M G Flanner

List of Publications by Year
in descending order

88 papers	18,530 citations	36271 51 h-index	49868 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. Journal of Geophysical Research D: Atmospheres, 2013, 118, 5380-5552.	1.2	4,319
2	Present-day climate forcing and response from black carbon in snow. Journal of Geophysical Research, 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. Geoscientific Model Development, 2012, 5, 709-739.	1.3	807
4	The Impact of Boreal Forest Fire on Climate Warming. Science, 2006, 314, 1130-1132.	6.0	765
5	The Community Land Model Version 5: Description of New Features, Benchmarking, and Impact of Forcing Uncertainty. Journal of Advances in Modeling Earth Systems, 2019, 11, 4245-4287.	1.3	692
6	Parameterization improvements and functional and structural advances in Version 4 of the Community Land Model. Journal of Advances in Modeling Earth Systems, 2011, 3, .	1.3	666
7	Clouds and Aerosols. , 2014, , 571-658.		629
8	20th-Century Industrial Black Carbon Emissions Altered Arctic Climate Forcing. Science, 2007, 317, 1381-1384.	6.0	562
9	Springtime warming and reduced snow cover from carbonaceous particles. Atmospheric Chemistry and Physics, 2009, 9, 2481-2497.	1.9	492
10	The size distribution of desert dust aerosols and its impact on the Earth system. Aeolian Research, 2014, 15, 53-71.	1.1	468
11	The DOE E3SM Coupled Model Version 1: Overview and Evaluation at Standard Resolution. Journal of Advances in Modeling Earth Systems, 2019, 11, 2089-2129.	1.3	404
12	Radiative forcing in the ACCMIP historical and future climate simulations. Atmospheric Chemistry and Physics, 2013, 13, 2939-2974.	1.9	395
13	Parameterization improvements and functional and structural advances in Version 4 of the Community Land Model. Journal of Advances in Modeling Earth Systems, 2011, 3, n/a-n/a.	1.3	367
14	Observed 20th century desert dust variability: impact on climate and biogeochemistry. Atmospheric Chemistry and Physics, 2010, 10, 10875-10893.	1.9	355
15	Short-lived pollutants in the Arctic: their climate impact and possible mitigation strategies. Atmospheric Chemistry and Physics, 2008, 8, 1723-1735.	1.9	346
16	Linking snowpack microphysics and albedo evolution. Journal of Geophysical Research, 2006, 111, .	3.3	331
17	Radiative forcing and albedo feedback from the Northern Hemisphere cryosphere between 1979 and 2008. Nature Geoscience, 2011, 4, 151-155.	5.4	330
18	Sensitivity studies on the impacts of Tibetan Plateau snowpack pollution on the Asian hydrological cycle and monsoon climate. Atmospheric Chemistry and Physics, 2011, 11, 1929-1948.	1.9	285

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19	The CCSM4 Land Simulation, 1850â€“2005: Assessment of Surface Climate and New Capabilities. Journal of Climate, 2012, 25, 2240-2260.	1.2	276
20	Light-absorbing particles in snow and ice: Measurement and modeling of climatic and hydrological impact. Advances in Atmospheric Sciences, 2015, 32, 64-91.	1.9	223
21	Radiative forcing by light-absorbing particles in snow. Nature Climate Change, 2018, 8, 964-971.	8.1	216
22	Aerosol Impacts on Climate and Biogeochemistry. Annual Review of Environment and Resources, 2011, 36, 45-74.	5.6	207
23	Integrating anthropogenic heat flux with global climate models. Geophysical Research Letters, 2009, 36, .	1.5	203
24	Radiative forcing of organic aerosol in the atmosphere and on snow: Effects of SOA and brown carbon. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7453-7476.	1.2	197
25	Recent increase in black carbon concentrations from a Mt. Everest ice core spanning 1860-2000 AD. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	186
26	Response of Arctic temperature to changes in emissions of short-lived climate forcers. Nature Climate Change, 2016, 6, 286-289.	8.1	170
27	An Overview of the Atmospheric Component of the Energy Exascale Earth System Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 2377-2411.	1.3	168
28	Contact spectroscopy for determination of stratigraphy of snow optical grain size. Journal of Glaciology, 2007, 53, 121-127.	1.1	166
29	LS3MIP (v1.0) contribution to CMIP6: the Land Surface, Snow and Soil moisture Model Intercomparison Project â€“ aims, setup and expected outcome. Geoscientific Model Development, 2016, 9, 2809-2832.	1.3	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. Atmospheric Chemistry and Physics, 2015, 15, 9413-9433.	1.9	145
31	End of the Little Ice Age in the Alps forced by industrial black carbon. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15216-15221.	3.3	142
32	Arctic climate sensitivity to local black carbon. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1840-1851.	1.2	142
33	Quantifying immediate radiative forcing by black carbon and organic matter with the Specific Forcing Pulse. Atmospheric Chemistry and Physics, 2011, 11, 1505-1525.	1.9	131
34	Snowpack radiative heating: Influence on Tibetan Plateau climate. Geophysical Research Letters, 2005, 32, .	1.5	128
35	Evaluation of preindustrial to present-day black carbon and its albedo forcing from Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP). Atmospheric Chemistry and Physics, 2013, 13, 2607-2634.	1.9	125
36	Enhanced solar energy absorption by internally-mixed black carbon in snow grains. Atmospheric Chemistry and Physics, 2012, 12, 4699-4721.	1.9	124

