Marcel Nicolaus

List of Publications by Year
in descending order

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78 papers	4,048 citations	126907 33 h-index	128289 60 g-index
90 all docs	90 docs citations	90 times ranked	3865 citing authors

#	Article	IF	Citations
1	Monitoring a changing Arctic: Recent advancements in the study of sea ice microbial communities. Ambio, 2022, 51, 318-332.	5.5	12
2	Net heterotrophy in High Arctic first-year and multi-year spring sea ice. Elementa, 2022, 10, .	3.2	1
3	Overview of the MOSAiC expedition: Physical oceanography. Elementa, 2022, 10, .	3.2	54
4	Overview of the MOSAiC expedition: Atmosphere. Elementa, 2022, 10, .	3.2	121
5	Overview of the MOSAiC expedition: Snow and sea ice. Elementa, 2022, 10, .	3.2	91
6	Under-Ice Light Field in the Western Arctic Ocean During Late Summer. Frontiers in Earth Science, 2022, 9, .	1.8	6
7	Thermodynamic and dynamic contributions to seasonal Arctic sea ice thickness distributions from airborne observations. Elementa, 2022, 10, .	3.2	15
8	Snowfall and snow accumulation during the MOSAiC winter and spring seasons. Cryosphere, 2022, 16, 2373-2402.	3.9	17
9	Seasonality and timing of sea ice mass balance and heat fluxes in the Arctic transpolar drift during 2019â€“2020. Elementa, 2022, 10, .	3.2	21
10	Snow Depth and Air Temperature Seasonality on Sea Ice Derived From Snow Buoy Measurements. Frontiers in Marine Science, 2021, 8, .	2.5	22
11	From Bright Windows to Dark Spots: Snow Cover Controls Melt Pond Optical Properties During Refreezing. Geophysical Research Letters, 2021, 48, e2021GL095369.	4.0	5
12	Snow Depth Retrieval on Arctic Sea Ice Using Under-Ice Hyperspectral Radiation Measurements. Frontiers in Earth Science, 2021, 9, .	1.8	1
13	The Impact of Diffusive Water Vapor Transport on Snow Profiles in Deep and Shallow Snow Covers and on Sea Ice. Frontiers in Earth Science, 2020, 8, .	1.8	15
14	Platelet Ice Under Arctic Pack Ice in Winter. Geophysical Research Letters, 2020, 47, e2020GL088898.	4.0	17
15	Environmental drivers of under-ice phytoplankton bloom dynamics in the Arctic Ocean. Elementa, 2020, 8, .	3.2	45
16	Version 1 of a sea ice module for the physics-based, detailed, multi-layer SNOWPACK model. Geoscientific Model Development, 2020, 13, 99-119.	3.6	14
17	New observations of the distribution, morphology and dissolution dynamics of cryogenic gypsum in the Arctic Ocean. Cryosphere, 2020, 14, 1795-1808.	3.9	11
18	The MOSAiC ice floe: sediment-laden survivor from the Siberian shelf. Cryosphere, 2020, 14, 2173-2187.	3.9	59

