

Dirk Notz

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

111
papers

9,052
citations

43
h-index

95
g-index

135
ext. papers

10,622
ext. citations

6.4
avg, IF

6.69
L-index

#	Paper	IF	Citations
111	Arctic sea ice decline: Faster than forecast. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	1225
110	Climate and carbon cycle changes from 1850 to 2100 in MPI-ESM simulations for the Coupled Model Intercomparison Project phase 5. <i>Journal of Advances in Modeling Earth Systems</i> , 2013 , 5, 572-597 ^{7.1}	7.1	979
109	Perspectives on the Arctic's shrinking sea-ice cover. <i>Science</i> , 2007 , 315, 1533-6	33.3	973
108	Characteristics of the ocean simulations in the Max Planck Institute Ocean Model (MPIOM) the ocean component of the MPI-Earth system model. <i>Journal of Advances in Modeling Earth Systems</i> , 2013 , 5, 422-446	7.1	438
107	Arctic Sea Ice Extent Plummets in 2007. <i>Eos</i> , 2008 , 89, 13	1.5	356
106	Changing state of Arctic sea ice across all seasons. <i>Environmental Research Letters</i> , 2018 , 13, 103001	6.2	298
105	Tuning the climate of a global model. <i>Journal of Advances in Modeling Earth Systems</i> , 2012 , 4, n/a-n/a	7.1	279
104	Observed Arctic sea-ice loss directly follows anthropogenic CO2 emission. <i>Science</i> , 2016 , 354, 747-750	33.3	259
103	Developments in the MPI-M Earth System Model version 1.2 (MPI-ESM1.2) and Its Response to Increasing CO. <i>Journal of Advances in Modeling Earth Systems</i> , 2019 , 11, 998-1038	7.1	258
102	Arctic sea ice trends, variability and implications for seasonal ice forecasting. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2015 , 373,	3	214
101	The Max Planck Institute Grand Ensemble: Enabling the Exploration of Climate System Variability. <i>Journal of Advances in Modeling Earth Systems</i> , 2019 , 11, 2050-2069	7.1	172
100	Recovery mechanisms of Arctic summer sea ice. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	147
99	Whither Arctic sea ice? A clear signal of decline regionally, seasonally and extending beyond the satellite record. <i>Annals of Glaciology</i> , 2007 , 46, 428-434	2.5	146
98	Desalination processes of sea ice revisited. <i>Journal of Geophysical Research</i> , 2009 , 114,		136
97	Predicting September sea ice: Ensemble skill of the SEARCH Sea Ice Outlook 2008-2013. <i>Geophysical Research Letters</i> , 2014 , 41, 2411-2418	4.9	132
96	Arctic Sea Ice in CMIP6. <i>Geophysical Research Letters</i> , 2020 , 47, e2019GL086749	4.9	126
95	The sea ice mass budget of the Arctic and its future change as simulated by coupled climate models. <i>Climate Dynamics</i> , 2010 , 34, 185-200	4.2	120

94	Recent changes in tropospheric water vapor over the Arctic as assessed from radiosondes and atmospheric reanalyses. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		118
93	Observations reveal external driver for Arctic sea-ice retreat. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	118
92	A Higher-resolution Version of the Max Planck Institute Earth System Model (MPI-ESM1.2-HR). <i>Journal of Advances in Modeling Earth Systems</i> , 2018 , 10, 1383-1413	7.1	117
91	Version 2 of the EUMETSAT OSI SAF and ESA CCI sea-ice concentration climate data records. <i>Cryosphere</i> , 2019 , 13, 49-78	5.5	116
90	Advances in understanding and parameterization of small-scale physical processes in the marine Arctic climate system: a review. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 9403-9450	6.8	113
89	The future of ice sheets and sea ice: between reversible retreat and unstoppable loss. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 20590-5	11.5	111
88	Late-Twentieth-Century Simulation of Arctic Sea Ice and Ocean Properties in the CCSM4. <i>Journal of Climate</i> , 2012 , 25, 1431-1452	4.4	90
87	Arctic sea-ice evolution as modeled by Max Planck Institute for Meteorology's Earth system model. <i>Journal of Advances in Modeling Earth Systems</i> , 2013 , 5, 173-194	7.1	89
86	Impact of underwater-ice evolution on Arctic summer sea ice. <i>Journal of Geophysical Research</i> , 2003 , 108,		81
85	The multiphase physics of sea ice: a review for model developers. <i>Cryosphere</i> , 2011 , 5, 989-1009	5.5	80
84	Arctic sea-ice variability is primarily driven by atmospheric temperature fluctuations. <i>Nature Geoscience</i> , 2019 , 12, 430-434	18.3	78
83	In situ measurements of the evolution of young sea ice. <i>Journal of Geophysical Research</i> , 2008 , 113,		75
82	Insights on past and future sea-ice evolution from combining observations and models. <i>Global and Planetary Change</i> , 2015 , 135, 119-132	4.2	69
81	How well must climate models agree with observations?. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2015 , 373,	3	64
80	Forecast skill of multi-year seasonal means in the decadal prediction system of the Max Planck Institute for Meteorology. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	60
79	Changing seasonal sea ice predictor relationships in a changing Arctic climate. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	57
78	A non-destructive method for measuring the salinity and solid fraction of growing sea ice in situ. <i>Journal of Glaciology</i> , 2005 , 51, 159-166	3.4	56
77	Potential climatic transitions with profound impact on Europe. <i>Climatic Change</i> , 2012 , 110, 845-878	4.5	55