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37	ESM-SnowMIP: assessing snow models and quantifying snow-related climate feedbacks. Geoscientific Model Development, 2018, 11, 5027-5049.	1.3	119
38	Simulating black carbon and dust and their radiative forcing in seasonal snow: a case study over North China with field campaign measurements. Atmospheric Chemistry and Physics, 2014, 14, 11475-11491.	1.9	115
39	A new albedo parameterization for use in climate models over the Antarctic ice sheet. Journal of Geophysical Research, 2011, 116, .	3.3	107
40	Do biomass burning aerosols intensify drought in equatorial Asia during El NiÃ±o?. Atmospheric Chemistry and Physics, 2010, 10, 3515-3528.	1.9	87
41	Multi-model simulations of aerosol and ozone radiative forcing due to anthropogenic emission changes during the periodÂ1990â€“2015. Atmospheric Chemistry and Physics, 2017, 17, 2709-2720.	1.9	87
42	An AeroCom assessment of black carbon in Arctic snow and sea ice. Atmospheric Chemistry and Physics, 2014, 14, 2399-2417.	1.9	86
43	Anthropogenic combustion iron as a complex climate forcer. Nature Communications, 2018, 9, 1593.	5.8	86
44	Black carbon-induced snow albedo reduction over the Tibetan Plateau: uncertainties from snow grain shape and aerosolâ€“snow mixing state based on an updated SNICAR model. Atmospheric Chemistry and Physics, 2018, 18, 11507-11527.	1.9	85
45	Retention and radiative forcing of black carbon in eastern Sierra Nevada snow. Cryosphere, 2013, 7, 365-374.	1.5	81
46	Glacier algae accelerate melt rates on the south-western Greenland Ice Sheet. Cryosphere, 2020, 14, 309-330.	1.5	78
47	Aerosols in the E3SM Version 1: New Developments and Their Impacts on Radiative Forcing. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001851.	1.3	68
48	A sensitivity study on modeling black carbon in snow and its radiative forcing over the Arctic and Northern China. Environmental Research Letters, 2014, 9, 064001.	2.2	67
49	Neither dust nor black carbon causing apparent albedo decline in Greenland's dry snow zone: Implications for MODIS C5 surface reflectance. Geophysical Research Letters, 2015, 42, 9319-9327.	1.5	64
50	Modulation of snow reflectance and snowmelt from Central Asian glaciers by anthropogenic black carbon. Scientific Reports, 2017, 7, 40501.	1.6	63
51	Quantifying bioalbedo: a new physically based model and discussion of empirical methods for characterising biological influence on ice and snow albedo. Cryosphere, 2017, 11, 2611-2632.	1.5	61
52	Processes controlling Southern Ocean shortwave climate feedbacks in CESM. Geophysical Research Letters, 2014, 41, 616-622.	1.5	58
53	Arctic air pollution: Challenges and opportunities for the next decade. Elementa, 0, 4, 000104.	1.1	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.. Journal of Geophysical Research D: Atmospheres, 2015, 120, 3228-3248.	1.2	45

