Cecilia Bitz

List of Publications by Year
in descending order

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151 papers	16,533 citations	25034 57 h-index	16650 123 g-index
167 all docs	167 docs citations	167 times ranked	13779 citing authors

#	Article	IF	Citations
1	The Community Climate System Model Version 3 (CCSM3). Journal of Climate, 2006, 19, 2122-2143.	3.2	2,075
2	Polar amplification of climate change in coupled models. Climate Dynamics, 2003, 21, 221-232.	3.8	1,002
3	The Formulation and Atmospheric Simulation of the Community Atmosphere Model Version 3 (CAM3). Journal of Climate, 2006, 19, 2144-2161.	3.2	895
4	Influence of high latitude ice cover on the marine Intertropical Convergence Zone. Climate Dynamics, 2005, 25, 477-496.	3.8	687
5	The UVic earth system climate model: Model description, climatology, and applications to past, present and future climates. Atmosphere - Ocean, 2001, 39, 361-428.	1.6	604
6	Future abrupt reductions in the summer Arctic sea ice. Geophysical Research Letters, 2006, 33, .	4.0	544
7	Chinese stalagmite Î´18O controlled by changes in the Indian monsoon during a simulated Heinrich event. Nature Geoscience, 2011, 4, 474-480.	12.9	505
8	Ecological Consequences of Sea-Ice Decline. Science, 2013, 341, 519-524.	12.6	461
9	An energy-conserving thermodynamic model of sea ice. Journal of Geophysical Research, 1999, 104, 15669-15677.	3.3	414
10	Dynamics of Recent Climate Change in the Arctic. Science, 2002, 297, 1497-1502.	12.6	327
11	Time-Varying Climate Sensitivity from Regional Feedbacks. Journal of Climate, 2013, 26, 4518-4534.	3.2	291
12	Simulating the ice-thickness distribution in a coupled climate model. Journal of Geophysical Research, 2001, 106, 2441-2463.	3.3	273
13	Constraining projections of summer Arctic sea ice. Cryosphere, 2012, 6, 1383-1394.	3.9	239
14	Global Climate Impacts of Fixing the Southern Ocean Shortwave Radiation Bias in the Community Earth System Model (CESM). Journal of Climate, 2016, 29, 4617-4636.	3.2	224
15	Persistence and Inherent Predictability of Arctic Sea Ice in a GCM Ensemble and Observations. Journal of Climate, 2011, 24, 231-250.	3.2	218
16	Antarctic sea-ice expansion between 2000 and 2014 driven by tropical Pacific decadal climateÂvariability. Nature Geoscience, 2016, 9, 590-595.	12.9	218
17	Polar amplification dominated by local forcing and feedbacks. Nature Climate Change, 2018, 8, 1076-1081.	18.8	216
18	Climate Sensitivity of the Community Climate System Model, Version 4. Journal of Climate, 2012, 25, 3053-3070.	3.2	190

