

M G Flanner

List of Publications by Year in descending order

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Version: 2024-02-01

88
papers

18,530
citations

36303

51
h-index

49909

87
g-index

121
all docs

121
docs citations

121
times ranked

16337
citing authors

#	ARTICLE	IF	CITATIONS
1	Bounding the role of black carbon in the climate system: A scientific assessment. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 5380-5552.	3.3	4,319
2	Present-day climate forcing and response from black carbon in snow. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	1,059
3	Toward a minimal representation of aerosols in climate models: description and evaluation in the Community Atmosphere Model CAM5. <i>Geoscientific Model Development</i> , 2012, 5, 709-739.	3.6	807
4	The Impact of Boreal Forest Fire on Climate Warming. <i>Science</i> , 2006, 314, 1130-1132.	12.6	765
5	The Community Land Model Version 5: Description of New Features, Benchmarking, and Impact of Forcing Uncertainty. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 4245-4287.	3.8	692
6	Parameterization improvements and functional and structural advances in Version 4 of the Community Land Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2011, 3, .	3.8	666
7	Clouds and Aerosols. , 2014, , 571-658.		629
8	20th-Century Industrial Black Carbon Emissions Altered Arctic Climate Forcing. <i>Science</i> , 2007, 317, 1381-1384.	12.6	562
9	Springtime warming and reduced snow cover from carbonaceous particles. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 2481-2497.	4.9	492
10	The size distribution of desert dust aerosols and its impact on the Earth system. <i>Aeolian Research</i> , 2014, 15, 53-71.	2.7	468
11	The DOE E3SM Coupled Model Version 1: Overview and Evaluation at Standard Resolution. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2089-2129.	3.8	404
12	Radiative forcing in the ACCMIP historical and future climate simulations. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 2939-2974.	4.9	395
13	Parameterization improvements and functional and structural advances in Version 4 of the Community Land Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2011, 3, n/a-n/a.	3.8	367
14	Observed 20th century desert dust variability: impact on climate and biogeochemistry. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 10875-10893.	4.9	355
15	Short-lived pollutants in the Arctic: their climate impact and possible mitigation strategies. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 1723-1735.	4.9	346
16	Linking snowpack microphysics and albedo evolution. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	331
17	Radiative forcing and albedo feedback from the Northern Hemisphere cryosphere between 1979 and 2008. <i>Nature Geoscience</i> , 2011, 4, 151-155.	12.9	330
18	Sensitivity studies on the impacts of Tibetan Plateau snowpack pollution on the Asian hydrological cycle and monsoon climate. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1929-1948.	4.9	285

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19	The CCSM4 Land Simulation, 1850–2005: Assessment of Surface Climate and New Capabilities. <i>Journal of Climate</i> , 2012, 25, 2240-2260.	3.2	276
20	Light-absorbing particles in snow and ice: Measurement and modeling of climatic and hydrological impact. <i>Advances in Atmospheric Sciences</i> , 2015, 32, 64-91.	4.3	223
21	Radiative forcing by light-absorbing particles in snow. <i>Nature Climate Change</i> , 2018, 8, 964-971.	18.8	216
22	Aerosol Impacts on Climate and Biogeochemistry. <i>Annual Review of Environment and Resources</i> , 2011, 36, 45-74.	13.4	207
23	Integrating anthropogenic heat flux with global climate models. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	203
24	Radiative forcing of organic aerosol in the atmosphere and on snow: Effects of SOA and brown carbon. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 7453-7476.	3.3	197
25	Recent increase in black carbon concentrations from a Mt. Everest ice core spanning 1860-2000 AD. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	186
26	Response of Arctic temperature to changes in emissions of short-lived climate forcers. <i>Nature Climate Change</i> , 2016, 6, 286-289.	18.8	170
27	An Overview of the Atmospheric Component of the Energy Exascale Earth System Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2377-2411.	3.8	168
28	Contact spectroscopy for determination of stratigraphy of snow optical grain size. <i>Journal of Glaciology</i> , 2007, 53, 121-127.	2.2	166
29	LS3MIP (v1.0) contribution to CMIP6: the Land Surface, Snow and Soil moisture Model Intercomparison Project – aims, setup and expected outcome. <i>Geoscientific Model Development</i> , 2016, 9, 2809-2832.	3.6	152
30	Current model capabilities for simulating black carbon and sulfate concentrations in the Arctic atmosphere: a multi-model evaluation using a comprehensive measurement data set. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 9413-9433.	4.9	145
31	End of the Little Ice Age in the Alps forced by industrial black carbon. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 15216-15221.	7.1	142
32	Arctic climate sensitivity to local black carbon. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 1840-1851.	3.3	142
33	Quantifying immediate radiative forcing by black carbon and organic matter with the Specific Forcing Pulse. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1505-1525.	4.9	131
34	Snowpack radiative heating: Influence on Tibetan Plateau climate. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	128
35	Evaluation of preindustrial to present-day black carbon and its albedo forcing from Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP). <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 2607-2634.	4.9	125
36	Enhanced solar energy absorption by internally-mixed black carbon in snow grains. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 4699-4721.	4.9	124

