Thomas Krumpen

List of Publications by Year in descending order

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Version: 2024-02-01

79 papers	4,461 citations	136950 32 h-index	110387 64 g-index
111 all docs	111 docs citations	111 times ranked	4840 citing authors

#	Article	IF	Citations
1	Arctic sea ice is an important temporal sink and means of transport for microplastic. Nature Communications, 2018, 9, 1505.	12.8	670
2	High Quantities of Microplastic in Arctic Deep-Sea Sediments from the HAUSGARTEN Observatory. Environmental Science & Technology, 2017, 51, 11000-11010.	10.0	630
3	Export of Algal Biomass from the Melting Arctic Sea Ice. Science, 2013, 339, 1430-1432.	12.6	383
4	Microplastics in sea ice and seawater beneath ice floes from the Arctic Ocean. Scientific Reports, 2020, 10, 5004.	3.3	163
5	SMOS-derived thin sea ice thickness: algorithm baseline, product specifications and initial verification. Cryosphere, 2014, 8, 997-1018.	3.9	150
6	Marine litter on deep Arctic seafloor continues to increase and spreads to the North at the HAUSGARTEN observatory. Deep-Sea Research Part I: Oceanographic Research Papers, 2017, 120, 88-99.	1.4	148
7	Overview of the MOSAiC expedition: Atmosphere. Elementa, 2022, 10, .	3.2	121
8	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
9	The winter pack-ice zone provides a sheltered but food-poor habitat for larval Antarctic krill. Nature Ecology and Evolution, 2017, 1, 1853-1861.	7.8	96
10	Overview of the MOSAiC expedition: Snow and sea ice. Elementa, 2022, 10, .	3.2	91
11	Empirical sea ice thickness retrieval during the freeze-up period from SMOS high incident angle observations. Cryosphere, 2014, 8, 439-451.	3.9	90
12	Under-ice distribution of polar cod Boreogadus saida in the central Arctic Ocean and their association with sea-ice habitat properties. Polar Biology, 2016, 39, 981-994.	1.2	85
13	Future projections of the Greenland ice sheet energy balance driving the surface melt. Cryosphere, 2013, 7, 1-18.	3.9	74
14	Recent summer sea ice thickness surveys in Fram Strait and associated ice volume fluxes. Cryosphere, 2016, 10, 523-534.	3.9	64
15	The MOSAiC ice floe: sediment-laden survivor from the Siberian shelf. Cryosphere, 2020, 14, 2173-2187.	3.9	59
16	Thin Sea Ice, Thick Snow, and Widespread Negative Freeboard Observed During Nâ€ICE2015 North of Svalbard. Journal of Geophysical Research: Oceans, 2018, 123, 1156-1176.	2.6	58
17	Ice Algae-Produced Carbon Is Critical for Overwintering of Antarctic Krill Euphausia superba. Frontiers in Marine Science, 2017, 4, .	2.5	55
18	Overview of the MOSAiC expedition: Physical oceanography. Elementa, 2022, 10, .	3.2	54