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19	Impact of ocean model resolution on CCSM climate simulations. Climate Dynamics, 2012, 39, 1303-1328.	3.8	181
20	Antarctic Ocean and Sea Ice Response to Ozone Depletion: A Two-Time-Scale Problem. Journal of Climate, 2015, 28, 1206-1226.	3.2	179
21	Sustained ocean changes contributed to sudden Antarctic sea ice retreat in late 2016. Nature Communications, 2019, 10, 14.	12.8	179
22	Influence of the Sea Ice Thickness Distribution on Polar Climate in CCSM3. Journal of Climate, 2006, 19, 2398-2414.	3.2	168
23	Predicting September sea ice: Ensemble skill of the SEARCH Sea Ice Outlook 2008-2013. Geophysical Research Letters, 2014, 41, 2411-2418.	4.0	154
24	Greenhouse gas mitigation can reduce sea-ice loss and increase polar bear persistence. Nature, 2010, 468, 955-958.	27.8	151
25	Interannual to Decadal Variability in Climate and the Glacier Mass Balance in Washington, Western Canada, and Alaska*. Journal of Climate, 1999, 12, 3181-3196.	3.2	149
26	The Role of Iceâ€“Ocean Interactions in the Variability of the North Atlantic Thermohaline Circulation. Journal of Climate, 2001, 14, 656-675.	3.2	140
27	A Mechanism for the High Rate of Sea Ice Thinning in the Arctic Ocean. Journal of Climate, 2004, 17, 3623-3632.	3.2	140
28	High-Latitude Ocean and Sea Ice Surface Fluxes: Challenges for Climate Research. Bulletin of the American Meteorological Society, 2013, 94, 403-423.	3.3	137
29	The Effect of Host Star Spectral Energy Distribution and Ice-Albedo Feedback on the Climate of Extrasolar Planets. Astrobiology, 2013, 13, 715-739.	3.0	134
30	The Influence of Local Feedbacks and Northward Heat Transport on the Equilibrium Arctic Climate Response to Increased Greenhouse Gas Forcing. Journal of Climate, 2012, 25, 5433-5450.	3.2	133
31	Antarctic Sea Ice Area in CMIP6. Geophysical Research Letters, 2020, 47, e2019GL086729.	4.0	129
32	Soil Thermal and Ecological Impacts of Rain on Snow Events in the Circumpolar Arctic. Journal of Climate, 2009, 22, 2302-2315.	3.2	126
33	Conditions leading to the unprecedented low Antarctic sea ice extent during the 2016 austral spring season. Geophysical Research Letters, 2017, 44, 9008-9019.	4.0	126
34	Can North Atlantic Sea Ice Anomalies Account for Dansgaardâ€“Oeschger Climate Signals?*. Journal of Climate, 2010, 23, 5457-5475.	3.2	121
35	Maintenance of the Sea-Ice Edge. Journal of Climate, 2005, 18, 2903-2921.	3.2	120
36	The spatial extent and dynamics of the Antarctic Cold Reversal. Nature Geoscience, 2016, 9, 51-55.	12.9	118

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37	The Influence of Sea Ice on Ocean Heat Uptake in Response to Increasing CO2. Journal of Climate, 2006, 19, 2437-2450.	3.2	117
38	The ocean's role in polar climate change: asymmetric Arctic and Antarctic responses to greenhouse gas and ozone forcing. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130040.	3.4	114
39	Antarctic climate response to stratospheric ozone depletion in a fine resolution ocean climate model. Geophysical Research Letters, 2012, 39, .	4.0	112
40	THERMOHALINE CIRCULATION: High-Latitude Phenomena and the Difference Between the Pacific and Atlantic. Annual Review of Earth and Planetary Sciences, 1999, 27, 231-285.	11.0	110
41	Global atmospheric teleconnections during Dansgaardâ€“Oeschger events. Nature Geoscience, 2017, 10, 36-40.	12.9	108
42	CCSMâ€“CAM3 Climate Simulation Sensitivity to Changes in Horizontal Resolution. Journal of Climate, 2006, 19, 2267-2289.	3.2	105
43	Influence of initial conditions and climate forcing on predicting Arctic sea ice. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	105
44	Late-Twentieth-Century Simulation of Arctic Sea Ice and Ocean Properties in the CCSM4. Journal of Climate, 2012, 25, 1431-1452.	3.2	99
45	Fast teleconnections to the tropical Atlantic sector from Atlantic thermohaline adjustment. Geophysical Research Letters, 2008, 35, .	4.0	91
46	Antarctic temperatures over the past two centuries from ice cores. Geophysical Research Letters, 2006, 33, .	4.0	88
47	The Response of the Southern Ocean and Antarctic Sea Ice to Freshwater from Ice Shelves in an Earth System Model. Journal of Climate, 2016, 29, 1655-1672.	3.2	87
48	Projected decline in spring snow depth on Arctic sea ice caused by progressively later autumn open ocean freezeâ€up this century. Geophysical Research Letters, 2012, 39, .	4.0	85
49	Tropical teleconnection impacts on Antarctic climate changes. Nature Reviews Earth & Environment, 2021, 2, 680-698.	29.7	85
50	An Emergent Sea Ice Floe Size Distribution in a Global Coupled Oceanâ€Sea Ice Model. Journal of Geophysical Research: Oceans, 2018, 123, 4322-4337.	2.6	84
51	A Bayesian Network Modeling Approach to Forecasting the 21st Century Worldwide Status of Polar Bears. Geophysical Monograph Series, 0, , 213-268.	0.1	83
52	Two modes of seaâ€ice gravity drainage: A parameterization for largeâ€scale modeling. Journal of Geophysical Research: Oceans, 2013, 118, 2279-2294.	2.6	82
53	Increased variability of the Arctic summer ice extent in a warmer climate. Geophysical Research Letters, 2009, 36, .	4.0	80
54	The reversibility of sea ice loss in a state-of-the-art climate model. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	75