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37	ESM-SnowMIP: assessing snow models and quantifying snow-related climate feedbacks. <i>Geoscientific Model Development</i> , 2018, 11, 5027-5049.	3.6	119
38	Simulating black carbon and dust and their radiative forcing in seasonal snow: a case study over North China with field campaign measurements. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 11475-11491.	4.9	115
39	A new albedo parameterization for use in climate models over the Antarctic ice sheet. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	107
40	Do biomass burning aerosols intensify drought in equatorial Asia during El Niño? <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 3515-3528.	4.9	87
41	Multi-model simulations of aerosol and ozone radiative forcing due to anthropogenic emission changes during the period 1990–2015. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 2709-2720.	4.9	87
42	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
43	Anthropogenic combustion iron as a complex climate forcer. <i>Nature Communications</i> , 2018, 9, 1593.	12.8	86
44	Black carbon-induced snow albedo reduction over the Tibetan Plateau: uncertainties from snow grain shape and aerosol–snow mixing state based on an updated SNICAR model. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 11507-11527.	4.9	85
45	Retention and radiative forcing of black carbon in eastern Sierra Nevada snow. <i>Cryosphere</i> , 2013, 7, 365-374.	3.9	81
46	Glacier algae accelerate melt rates on the south-western Greenland Ice Sheet. <i>Cryosphere</i> , 2020, 14, 309-330.	3.9	78
47	Aerosols in the E3SM Version 1: New Developments and Their Impacts on Radiative Forcing. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001851.	3.8	68
48	A sensitivity study on modeling black carbon in snow and its radiative forcing over the Arctic and Northern China. <i>Environmental Research Letters</i> , 2014, 9, 064001.	5.2	67
49	Neither dust nor black carbon causing apparent albedo decline in Greenland's dry snow zone: Implications for MODIS C5 surface reflectance. <i>Geophysical Research Letters</i> , 2015, 42, 9319-9327.	4.0	64
50	Modulation of snow reflectance and snowmelt from Central Asian glaciers by anthropogenic black carbon. <i>Scientific Reports</i> , 2017, 7, 40501.	3.3	63
51	Quantifying bioalbedo: a new physically based model and discussion of empirical methods for characterising biological influence on ice and snow albedo. <i>Cryosphere</i> , 2017, 11, 2611-2632.	3.9	61
52	Processes controlling Southern Ocean shortwave climate feedbacks in CESM. <i>Geophysical Research Letters</i> , 2014, 41, 616-622.	4.0	58
53	Arctic air pollution: Challenges and opportunities for the next decade. <i>Elementa</i> , 0, 4, 000104.	3.2	53
54	Improving snow albedo processes in WRF/SSiB regional climate model to assess impact of dust and black carbon in snow on surface energy balance and hydrology over western U.S.. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 3228-3248.	3.3	45