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19	Impact of the Arctic Ocean Atlantic water layer on Siberian shelf hydrography. Journal of Geophysical Research, 2010, 115, .	3.3	51
20	Variability and trends in Laptev Sea ice outflow between 1992â€“2011. Cryosphere, 2013, 7, 349-363.	3.9	48
21	Microplastic ingestion in zooplankton from the Fram Strait in the Arctic. Science of the Total Environment, 2022, 831, 154886.	8.0	48
22	Satelliteâ€observed drop of Arctic sea ice growth in winter 2015â€“2016. Geophysical Research Letters, 2017, 44, 3236-3245.	4.0	46
23	Satellite-derived sea ice export and its impact on Arctic ice mass balance. Cryosphere, 2018, 12, 3017-3032.	3.9	45
24	MOSAiC drift expedition from October 2019 to July 2020: sea ice conditions from space and comparison with previous years. Cryosphere, 2021, 15, 3897-3920.	3.9	45
25	Seasonal and interannual variability of fast ice extent in the southeastern <scp>L</scp>aptev <scp>S</scp>ea between 1999 and 2013. Journal of Geophysical Research: Oceans, 2015, 120, 7791-7806.	2.6	40
26	Diazotroph Diversity in the Sea Ice, Melt Ponds, and Surface Waters of the Eurasian Basin of the Central Arctic Ocean. Frontiers in Microbiology, 2016, 7, 1884.	3.5	39
27	Seaâ€ice retreat controls timing of summer plankton blooms in the Eastern Arctic Ocean. Geophysical Research Letters, 2016, 43, 12,493.	4.0	39
28	Radium Isotopes Across the Arctic Ocean Show Time Scales of Water Mass Ventilation and Increasing Shelf Inputs. Journal of Geophysical Research: Oceans, 2018, 123, 4853-4873.	2.6	39
29	Cross-validation of polynya monitoring methods from multisensor satellite and airborne data: a case study for the Laptev Sea. Canadian Journal of Remote Sensing, 2010, 36, S196-S210.	2.4	37
30	Improvement and Sensitivity Analysis of Thermal Thin-Ice Thickness Retrievals. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 3306-3318.	6.3	37
31	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
32	Episodic warming of nearâ€bottom waters under the Arctic sea ice on the central Laptev Sea shelf. Geophysical Research Letters, 2016, 43, 264-272.	4.0	36
33	Validating satellite derived and modelled sea-ice drift in the Laptev Sea with in situ measurements from the winter of 2007/2008. Polar Research, 2011, 30, 7218.	1.6	35
34	Observations of supercooling and frazil ice formation in the Laptev Sea coastal polynya. Journal of Geophysical Research, 2010, 115, .	3.3	32
35	Dynamic benthic megafaunal communities: Assessing temporal variations in structure, composition and diversity at the Arctic deep-sea observatory HAUSGARTEN between 2004 and 2015. Deep-Sea Research Part I: Oceanographic Research Papers, 2017, 122, 81-94.	1.4	31
36	Sea-ice derived meltwater stratification slows the biological carbon pump: results from continuous observations. Nature Communications, 2021, 12, 7309.	12.8	31

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37	Impact of Siberian coastal polynyas on shelfâ€derived Arctic Ocean halocline waters. Journal of Geophysical Research, 2012, 117, .	3.3	30
38	Sediment entrainment into sea ice and transport in the Transpolar Drift: A case study from the Laptev Sea in winter 2011/2012. Continental Shelf Research, 2017, 141, 1-10.	1.8	29
39	Antarctic pack ice algal distribution: Floeâ€scale spatial variability and predictability from physical parameters. Geophysical Research Letters, 2017, 44, 7382-7390.	4.0	28
40	The Transpolar Drift conveys methane from the Siberian Shelf to the central Arctic Ocean. Scientific Reports, 2018, 8, 4515.	3.3	28
41	Wind-driven diversion of summer river runoff preconditions the Laptev Sea coastal polynya hydrography: Evidence from summer-to-winter hydrographic records of 2007â€“2009. Continental Shelf Research, 2010, 30, 1656-1664.	1.8	27
42	Large-scale ice thickness distribution of first-year sea ice in spring and summer north of Svalbard. Annals of Glaciology, 2013, 54, 13-18.	1.4	27
43	Large-Scale Variability of Physical and Biological Sea-Ice Properties in Polar Oceans. Frontiers in Marine Science, 2020, 7, .	2.5	26
44	Carbon Export in the Seasonal Sea Ice Zone North of Svalbard From Winter to Late Summer. Frontiers in Marine Science, 2021, 7, .	2.5	26
45	Crossâ€shelf transport of warm and saline water in response to sea ice drift on the Laptev Sea shelf. Journal of Geophysical Research: Oceans, 2013, 118, 563-576.	2.6	25
46	Regional- and local-scale variations in benthic megafaunal composition at the Arctic deep-sea observatory HAUSGARTEN. Deep-Sea Research Part I: Oceanographic Research Papers, 2016, 108, 58-72.	1.4	25
47	Winter sea ice export from the Laptev Sea preconditions the local summer sea ice cover and fast ice decay. Cryosphere, 2017, 11, 2383-2391.	3.9	25
48	Interannual variability in Transpolar Drift summer sea ice thickness and potential impact of Atlantification. Cryosphere, 2021, 15, 2575-2591.	3.9	21
49	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
50	Sea ice production and water mass modification in the eastern Laptev Sea. Journal of Geophysical Research, 2011, 116, .	3.3	19
51	Satellite-based sea ice thickness changes in the Laptev Sea from 2002 to 2017: comparison to mooring observations. Cryosphere, 2020, 14, 2189-2203.	3.9	19
52	Sea ice origin and sea ice retreat as possible drivers of variability in Arctic marine protist composition. Marine Ecology - Progress Series, 2017, 571, 43-57.	1.9	18
53	On the Variability of Stratification in the Freshwater-Influenced Laptev Sea Region. Frontiers in Marine Science, 2020, 7, .	2.5	17
54	A 10-year record of Arctic summer sea ice freeboard from CryoSat-2. Remote Sensing of Environment, 2022, 268, 112744.	11.0	17