76	Insights into brine dynamics and sea ice desalination from a 1-D model study of gravity drainage. <i>Journal of Geophysical Research: Oceans</i> , 2013 , 118, 3370-3386	3-3	54
75	The CMIP6 Sea-Ice Model Intercomparison Project (SIMIP): understanding sea ice through climate-model simulations. <i>Geoscientific Model Development</i> , 2016 , 9, 3427-3446	6-3	54
74	Antarctic Sea Ice Area in CMIP6. <i>Geophysical Research Letters</i> , 2020 , 47, e2019GL086729	4-9	54
73	Drivers of variability in Arctic sea-ice drift speed. <i>Journal of Geophysical Research: Oceans</i> , 2014 , 119, 5755-5775	3-3	44
72	Anthropogenic influence on recent circulation-driven Antarctic sea ice changes. <i>Geophysical Research Letters</i> , 2014 , 41, 8429-8437	4-9	44
71	Summer atmospheric circulation anomalies over the Arctic Ocean and their influences on September sea ice extent: A cautionary tale. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 11,463	4-4	44
70	Sea-ice extent and its trend provide limited metrics of model performance. <i>Cryosphere</i> , 2014 , 8, 229-243	5-5	43
69	Assimilation of sea-ice concentration in a global climate model (physical and statistical aspects). <i>Ocean Science</i> , 2013 , 9, 19-36	4	43
68	The prediction of surface temperature in the new seasonal prediction system based on the MPI-ESM coupled climate model. <i>Climate Dynamics</i> , 2015 , 44, 2723-2735	4-2	42
67	Arctic Sea Ice in a 1.5°C Warmer World. <i>Geophysical Research Letters</i> , 2018 , 45, 1963-1971	4-9	42
66	The Transient versus the Equilibrium Response of Sea Ice to Global Warming. <i>Journal of Climate</i> , 2013 , 26, 5624-5636	4-4	42
65	The Trajectory Towards a Seasonally Ice-Free Arctic Ocean. <i>Current Climate Change Reports</i> , 2018 , 4, 407-416	4-16	41
64	Predictability of large interannual Arctic sea-ice anomalies. <i>Climate Dynamics</i> , 2013 , 41, 2511-2526	4-2	39
63	On the Potential for Abrupt Arctic Winter Sea Ice Loss. <i>Journal of Climate</i> , 2016 , 29, 2703-2719	4-4	35
62	Satellite passive microwave sea-ice concentration data set intercomparison: closed ice and ship-based observations. <i>Cryosphere</i> , 2019 , 13, 3261-3307	5-5	35
61	Consistently Estimating Internal Climate Variability from Climate Model Simulations. <i>Journal of Climate</i> , 2017 , 30, 9555-9573	4-4	33
60	Seasonal climate forecasts significantly affected by observational uncertainty of Arctic sea ice concentration. <i>Geophysical Research Letters</i> , 2016 , 43, 852-859	4-9	31
59	Challenges in simulating sea ice in Earth System Models. <i>Wiley Interdisciplinary Reviews: Climate Change</i> , 2012 , 3, 509-526	8-4	30

