Bonnie Light

List of Publications by Year
in descending order

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39 papers	2,388 citations	471061 17 h-index	315357 38 g-index
48 all docs	48 docs citations	48 times ranked	2787 citing authors

#	Article	IF	Citations
1	Increasing solar heating of the Arctic Ocean and adjacent seas, 1979â€“2005: Attribution and role in the iceâ€albedo feedback. Geophysical Research Letters, 2007, 34, .	1.5	377
2	Sunlight, water, and ice: Extreme Arctic sea ice melt during the summer of 2007. Geophysical Research Letters, 2008, 35, .	1.5	366
3	Improved Sea Ice Shortwave Radiation Physics in CCSM4: The Impact of Melt Ponds and Aerosols on Arctic Sea Ice. Journal of Climate, 2012, 25, 1413-1430.	1.2	299
4	Thin and thinner: Sea ice mass balance measurements during SHEBA. Journal of Geophysical Research, 2003, 108, .	3.3	230
5	Transmission and absorption of solar radiation by Arctic sea ice during the melt season. Journal of Geophysical Research, 2008, 113, .	3.3	163
6	The spatial distribution of solar radiation under a melting Arctic sea ice cover. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	116
7	Transpolar observations of the morphological properties of Arctic sea ice. Journal of Geophysical Research, 2009, 114, .	3.3	95
8	Overview of the MOSAiC expedition: Snow and sea ice. Elementa, 2022, 10, .	1.1	91
9	Seasonal evolution of melt ponds on Arctic sea ice. Journal of Geophysical Research: Oceans, 2015, 120, 5968-5982.	1.0	83
10	Spatial distribution and radiative effects of soot in the snow and sea ice during the SHEBA experiment. Journal of Geophysical Research, 2002, 107, SHE 7-1.	3.3	75
11	Arctic sea-ice melt in 2008 and the role of solar heating. Annals of Glaciology, 2011, 52, 355-359.	2.8	71
12	Optical properties of melting firstâ€year <scp>A</scp>rctic sea ice. Journal of Geophysical Research: Oceans, 2015, 120, 7657-7675.	1.0	62
13	Light Availability and Phytoplankton Growth Beneath Arctic Sea Ice: Integrating Observations and Modeling. Journal of Geophysical Research: Oceans, 2018, 123, 3651-3667.	1.0	45
14	Hydrohalite in cold sea ice: Laboratory observations of single crystals, surface accumulations, and migration rates under a temperature gradient, with application to â€œSnowball Earthâ€. Journal of Geophysical Research, 2009, 114, .	3.3	39
15	Spectral transmission and implications for the partitioning of shortwave radiation in arctic sea ice. Annals of Glaciology, 2006, 44, 1-6.	2.8	26
16	Melt Pond Conditions on Declining Arctic Sea Ice Over 1979â€“2016: Model Development, Validation, and Results. Journal of Geophysical Research: Oceans, 2018, 123, 7983-8003.	1.0	23
17	Spatiotemporal evolution of melt ponds on Arctic sea ice. Elementa, 2022, 10, .	1.1	22
18	Shine a light: Under-ice light and its ecological implications in a changing Arctic Ocean. Ambio, 2022, 51, 307-317.	2.8	18

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19	Evolution of summer Arctic sea ice albedo in CCSM4 simulations: Episodic summer snowfall and frozen summers. Journal of Geophysical Research: Oceans, 2015, 120, 284-303.	1.0	16
20	Physical and optical characteristics of heavily melted â€œrottenâ€•Arctic sea ice. Cryosphere, 2019, 13, 775-793.	1.5	14
21	Mapping sediment-laden sea ice in the Arctic using AVHRR remote-sensing data: Atmospheric correction and determination of reflectances as a function of ice type and sediment load. Remote Sensing of Environment, 2007, 107, 484-495.	4.6	13
22	Migration of air bubbles in ice under a temperature gradient, with application to â€œSnowball Earthâ€• Journal of Geophysical Research, 2010, 115, .	3.3	13
23	Arctic sea ice sensitivity to lateral melting representation in a coupled climate model. Cryosphere, 2022, 16, 419-434.	1.5	13
24	The spectral albedo of sea ice and salt crusts on the tropical ocean of Snowball Earth: II. Optical modeling. Journal of Geophysical Research: Oceans, 2016, 121, 5217-5230.	1.0	12
25	Meltwater sources and sinks for multiyear Arctic sea ice inÂsummer. Cryosphere, 2021, 15, 4517-4525.	1.5	12
26	Subzero, saline incubations of Colwellia psychrerythraea reveal strategies and biomarkers for sustained life in extreme icy environments. Environmental Microbiology, 2021, 23, 3840-3866.	1.8	10
27	Quantifying false bottoms and under-ice meltwater layers beneath Arctic summer sea ice with fine-scale observations. Elementa, 2022, 10, .	1.1	10
28	Physical and morphological properties of sea ice in the Chukchi and Beaufort Seas during the 2010 and 2011 NASA ICESCAPE missions. Deep-Sea Research Part II: Topical Studies in Oceanography, 2015, 118, 7-17.	0.6	9
29	Changing ice and changing light: trends in solar heat input to the upper Arctic ocean from 1988 to 2014. Annals of Glaciology, 2020, 61, 401-407.	2.8	9
30	The influence of snow on sea ice as assessed from simulations of CESM2. Cryosphere, 2021, 15, 4981-4998.	1.5	8
31	The spectral albedo of sea ice and salt crusts on the tropical ocean of Snowball Earth: 1. Laboratory measurements. Journal of Geophysical Research: Oceans, 2016, 121, 4966-4979.	1.0	7
32	The magnitude of the snow-sourced reactive nitrogen flux to the boundary layer in the Uintah Basin, Utah, USA. Atmospheric Chemistry and Physics, 2016, 16, 13837-13851.	1.9	7
33	A Synthesis of Observations and Models to Assess the Time Series of Sea Ice Mass Balance in the Beaufort Sea. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015833.	1.0	6
34	Theoretical and observational techniques for estimating light scattering in first-year Arctic sea ice. , 2010, , 331-391.		6
35	A neural network-based method for satellite-based mapping of sediment-laden sea ice in the Arctic. Remote Sensing of Environment, 2022, 270, 112861.	4.6	6
36	â€œAlbedo domeâ€• a method for measuring spectral flux-reflectance in a laboratory for media with long optical paths. Applied Optics, 2015, 54, 5260.	2.1	5

#	Article	IF	Citations
37	Energy- and mass-balance observations of the landâ€“iceâ€“oceanâ€“atmosphere system near Barrow, Alaska, USA, November 1999â€“July 2002. Annals of Glaciology, 2006, 44, 193-199.	2.8	4
38	Contrasting Seaâ€Ice Algae Blooms in a Changing Arctic Documented by Autonomous Drifting Buoys. Journal of Geophysical Research: Oceans, 2022, 127, .	1.0	3
39	Sensitivity of the Arctic Sea Ice Cover to the Summer Surface Scattering Layer. Geophysical Research Letters, 2022, 49, .	1.5	1