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55	Effect of smoke on subcanopy shaded light, canopy temperature, and carbon dioxide uptake in an Amazon rainforest. Global Biogeochemical Cycles, 2010, 24, .	1.9	43
56	Quantifying black carbon deposition over the Greenland ice sheet from forest fires in Canada. Geophysical Research Letters, 2017, 44, 7965-7974.	1.5	41
57	Striking stationarity of large-scale climate model bias patterns under strong climate change. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9462-9466.	3.3	41
58	Seasonality of global and Arctic black carbon processes in the Arctic Monitoring and Assessment Programme models. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7100-7116.	1.2	40
59	Sensitivity of modeled far-IR radiation budgets in polar continents to treatments of snow surface and ice cloud radiative properties. Geophysical Research Letters, 2014, 41, 6530-6537.	1.5	37
60	SNICAR-ADv3: a community tool for modeling spectral snow albedo. Geoscientific Model Development, 2021, 14, 7673-7704.	1.3	36
61	Intercomparison and improvement of two-stream shortwave radiative transfer schemes in Earth system models for a unified treatment of cryospheric surfaces. Cryosphere, 2019, 13, 2325-2343.	1.5	25
62	Aerosol radiative forcing from the 2010 EyjafjallajÃ¶kull volcanic eruptions. Journal of Geophysical Research D: Atmospheres, 2014, 119, 9481-9491.	1.2	24
63	Impact of Multiple Scattering on Longwave Radiative Transfer Involving Clouds. Journal of Advances in Modeling Earth Systems, 2017, 9, 3082-3098.	1.3	24
64	Improved Representation of Surface Spectral Emissivity in a Global Climate Model and Its Impact on Simulated Climate. Journal of Climate, 2018, 31, 3711-3727.	1.2	24
65	Snow Albedo and Radiative Transfer: Theory, Modeling, and Parameterization. Springer Series in Light Scattering, 2020, , 67-133.	1.8	24
66	Changing black carbon transport to the Arctic from present day to the end of 21st century. Journal of Geophysical Research D: Atmospheres, 2016, 121, 4734-4750.	1.2	23
67	Transport of black carbon to polar regions: Sensitivity and forcing by black carbon. Geophysical Research Letters, 2012, 39, .	1.5	19
68	Using ICESat-2 and Operation IceBridge altimetry for supraglacial lake depth retrievals. Cryosphere, 2020, 14, 4253-4263.	1.5	18
69	Multidecadal Variability in Surface Albedo Feedback Across CMIP5 Models. Geophysical Research Letters, 2018, 45, 1972-1980.	1.5	15
70	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.	1.9	15
71	Surface radiative impacts of ash deposits from the 2009 eruption of Redoubt volcano. Journal of Geophysical Research D: Atmospheres, 2014, 119, 11,387.	1.2	14
72	Running climate model on a commercial cloud computing environment: A case study using Community Earth System Model (CESM) on Amazon AWS. Computers and Geosciences, 2017, 98, 21-25.	2.0	14

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73	Diagnosing shortwave cryosphere radiative effect and its 21st century evolution in CESM. Journal of Geophysical Research D: Atmospheres, 2014, 119, 1356-1362.	1.2	13
74	An improved carbon dioxide snow spectral albedo model: Application to Martian conditions. Journal of Geophysical Research E: Planets, 2016, 121, 2037-2054.	1.5	13
75	The global land shortwave cryosphere radiative effect during the MODIS era. Cryosphere, 2015, 9, 2057-2070.	1.5	12
76	Future Arctic temperature change resulting from a range of aerosol emissions scenarios. Earth's Future, 2016, 4, 270-281.	2.4	12
77	Climate Response to Negative Greenhouse Gas Radiative Forcing in Polar Winter. Geophysical Research Letters, 2018, 45, 1997-2004.	1.5	12
78	Impacts of Greenland Block Location on Clouds and Surface Energy Fluxes Over the Greenland Ice Sheet. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD033172.	1.2	11
79	Modeling biases in laser-altimetry measurements caused by scattering of green light in snow. Remote Sensing of Environment, 2018, 215, 398-410.	4.6	10
80	Modeled Response of Greenland Snowmelt to the Presence of Biomass Burningâ€Based Absorbing Aerosols in the Atmosphere and Snow. Journal of Geophysical Research D: Atmospheres, 2018, 123, 6122-6141.	1.2	10
81	Biases in modeled surface snow BC mixing ratios in prescribed-aerosol climate model runs. Atmospheric Chemistry and Physics, 2014, 14, 11697-11709.	1.9	7
82	SNICAR-ADv4: a physically based radiative transfer model to represent the spectral albedo of glacier ice. Cryosphere, 2022, 16, 1197-1220.	1.5	7
83	Investigating the impact of aerosol deposition on snowmelt over the Greenland Ice Sheet using a large-ensemble kernel. Atmospheric Chemistry and Physics, 2018, 18, 16005-16018.	1.9	6
84	Monitoring of snow surface near-infrared bidirectional reflectance factors with added light-absorbing particles. Cryosphere, 2019, 13, 1753-1766.	1.5	6
85	Improvement of Mars Surface Snow Albedo Modeling in LMD Mars GCM With SNICAR. Journal of Geophysical Research E: Planets, 2018, 123, 780-791.	1.5	5
86	Constraining a Historical Black Carbon Emission Inventory of the United States for 1960â€“2000. Journal of Geophysical Research D: Atmospheres, 2019, 124, 4004-4025.	1.2	5
87	Brown Carbon Fuel and Emission Source Attributions to Global Snow Darkening Effect. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	5
88	The Effects of Surface Longwave Spectral Emissivity on Atmospheric Circulation and Convection over the Sahara and Sahel. Journal of Climate, 2019, 32, 4873-4890.	1.2	3