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55	SPECTRUM-DRIVEN PLANETARY DEGLACIATION DUE TO INCREASES IN STELLAR LUMINOSITY. Astrophysical Journal Letters, 2014, 785, L9.	8.3	72
56	Low-Frequency Variability in the Arctic Atmosphere, Sea Ice, and Upper-Ocean Climate System. Journal of Climate, 1996, 9, 394-408.	3.2	71
57	Sea-ice-free Arctic during the Last Interglacial supports fast future loss. Nature Climate Change, 2020, 10, 928-932.	18.8	71
58	Atmospheric Circulation and Its Effect on Arctic Sea Ice in CCSM3 Simulations at Medium and High Resolution*. Journal of Climate, 2006, 19, 2415-2436.	3.2	69
59	Sea Ice Enhancements to Polar WRF*. Monthly Weather Review, 2015, 143, 2363-2385.	1.4	69
60	Fasting season length sets temporal limits for global polar bear persistence. Nature Climate Change, 2020, 10, 732-738.	18.8	68
61	Remarkable separability of circulation response to Arctic sea ice loss and greenhouse gas forcing. Geophysical Research Letters, 2017, 44, 7955-7964.	4.0	63
62	Interhemispheric Effects of Interannual and Decadal ENSO-Like Climate Variations on the Americas. , 2001, , 1-16.		59
63	Iceâ€“ocean boundary conditions for coupled models. Ocean Modelling, 2004, 7, 59-74.	2.4	59
64	Summer landfast sea ice desalination at Point Barrow, Alaska: Modeling and observations. Journal of Geophysical Research, 2007, 112, .	3.3	56
65	The Effect of Orbital Configuration on the Possible Climates and Habitability of Kepler-62f. Astrobiology, 2016, 16, 443-464.	3.0	56
66	Pollen calendars and maps of allergenic pollen in North America. Aerobiologia, 2019, 35, 613-633.	1.7	55
67	Contributions to Polar Amplification in CMIP5 and CMIP6 Models. Frontiers in Earth Science, 2021, 9, .	1.8	55
68	Sea Ice Response to Wind Forcing from AMIP Models. Journal of Climate, 2002, 15, 522-536.	3.2	54
69	Model forecast skill and sensitivity to initial conditions in the seasonal Sea Ice Outlook. Geophysical Research Letters, 2015, 42, 8042-8048.	4.0	54
70	Ice Caps and Ice Belts: The Effects of Obliquity on Iceâ˜Albedo Feedback. Astrophysical Journal, 2017, 846, 28.	4.5	53
71	Characteristics of Arctic Sea-Ice Thickness Variability in GCMs. Journal of Climate, 2014, 27, 8244-8258.	3.2	51
72	Tropical Decadal Variability and the Rate of Arctic Sea Ice Decrease. Geophysical Research Letters, 2018, 45, 11,326.	4.0	51