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55	Effect of smoke on subcanopy shaded light, canopy temperature, and carbon dioxide uptake in an Amazon rainforest. <i>Global Biogeochemical Cycles</i> , 2010, 24, .	4.9	43
56	Quantifying black carbon deposition over the Greenland ice sheet from forest fires in Canada. <i>Geophysical Research Letters</i> , 2017, 44, 7965-7974.	4.0	41
57	Striking stationarity of large-scale climate model bias patterns under strong climate change. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 9462-9466.	7.1	41
58	Seasonality of global and Arctic black carbon processes in the Arctic Monitoring and Assessment Programme models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 7100-7116.	3.3	40
59	Sensitivity of modeled far-IR radiation budgets in polar continents to treatments of snow surface and ice cloud radiative properties. <i>Geophysical Research Letters</i> , 2014, 41, 6530-6537.	4.0	37
60	SNICAR-ADv3: a community tool for modeling spectral snow albedo. <i>Geoscientific Model Development</i> , 2021, 14, 7673-7704.	3.6	36
61	Intercomparison and improvement of two-stream shortwave radiative transfer schemes in Earth system models for a unified treatment of cryospheric surfaces. <i>Cryosphere</i> , 2019, 13, 2325-2343.	3.9	25
62	Aerosol radiative forcing from the 2010 Eyjafjallajökull volcanic eruptions. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 9481-9491.	3.3	24
63	Impact of Multiple Scattering on Longwave Radiative Transfer Involving Clouds. <i>Journal of Advances in Modeling Earth Systems</i> , 2017, 9, 3082-3098.	3.8	24
64	Improved Representation of Surface Spectral Emissivity in a Global Climate Model and Its Impact on Simulated Climate. <i>Journal of Climate</i> , 2018, 31, 3711-3727.	3.2	24
65	Snow Albedo and Radiative Transfer: Theory, Modeling, and Parameterization. <i>Springer Series in Light Scattering</i> , 2020, , 67-133.	0.6	24
66	Changing black carbon transport to the Arctic from present day to the end of 21st century. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 4734-4750.	3.3	23
67	Transport of black carbon to polar regions: Sensitivity and forcing by black carbon. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	19
68	Using ICESat-2 and Operation IceBridge altimetry for supraglacial lake depth retrievals. <i>Cryosphere</i> , 2020, 14, 4253-4263.	3.9	18
69	Multidecadal Variability in Surface Albedo Feedback Across CMIP5 Models. <i>Geophysical Research Letters</i> , 2018, 45, 1972-1980.	4.0	15
70	Model evaluation of short-lived climate forcings 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
71	Surface radiative impacts of ash deposits from the 2009 eruption of Redoubt volcano. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 11,387.	3.3	14
72	Running climate model on a commercial cloud computing environment: A case study using Community Earth System Model (CESM) on Amazon AWS. <i>Computers and Geosciences</i> , 2017, 98, 21-25.	4.2	14

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73	Diagnosing shortwave cryosphere radiative effect and its 21st century evolution in CESM. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 1356-1362.	3.3	13
74	An improved carbon dioxide snow spectral albedo model: Application to Martian conditions. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 2037-2054.	3.6	13
75	The global land shortwave cryosphere radiative effect during the MODIS era. <i>Cryosphere</i> , 2015, 9, 2057-2070.	3.9	12
76	Future Arctic temperature change resulting from a range of aerosol emissions scenarios. <i>Earth's Future</i> , 2016, 4, 270-281.	6.3	12
77	Climate Response to Negative Greenhouse Gas Radiative Forcing in Polar Winter. <i>Geophysical Research Letters</i> , 2018, 45, 1997-2004.	4.0	12
78	Impacts of Greenland Block Location on Clouds and Surface Energy Fluxes Over the Greenland Ice Sheet. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD033172.	3.3	11
79	Modeling biases in laser-altimetry measurements caused by scattering of green light in snow. <i>Remote Sensing of Environment</i> , 2018, 215, 398-410.	11.0	10
80	Modeled Response of Greenland Snowmelt to the Presence of Biomass Burning-Based Absorbing Aerosols in the Atmosphere and Snow. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 6122-6141.	3.3	10
81	Biases in modeled surface snow BC mixing ratios in prescribed-aerosol climate model runs. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 11697-11709.	4.9	7
82	SNICAR-ADv4: a physically based radiative transfer model to represent the spectral albedo of glacier ice. <i>Cryosphere</i> , 2022, 16, 1197-1220.	3.9	7
83	Investigating the impact of aerosol deposition on snowmelt over the Greenland Ice Sheet using a large-ensemble kernel. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 16005-16018.	4.9	6
84	Monitoring of snow surface near-infrared bidirectional reflectance factors with added light-absorbing particles. <i>Cryosphere</i> , 2019, 13, 1753-1766.	3.9	6
85	Improvement of Mars Surface Snow Albedo Modeling in LMD Mars GCM With SNICAR. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 780-791.	3.6	5
86	Constraining a Historical Black Carbon Emission Inventory of the United States for 1960-2000. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 4004-4025.	3.3	5
87	Brown Carbon Fuel and Emission Source Attributions to Global Snow Darkening Effect. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	3.8	5
88	The Effects of Surface Longwave Spectral Emissivity on Atmospheric Circulation and Convection over the Sahara and Sahel. <i>Journal of Climate</i> , 2019, 32, 4873-4890.	3.2	3