58	400 predictions: the SEARCH Sea Ice Outlook 2008-2015. <i>Polar Geography</i> , 2016 , 39, 274-287	2.2	29
57	Controlling high-latitude Southern Ocean convection in climate models. <i>Ocean Modelling</i> , 2015 , 86, 58-75		28
56	Sea-ice-free Arctic during the Last Interglacial supports fast future loss. <i>Nature Climate Change</i> , 2020 , 10, 928-932	21.4	27
55	Temporal dynamics of ikaite in experimental sea ice. <i>Cryosphere</i> , 2014 , 8, 1469-1478	5.5	22
54	Inter-hemispheric asymmetry in the sea-ice response to volcanic forcing simulated by MPI-ESM (COSMOS-Mill). <i>Earth System Dynamics</i> , 2014 , 5, 223-242	4.8	21
53	A Lagrangian Snow Evolution System for Sea Ice Applications (SnowModel-LG): Part II Analyses. <i>Journal of Geophysical Research: Oceans</i> , 2020 , 125, e2019JC015900	3.3	21
52	Satellite passive microwave sea-ice concentration data set inter-comparison for Arctic summer conditions. <i>Cryosphere</i> , 2020 , 14, 2469-2493	5.5	20
51	Drivers of Arctic Ocean warming in CMIP5 models. <i>Geophysical Research Letters</i> , 2017 , 44, 4263-4271	4.9	18
50	A one-dimensional enthalpy model of sea ice. <i>Annals of Glaciology</i> , 2006 , 44, 123-128	2.5	18
49	Sea-ice information and forecast needs for industry maritime stakeholders. <i>Polar Geography</i> , 2020 , 43, 160-187	2.2	15
48	Retrievals of Arctic Sea-Ice Volume and Its Trend Significantly Affected by Interannual Snow Variability. <i>Geophysical Research Letters</i> , 2018 , 45, 11,751-11,759	4.9	15
47	A 1-D modelling study of Arctic sea-ice salinity. <i>Cryosphere</i> , 2015 , 9, 305-329	5.5	13
46	Overview of the MOSAiC expedition. <i>Elementa</i> , 2022 , 10,	3.6	13
45	Statistical indicators of Arctic sea-ice stability [prospects and limitations]. <i>Cryosphere</i> , 2016 , 10, 1631-1645	5.5	13
44	Greenland monthly precipitation analysis from the Arctic System Reanalysis (ASR): 2000-2012. <i>Polar Science</i> , 2019 , 19, 1-12	2.3	12
43	A multi-model CMIP6-PMIP4 study of Arctic sea ice at 127 ka: sea ice data compilation and model differences. <i>Climate of the Past</i> , 2021 , 17, 37-62	3.9	12
42	New climate models reveal faster and larger increases in Arctic precipitation than previously projected. <i>Nature Communications</i> , 2021 , 12, 6765	17.4	11
41	Impact of Thermally Driven Turbulence on the Bottom Melting of Ice. <i>Journal of Physical Oceanography</i> , 2016 , 46, 1171-1187	2.4	10

40	Biogenic silica recycling in sea ice inferred from Si-isotopes: constraints from Arctic winter first-year sea ice. <i>Biogeochemistry</i> , 2014 , 119, 25-33	3.8	10
39	The Future of Sea Ice Modeling: Where Do We Go from Here?. <i>Bulletin of the American Meteorological Society</i> , 2020 , 101, E1304-E1311	6.1	10
38	Ice Tank Experiments Highlight Changes in Sea Ice Types. <i>Eos</i> , 2009 , 90, 81-82	1.5	9
37	Assessment of the sea-ice carbon pump: Insights from a three-dimensional ocean-sea-ice-biogeochemical model (MPIOM/HAMOCC). <i>Elementa</i> , 2016 , 4,	3.6	9
36	Technical Note: On the use of the mushy-layer Rayleigh number for the interpretation of sea-ice-core data		9
35	Machine learning approaches to retrieve pan-Arctic melt ponds from visible satellite imagery. <i>Remote Sensing of Environment</i> , 2020 , 247, 111919	13.2	8
34	Laboratory study of initial sea-ice growth: properties of grease ice and nilas. <i>Cryosphere</i> , 2012 , 6, 729-743	3.5	8
33	Assimilation of sea-ice concentration in a global climate model [physical and statistical aspects]		8
32	A Multi-Sensor and Modeling Approach for Mapping Light Under Sea Ice During the Ice-Growth Season. <i>Frontiers in Marine Science</i> , 2021 , 7,	4.5	8
31	Modulation of Sea Ice Melt Onset and Retreat in the Laptev Sea by the Timing of Snow Retreat in the West Siberian Plain. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 8691-8707	4.4	7
30	Arctic open-water periods are projected to lengthen dramatically by 2100. <i>Communications Earth & Environment</i> , 2021 , 2,	6.1	7
29	Reconciling estimates of the ratio of heat and salt fluxes at the ice-ocean interface. <i>Journal of Geophysical Research: Oceans</i> , 2016 , 121, 8419-8433	3.3	6
28	Regional September Sea Ice Forecasting with Complex Networks and Gaussian Processes. <i>Weather and Forecasting</i> , 2020 , 35, 793-806	2.1	5
27	The Arctic Ocean Observation Operator for 6.9 GHz (ARC3O) [Part I]: Development and evaluation. <i>Cryosphere</i> , 2020 , 14, 2387-2407	5.5	5
26	Arctic sea ice seasonal-to-decadal variability and long-term change. <i>Past Global Change Magazine</i> , 2017 , 25, 14-19	1	5
25	Sea ice in Earth system models 2016 , 304-325		5
24	The call of the emperor penguin: Legal responses to species threatened by climate change. <i>Global Change Biology</i> , 2021 , 27, 5008-5029	11.4	5
23	Advances in understanding and parameterization of small-scale physical processes in the marine Arctic climate system: a review		4