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73	100 Years of Earth System Model Development. Meteorological Monographs, 2019, 59, 12.1-12.66.	5.0	48
74	Rain driven by receding ice sheets as a cause of past climate change. Paleoceanography, 2009, 24, .	3.0	47
75	Southern Ocean Deep Circulation and Heat Uptake in a High-Resolution Climate Model. Journal of Climate, 2016, 29, 2597-2619.	3.2	47
76	Rates of thermohaline recovery from freshwater pulses in modern, Last Glacial Maximum, and greenhouse warming climates. Geophysical Research Letters, 2007, 34, .	4.0	45
77	Advances in Modeling Interactions Between Sea Ice and Ocean Surface Waves. Journal of Advances in Modeling Earth Systems, 2019, 11, 4167-4181.	3.8	45
78	The Effect of the Sea Ice Freshwater Flux on Southern Ocean Temperatures in CCSM3: Deep-Ocean Warming and Delayed Surface Warming. Journal of Climate, 2011, 24, 2224-2237.	3.2	43
79	Multi-model seasonal forecast of Arctic sea-ice: forecast uncertainty at pan-Arctic and regional scales. Climate Dynamics, 2017, 49, 1399-1410.	3.8	41
80	Timeâ€Dependent Freshwater Input From Ice Shelves: Impacts on Antarctic Sea Ice and the Southern Ocean in an Earth System Model. Geophysical Research Letters, 2017, 44, 10,454.	4.0	40
81	Adjustment of the global climate to an abrupt slowdown of the Atlantic meridional overturning circulation. Geophysical Monograph Series, 2007, , 295-313.	0.1	39
82	Consistent Changes in the Sea Ice Seasonal Cycle in Response to Global Warming. Journal of Climate, 2011, 24, 5325-5335.	3.2	38
83	Arctic climate response to forcing from light-absorbing particles in snow and sea ice in CESM. Atmospheric Chemistry and Physics, 2012, 12, 7903-7920.	4.9	37
84	Mechanisms Forcing an Antarctic Dipole in Simulated Sea Ice and Surface Ocean Conditions. Journal of Climate, 2005, 18, 2052-2066.	3.2	36
85	Offsetting effects of aerosols on Arctic and global climate in the late 20th century. Atmospheric Chemistry and Physics, 2014, 14, 3969-3975.	4.9	36
86	The influence of sea ice physics on simulations of climate change. Journal of Geophysical Research, 2001, 106, 19639-19655.	3.3	35
87	Inability of stratospheric sulfate aerosol injections to preserve the West Antarctic Ice Sheet. Geophysical Research Letters, 2015, 42, 4989-4997.	4.0	35
88	Sources of Intermodel Spread in the Lapse Rate and Water Vapor Feedbacks. Journal of Climate, 2018, 31, 3187-3206.	3.2	35
89	Rain on Snow: Little Understood Killer in the North. Eos, 2009, 90, 221-222.	0.1	34
90	The Role of Natural Versus Forced Change in Future Rapid Summer Arctic Ice Loss. Geophysical Monograph Series, 0, , 133-150.	0.1	34

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91	Arctic warming aloft is data set dependent. Nature, 2008, 455, E3-E4.	27.8	33
92	Reconstruction of Snow on Arctic Sea Ice. Journal of Geophysical Research: Oceans, 2018, 123, 3588-3602.	2.6	33
93	Sea Ice-Albedo Feedback and Nonlinear Arctic Climate Change. Geophysical Monograph Series, 0, , 111-131.	0.1	32
94	Distinct Mechanisms of Ocean Heat Transport Into the Arctic Under Internal Variability and Climate Change. Geophysical Research Letters, 2018, 45, 7692-7700.	4.0	32
95	Strong remote control of future equatorial warming by off-equatorial forcing. Nature Climate Change, 2020, 10, 124-129.	18.8	32
96	Modeling the salinity profile of undeformed Arctic sea ice. Geophysical Research Letters, 2006, 33, .	4.0	31
97	The Climate Response to Stratospheric Sulfate Injections and Implications for Addressing Climate Emergencies. Journal of Climate, 2012, 25, 3096-3116.	3.2	31
98	Rapid and extensive warming following cessation of solar radiation management. Environmental Research Letters, 2014, 9, 024005.	5.2	30
99	Do General Circulation Models Underestimate the Natural Variability in the Arctic Climate?. Journal of Climate, 1997, 10, 1909-1920.	3.2	29
100	On the sensitivity of undeformed Arctic sea ice to its vertical salinity profile. Geophysical Research Letters, 2005, 32, .	4.0	29
101	Modeling climatic effects of carbon dioxide emissions from Deccan Traps volcanic eruptions around the Cretaceousâ€“Paleogene boundary. Palaeogeography, Palaeoclimatology, Palaeoecology, 2017, 478, 139-148.	2.3	29
102	Metrics for the Evaluation of the Southern Ocean in Coupled Climate Models and Earth System Models. Journal of Geophysical Research: Oceans, 2018, 123, 3120-3143.	2.6	29
103	Exo-Milankovitch Cycles. II. Climates of G-dwarf Planets in Dynamically Hot Systems. Astronomical Journal, 2018, 155, 266.	4.7	29
104	Age characteristics in a multidecadal Arctic sea ice simulation. Journal of Geophysical Research, 2009, 114, .	3.3	28
105	A Yearâ€Round Subseasonalâ€toâ€Seasonal Sea Ice Prediction Portal. Geophysical Research Letters, 2019, 46, 3298-3307.	4.0	28
106	A mathematical framework for analysis of water tracers: Part 1: Development of theory and application to the preindustrial mean state. Journal of Advances in Modeling Earth Systems, 2016, 8, 991-1013.	3.8	27
107	Modeled methanesulfonic acid (MSA) deposition in Antarctica and its relationship to sea ice. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	26
108	The Atmospheric Response to Realistic Reduced Summer Arctic Sea Ice Anomalies. Geophysical Monograph Series, 0, , 91-110.	0.1	26

