journal, 1992, 388, 648.	4.5	40
41	The effect of black carbon on scattering and absorption of solar radiation by cloud droplets. Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 74, 195-204.	2.3	33
42	Remote Sensing of Atmospheric Aerosols and Trace Gases by Means of Multifilter Rotating Shadowband Radiometer. Part II: Climatological Applications. Journals of the Atmospheric Sciences, 2002, 59, 544-566.	1.7	32
43	GISS Model E2.2: A Climate Model Optimized for the Middle Atmosphereâ€”Model Structure, Climatology, Variability, and Climate Sensitivity. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032204.	3.3	32
44	The role of the stratosphere in climate change. Surveys in Geophysics, 1993, 14, 133-165.	4.6	31
45	Application of spectral analysis techniques in the intercomparison of aerosol data. Part II: Using maximum covariance analysis to effectively compare spatiotemporal variability of satellite and AERONET measured aerosol optical depth. Journal of Geophysical Research D: Atmospheres, 2014, 119, 153-166.	3.3	29
46	A new three-parameter cloud/aerosol particle size distribution based on the generalized inverse Gaussian density function. Applied Mathematics and Computation, 2000, 116, 153-165.	2.2	28
47	GLOBAL WARMING:Global Climate Data and Models: A Reconciliation. , 1998, 281, 930-932.		25
48	GCM Simulations of Volcanic Aerosol Forcing. Part I: Climate Changes Induced by Steady-State Perturbations. Journal of Climate, 1993, 6, 1719-1742.	3.2	24
49	Aerosol retrievals from channel-1 and -2 AVHRR radiances: Long-term trends updated and revisited. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 1974-1980.	2.3	24
50	Fast atmosphereâ€ocean model runs with large changes in CO₂. Geophysical Research Letters, 2013, 40, 5787-5792.	4.0	24
51	Application of spectral analysis techniques in the intercomparison of aerosol data: Part III. Using combined PCA to compare spatiotemporal variability of MODIS, MISR, and OMI aerosol optical depth. Journal of Geophysical Research D: Atmospheres, 2014, 119, 4017-4042.	3.3	22
52	Future Climate Change Under SSP Emission Scenarios With GISSâ€E2.1. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	22
53	Ortho-para-hydrogen equilibration on Jupiter. Astrophysical Journal, 1992, 393, 357.	4.5	21
54	Scaling Properties of Aerosol Optical Thickness Retrieved from Ground-Based Measurements. Journals of the Atmospheric Sciences, 2004, 61, 1024-1039.	1.7	20

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55	Potential effects of cloud optical thickness on climate warming. Nature, 1993, 366, 670-672.	27.8	19
56	Reducing multisensor satellite monthly mean aerosol optical depth uncertainty: 1. Objective assessment of current AERONET locations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 13609-13627.	3.3	19
57	Manifestations of morphology-dependent resonances in Mie scattering matrices. Applied Mathematics and Computation, 2000, 116, 167-179.	2.2	14
58	Wonderland climate model. Journal of Geophysical Research, 1997, 102, 6823-6830.	3.3	13
59	Synergy of Satelliteâ€and Groundâ€Based Aerosol Optical Depth Measurements Using an Ensemble Kalman Filter Approach. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031884.	3.3	11
60	Spectral Signature of the Biosphere: NISTAR Finds It in Our Solar System From the Lagrangian Lâ€1 Point. Geophysical Research Letters, 2019, 46, 10679-10686.	4.0	10
61	Keeping the Sun in proportion. Nature, 1992, 360, 297-297.	27.8	9
62	Revisiting AVHRR tropospheric aerosol trends using principal component analysis. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3309-3320.	3.3	9
63	Reducing multisensor monthly mean aerosol optical depth uncertainty: 2. Optimal locations for potential ground observation deployments. Journal of Geophysical Research D: Atmospheres, 2017, 122, 3920-3928.	3.3	5
64	An Intercomparison of the Spatiotemporal Variability of Satellite- and Ground-Based Cloud Datasets Using Spectral Analysis Techniques. Journal of Climate, 2015, 28, 5716-5736.	3.2	4
65	Retrieval of volcanic and man-made stratospheric aerosols from orbital polarimetric measurements. Optics Express, 2019, 27, A158.	3.4	3
66	Sun and water in the greenhouse. Nature, 1991, 349, 467-467.	27.8	2
67	Method of Correction for Instrumental Broadening to Determine the Solar Ultraviolet Limb-Darkening.. Astronomical Journal, 1965, 70, 142.	4.7	1
68	Unique NISTAR-Based Climate GCM Diagnostics of the Earthâ€™s Planetary Albedo and Spectral Absorption Through Longitudinal Data Slicing. Frontiers in Remote Sensing, 2022, 3, .	3.5	1
69	Unique Observational Constraints on the Seasonal and Longitudinal Variability of the Earthâ€™s Planetary Albedo and Cloud Distribution Inferred From EPIC Measurements. Frontiers in Remote Sensing, 2022, 2, .	3.5	1
70	Reply to Rasool. Climatic Change, 1983, 5, 203-204.	3.6	0
71	Sea-level effects due to long-term climate change as estimated from global climate models. Geophysical Journal International, 1986, 87, 117-118.	2.4	0
72	An Efficient and Accurate Algorithm for Computing Grid-Averaged Solar Fluxes for Horizontally Inhomogeneous Clouds. Journals of the Atmospheric Sciences, 2021, 78, 385-398.	1.7	0

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73	On the inclusion of the hydrogen dimer in the analysis of Voyager IRIS spectra. Astrophysical Journal, 1992, 394, L29.	4.5	0