22	The Arctic Ocean Observation Operator for 6.9 GHz (ARC3O) [Part I]: How to obtain sea ice brightness temperatures at 6.9 GHz from climate model output. <i>Cryosphere</i> , 2020 , 14, 2369-2386	5.5	4
21	Platelet Ice Under Arctic Pack Ice in Winter. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL088898	4.9	4
20	On the Origin of Discrepancies Between Observed and Simulated Memory of Arctic Sea Ice. <i>Geophysical Research Letters</i> , 2021 , 48, e2020GL091784	4.9	4
19	High-frequency and meso-scale winter sea-ice variability in the Southern Ocean in a high-resolution global ocean model. <i>Ocean Dynamics</i> , 2018 , 68, 347-361	2.3	3
18	Sea-ice extent provides a limited metric of model performance		3
17	Sensitivity of Northern Hemisphere climate to ice-ocean interface heat flux parameterizations. <i>Geoscientific Model Development</i> , 2021 , 14, 4891-4908	6.3	3
16	Arctic: Uncertainties in methane link. <i>Nature</i> , 2013 , 500, 529	50.4	2
15	Version 2 of the EUMETSAT OSI SAF and ESA CCI Sea Ice Concentration Climate Data Records		2
14	Satellite Passive Microwave Sea-Ice Concentration Data Set Intercomparison: Closed Ice and Ship-Based Observations		2
13	A 1-D model study of Arctic sea-ice salinity		2
12	A Bayesian Logistic Regression for Probabilistic Forecasts of the Minimum September Arctic Sea Ice Cover. <i>Earth and Space Science</i> , 2020 , 7, e2020EA001176	3.1	2
11	The Roland von Glasow Air-Sea-Ice Chamber (RvG-ASIC): an experimental facility for studying ocean-sea-ice-atmosphere interactions. <i>Atmospheric Measurement Techniques</i> , 2021 , 14, 1833-1849	4	2
10	Sea Ice Model Intercomparison Project (SIMIP): Understanding sea ice through climate-model simulations 2016 ,		2
9	On the thermodynamics of melting sea ice versus melting freshwater ice. <i>Annals of Glaciology</i> , 2015 , 56, 191-199	2.5	1
8	Inter-hemispheric asymmetry in the sea-ice response to volcanic forcing simulated by MPI-ESM (COSMOS-Mill)		1
7	The multiphase physics of sea ice: a review		1
6	Initial sea-ice growth in open water: properties of grease ice and nilas		1
5	A linear mixed effects model for seasonal forecasts of Arctic sea ice retreat. <i>Polar Geography</i> , 1-18	2.2	1

4	Dynamic ice production and dissolution in sea ice: Control by temperature, salinity and ice properties. <i>Cryosphere</i> , 2021 , 15, 3101-3118	5.5	0
3	Estimating instantaneous sea-ice dynamics from space using the bi-static radar measurements of Earth Explorer 10 candidate Harmony. <i>Cryosphere</i> , 2021 , 15, 3101-3118	5.5	0
2	Network connectivity between the winter Arctic Oscillation and summer sea ice in CMIP6 models and observations. <i>Cryosphere</i> , 2022 , 16, 1653-1673	5.5	0
1	Sea Ice in Coupled Climate Models 2019 , 200-207		