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109	A Sourceâ€“Receptor Perspective on the Polar Hydrologic Cycle: Sources, Seasonality, and Arcticâ€“Antarctic Parity in the Hydrologic Cycle Response to CO₂ Doubling. Journal of Climate, 2017, 30, 9999-10017.	3.2	26
110	Snow cover on Arctic sea ice in observations and an Earth System Model. Geophysical Research Letters, 2015, 42, 10,342.	4.0	25
111	Insights on Sea Ice Data Assimilation from Perfect Model Observing System Simulation Experiments. Journal of Climate, 2018, 31, 5911-5926.	3.2	23
112	Estimating the sea ice floe size distribution using satellite altimetry: theory, climatology, and model comparison. Cryosphere, 2019, 13, 2869-2885.	3.9	23
113	Polar Lower-Latitude Linkages and Their Role in Weather and Climate Prediction. Bulletin of the American Meteorological Society, 2015, 96, ES197-ES200.	3.3	21
114	The Global Climate Response to Lowering Surface Orography of Antarctica and the Importance of Atmosphereâ€“Ocean Coupling. Journal of Climate, 2016, 29, 4137-4153.	3.2	21
115	Radiative Feedbacks From Stochastic Variability in Surface Temperature and Radiative Imbalance. Geophysical Research Letters, 2018, 45, 5082-5094.	4.0	21
116	A Mathematical Framework for Analysis of Water Tracers. Part II: Understanding Large-Scale Perturbations in the Hydrological Cycle due to CO2 Doubling. Journal of Climate, 2016, 29, 6765-6782.	3.2	20
117	Some Aspects of Uncertainty in Predicting Sea Ice Thinning. Geophysical Monograph Series, 0, , 63-76.	0.1	19
118	Processes Controlling Arctic and Antarctic Sea Ice Predictability in the Community Earth System Model. Journal of Climate, 2018, 31, 9771-9786.	3.2	18
119	Greater aerial moisture transport distances with warming amplify interbasin salinity contrasts. Geophysical Research Letters, 2016, 43, 8677-8684.	4.0	17
120	Recent Trends in Arctic Sea Ice and the Evolving Role of Atmospheric Circulation Forcing, 1979-2007. Geophysical Monograph Series, 0, , 7-26.	0.1	16
121	Antarctic Elevation Drives Hemispheric Asymmetry in Polar Lapse Rate Climatology and Feedback. Geophysical Research Letters, 2020, 47, e2020GL088965.	4.0	16
122	Seasonality in Arctic Warming Driven by Sea Ice Effective Heat Capacity. Journal of Climate, 2022, 35, 1629-1642.	3.2	16
123	Improved Sea Ice Forecasting through Spatiotemporal Bias Correction. Journal of Climate, 2017, 30, 9493-9510.	3.2	15
124	A floe size dependent scattering model in two- and three-dimensions for wave attenuation by ice floes. Ocean Modelling, 2021, 161, 101779.	2.4	15
125	Parameterization Improvements in an Eddy-Permitting Ocean Model for Climate. Journal of Climate, 2002, 15, 1447-1459.	3.2	14
126	Multiple Equilibria and Abrupt Transitions in Arctic Summer Sea Ice Extent. Geophysical Monograph Series, 0, , 151-174.	0.1	14