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19	Seasonal and interannual variability of landfast sea ice in Atka Bay, Weddell Sea, Antarctica. Cryosphere, 2020, 14, 2775-2793.	3.9	12
20	Seasonal Evolution of Light Transmission Distributions Through Arctic Sea Ice. Journal of Geophysical Research: Oceans, 2019, 124, 5418-5435.	2.6	51
21	Validation of the sea ice surface albedo scheme of the regional climate model HIRHAMâ€“NAOSIM using aircraft measurements during the ACLOUD/PASCAL campaigns. Cryosphere, 2019, 13, 1695-1708.	3.9	21
22	Arctic warming interrupts the Transpolar Drift and affects long-range transport of sea ice and ice-rafted matter. Scientific Reports, 2019, 9, 5459.	3.3	108
23	The Arctic Cloud Puzzle: Using ACLOUD/PASCAL Multiplatform Observations to Unravel the Role of Clouds and Aerosol Particles in Arctic Amplification. Bulletin of the American Meteorological Society, 2019, 100, 841-871.	3.3	145
24	Influence of snow depth and surface flooding on light transmission through <scp>A</scp>ntarctic pack ice. Journal of Geophysical Research: Oceans, 2017, 122, 2108-2119.	2.6	37
25	Thin ice and storms: Sea ice deformation from buoy arrays deployed during <scp>Nâ€ICE</scp>2015. Journal of Geophysical Research: Oceans, 2017, 122, 4661-4674.	2.6	88
26	Satelliteâ€observed drop of Arctic sea ice growth in winter 2015â€“2016. Geophysical Research Letters, 2017, 44, 3236-3245.	4.0	46
27	Increasing frequency and duration of Arctic winter warming events. Geophysical Research Letters, 2017, 44, 6974-6983.	4.0	134
28	Leads in Arctic pack ice enable early phytoplankton blooms below snow-covered sea ice. Scientific Reports, 2017, 7, 40850.	3.3	259
29	A New Remotely Operated Sensor Platform for Interdisciplinary Observations under Sea Ice. Frontiers in Marine Science, 2017, 4, .	2.5	24
30	Characterizing Spatial Variability of Ice Algal Chlorophyll a and Net Primary Production between Sea Ice Habitats Using Horizontal Profiling Platforms. Frontiers in Marine Science, 2017, 4, .	2.5	29
31	Geometric Effects of an Inhomogeneous Sea Ice Cover on the under Ice Light Field. Frontiers in Earth Science, 2016, 4, .	1.8	25
32	Sea ice algae chlorophyll a concentrations derived from under-ice spectral radiation profiling platforms. Journal of Geophysical Research: Oceans, 2016, 121, 8511-8534.	2.6	38
33	Retrieval of sea ice thickness during melt season from in situ, airborne and satellite imagery. , 2016, , .		6
34	Arctic in Rapid Transition: Priorities for the future of marine and coastal research in the Arctic. Polar Science, 2016, 10, 364-373.	1.2	14
35	Atmospheric conditions in the central Arctic Ocean through the melt seasons of 2012 and 2013: Impact on surface conditions and solar energy deposition into the iceâ€ocean system. Journal of Geophysical Research D: Atmospheres, 2016, 121, 1043-1058.	3.3	13
36	Spectral albedo and transmittance of thin young <scp>A</scp>rctic sea ice. Journal of Geophysical Research: Oceans, 2016, 121, 540-553.	2.6	20

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37	Timing and regional patterns of snowmelt on Antarctic sea ice from passive microwave satellite observations. Journal of Geophysical Research: Oceans, 2016, 121, 5916-5930.	2.6	21
38	Influence of ice thickness and surface properties on light transmission through <scp>A</scp>rctic sea ice. Journal of Geophysical Research: Oceans, 2015, 120, 5932-5944.	2.6	70
39	Seasonal evolution of an iceâ€shelf influenced fastâ€ice regime, derived from an autonomous thermistor chain. Journal of Geophysical Research: Oceans, 2015, 120, 1703-1724.	2.6	31
40	Ice platelets below Weddell Sea landfast sea ice. Annals of Glaciology, 2015, 56, 175-190.	1.4	21
41	Shallow methylmercury production in the marginal sea ice zone of the central Arctic Ocean. Scientific Reports, 2015, 5, 10318.	3.3	70
42	The impact of early-summer snow properties on Antarctic landfast sea-ice X-band backscatter. Annals of Glaciology, 2015, 56, 263-273.	1.4	8
43	Photosynthetic production in the central Arctic Ocean during the record sea-ice minimum in 2012. Biogeosciences, 2015, 12, 3525-3549.	3.3	149
44	Distribution of algal aggregates under summer sea ice in the Central Arctic. Polar Biology, 2015, 38, 719-731.	1.2	39
45	Autonomous observations of solar energy partitioning in first-year sea ice in the Arctic Basin. Journal of Geophysical Research: Oceans, 2014, 119, 2066-2080.	2.6	20
46	The anisotropic scattering coefficient of sea ice. Journal of Geophysical Research: Oceans, 2014, 119, 842-855.	2.6	36
47	The microwave emissivity variability of snow covered first-year sea ice from late winter to early summer: a model study. Cryosphere, 2014, 8, 891-904.	3.9	30
48	Seasonal cycle and long-term trend of solar energy fluxes through Arctic sea ice. Cryosphere, 2014, 8, 2219-2233.	3.9	52
49	Evidence of Arctic sea ice thinning from direct observations. Geophysical Research Letters, 2014, 41, 5029-5036.	4.0	105
50	The influence of sea ice cover on air-sea gas exchange estimated with radon-222 profiles. Journal of Geophysical Research: Oceans, 2014, 119, 2735-2751.	2.6	45
51	Export of Algal Biomass from the Melting Arctic Sea Ice. Science, 2013, 339, 1430-1432.	12.6	383
52	Variability of light transmission through Arctic land-fast sea ice during spring. Cryosphere, 2013, 7, 977-986.	3.9	26
53	Mapping radiation transfer through sea ice using a remotely operated vehicle (ROV). Cryosphere, 2013, 7, 763-777.	3.9	52
54	Floating Ice-Algal Aggregates below Melting Arctic Sea Ice. PLoS ONE, 2013, 8, e76599.	2.5	109