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127	A cyclone-centered perspective on the drivers of asymmetric patterns in the atmosphere and sea ice during Arctic cyclones. Journal of Climate, 2022, , 1-47.	3.2	14
128	A Heuristic Model of Dansgaardâ€“Oeschger Cycles. Part I: Description, Results, and Sensitivity Studies. Journal of Climate, 2014, 27, 4337-4358.	3.2	13
129	Diagnostic sea ice predictability in the panâ€Arctic and U.S. Arctic regional seas. Geophysical Research Letters, 2016, 43, 11,688.	4.0	13
130	Global Climate Models and 20th and 21st Century Arctic Climate Change. Atmospheric and Oceanographic Sciences Library, 2012, , 405-436.	0.1	13
131	Controls on Arctic Sea Ice from First-Year and Multiyear Ice Survivability. Journal of Climate, 2011, 24, 2378-2390.	3.2	9
132	Arctic Cloud Properties and Radiative Forcing from Observations and their Role in Sea Ice Decline Predicted by the NCAR CCSM3 Model During the 21st Century. Geophysical Monograph Series, 0, , 47-62.	0.1	8
133	Robust Interâ€Hemispheric Asymmetry in the Response to Symmetric Volcanic Forcing in Model Large Ensembles. Geophysical Research Letters, 2021, 48, e2021GL092558.	4.0	8
134	The influence of ENSO on Arctic sea ice in large ensembles and observations. Journal of Climate, 2021, , 1-50.	3.2	8
135	Asymmetry in the seasonal cycle of Antarctic sea ice driven by insolation. Nature Geoscience, 2022, 15, 277-281.	12.9	8
136	Biases in modeled surface snow BC mixing ratios in prescribed-aerosol climate model runs. Atmospheric Chemistry and Physics, 2014, 14, 11697-11709.	4.9	7
137	Energy Budgets for Terrestrial Extrasolar Planets. Astrophysical Journal Letters, 2019, 884, L2.	8.3	5
138	Probabilistic forecasting of the Arctic sea ice edge with contour modeling. Annals of Applied Statistics, 2021, 15, .	1.1	5
139	Highâ€Frequency Sea Ice Variability in Observations and Models. Geophysical Research Letters, 2021, 48, e2020GL092356.	4.0	5
140	Effects of Ensemble Configuration on Estimates of Regional Climate Uncertainties. Geophysical Research Letters, 2018, 45, 926-934.	4.0	4
141	Probabilistic Forecasts of Arctic Sea Ice Thickness. Journal of Agricultural, Biological, and Environmental Statistics, 2022, 27, 280-302.	1.4	4
142	What is the Trajectory of Arctic Sea Ice?. Geophysical Monograph Series, 2013, , 175-185.	0.1	2
143	Analysis of Arctic Sea Ice Anomalies in a Coupled Model Control Simulation. Geophysical Monograph Series, 0, , 187-211.	0.1	2
144	Sensitivity of Arctic Sea Ice Thickness to Intermodel Variations in the Surface Energy Budget. Geophysical Monograph Series, 2013, , 77-90.	0.1	2

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145	The Abisko Polar Prediction School. Bulletin of the American Meteorological Society, 2017, 98, 445-447.	3.3	2
146	Arctic Sea Ice Response to Flooding of the Snow Layer in Future Warming Scenarios. Earth's Future, 2021, 9, e2021EF002136.	6.3	2
147	Understanding the Forecast Skill of Rapid Arctic Sea Ice Loss on Subseasonal Time Scales. Journal of Climate, 2022, 35, 1179-1196.	3.2	2
148	The University of Washington polarized ion source. Review of Scientific Instruments, 1990, 61, 445-447.	1.3	1
149	Arctic Sea Ice Decline: Introduction. Geophysical Monograph Series, 2013, , 1-5.	0.1	1
150	Cryosphere, Modeling of. , 2012, , 31-62.		0
151	Estimating parameters in a sea ice model using an ensemble Kalman filter. Cryosphere, 2021, 15, 1277-1284.	3.9	0