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55	Changes in Arctic sea ice result in increasing light transmittance and absorption. Geophysical Research Letters, 2012, 39, .	4.0	260
56	Sensitivity of the light field under sea ice to spatially inhomogeneous optical properties and incident light assessed with three-dimensional Monte Carlo radiative transfer simulations. Cold Regions Science and Technology, 2012, 73, 1-11.	3.5	21
57	Morphology of sea ice pressure ridges in the northwestern Weddell Sea in winter. Journal of Geophysical Research, 2012, 117, .	3.3	20
58	Antarctic sympagic meiofauna in winter: Comparing diversity, abundance and biomass between perennially and seasonally ice-covered regions. Deep-Sea Research Part II: Topical Studies in Oceanography, 2011, 58, 1062-1074.	1.4	25
59	Assessment of radiation forcing data sets for large-scale sea ice models in the Southern Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2011, 58, 1237-1249.	1.4	31
60	Mixing, heat fluxes and heat content evolution of the Arctic Ocean mixed layer. Ocean Science, 2011, 7, 335-349.	3.4	38
61	Correction to â€œEvolution of first- and second-year snow properties on sea ice in the Weddell Sea during spring-summer transitionâ€• Journal of Geophysical Research, 2011, 116, .	3.3	0
62	A new snow thermodynamic scheme for large-scale sea-ice models. Annals of Glaciology, 2011, 52, 337-346.	1.4	32
63	An intercomparison between AMSR-E snow-depth and satellite C- and Ku-band radar backscatter data for Antarctic sea ice. Annals of Glaciology, 2011, 52, 279-290.	1.4	19
64	Closing the loop â€“ Approaches to monitoring the state of the Arctic Mediterranean during the International Polar Year 2007â€“2008. Progress in Oceanography, 2011, 90, 62-89.	3.2	47
65	A transitioning Arctic surface energy budget: the impacts of solar zenith angle, surface albedo and cloud radiative forcing. Climate Dynamics, 2011, 37, 1643-1660.	3.8	162
66	High radar-backscatter regions on Antarctic sea-ice and their relation to sea-ice and snow properties and meteorological conditions. International Journal of Remote Sensing, 2011, 32, 3967-3984.	2.9	9
67	Seasonality of spectral albedo and transmittance as observed in the Arctic Transpolar Drift in 2007. Journal of Geophysical Research, 2010, 115, .	3.3	92
68	A modern concept for autonomous and continuous measurements of spectral albedo and transmittance of sea ice. Cold Regions Science and Technology, 2010, 62, 14-28.	3.5	71
69	Observing snowmelt dynamics on fast ice in Kongsfjorden, Svalbard, with NOAA/AVHRR data and field measurements. Polar Research, 2009, 28, 203-213.	1.6	6
70	Satellite microwave observations of the interannual variability of snowmelt on sea ice in the Southern Ocean. Journal of Geophysical Research, 2009, 114, .	3.3	20
71	Evolution of firstâ€year and secondâ€year snow properties on sea ice in the Weddell Sea during springâ€summer transition. Journal of Geophysical Research, 2009, 114, .	3.3	37
72	Ice Tank Experiments Highlight Changes in Sea Ice Types. Eos, 2009, 90, 81-82.	0.1	12

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73	Exploring Arctic Transpolar Drift During Dramatic Sea Ice Retreat. Eos, 2008, 89, 21-22.	0.1	94
74	Sea ice and snow thickness and physical properties of an ice floe in the western Weddell Sea and their changes during spring warming. Deep-Sea Research Part II: Topical Studies in Oceanography, 2008, 55, 963-974.	1.4	47
75	The importance of diurnal processes for the Seasonal cycle of Sea-ice microwave brightness temperatures during early Summer in the Weddell Sea, Antarctica. Annals of Glaciology, 2006, 44, 297-302.	1.4	22
76	A model study of differences of snow thinning on Arctic and Antarctic first-year sea ice during spring and summer. Annals of Glaciology, 2006, 44, 147-153.	1.4	41
77	Numerical model studies of Antarctic ice-sheetâ€“ice-shelfâ€“ocean systems and ice caps. Annals of Glaciology, 2005, 41, 111-120.	1.4	4
78	Observations of superimposed ice formation at melt-onset on fast ice on Kongsfjorden, Svalbard. Physics and Chemistry of the Earth, 2003, 28, 1241-1248.	2.9	44