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55	Properties of Sediment Trap Catchment Areas in Fram Strait: Results From Lagrangian Modeling and Remote Sensing. Frontiers in Marine Science, 2018, 5, .	2.5	16
56	Fram Strait sea ice export affected by thinning: comparing high-resolution simulations and observations. Climate Dynamics, 2019, 53, 3257-3270.	3.8	16
57	Satellite Observations for Detecting and Forecasting Sea-Ice Conditions: A Summary of Advances Made in the SPICES Project by the EUâ€™s Horizon 2020 Programme. Remote Sensing, 2020, 12, 1214.	4.0	16
58	Thermodynamic and dynamic contributions to seasonal Arctic sea ice thickness distributions from airborne observations. Elementa, 2022, 10, .	3.2	15
59	Sea Ice and Water Mass Influence Dimethylsulfide Concentrations in the Central Arctic Ocean. Frontiers in Earth Science, 2019, 7, .	1.8	13
60	Vast Quantities of Microplastics in Arctic Sea Iceâ€"A Prime Temporary Sink for Plastic Litter and a Medium of Transport. , 2017, , 75-76.		12
61	Mechanisms of fast-ice development in the south-eastern Laptev Sea: a case study for winter of 2007/08 and 2009/10. Polar Research, 2017, 36, 1411140.	1.6	11
62	New observations of the distribution, morphology and dissolution dynamics of cryogenic gypsum in the Arctic Ocean. Cryosphere, 2020, 14, 1795-1808.	3.9	11
63	Significant variability of structure and predictability of Arctic Ocean surface pathways affects basin-wide connectivity. Communications Earth & Environment, 2021, 2, .	6.8	10
64	Evaluation of a polynya flux model by means of thermal infrared satellite estimates. Annals of Glaciology, 2011, 52, 52-60.	1.4	9
65	Validation of SMOS sea ice thickness retrieval in the northern Baltic Sea. Tellus, Series A: Dynamic Meteorology and Oceanography, 2015, 67, 24617.	1.7	8
66	Arctic sea ice anomalies during the MOSAiC winter 2019/20. Cryosphere, 2022, 16, 981-1005.	3.9	7
67	Recent observations of superimposed ice and snow ice on sea ice in the northwestern Weddell Sea. Cryosphere, 2021, 15, 4165-4178.	3.9	6
68	Retrieval and parameterisation of sea-ice bulk density from airborne multi-sensor measurements. Cryosphere, 2022, 16, 259-275.	3.9	6
69	First tests on near real time ice type classification in Antarctica. , 2014, , .		5
70	HELIOS, a nadir-looking sea ice monitoring camera. Cold Regions Science and Technology, 2011, 65, 308-313.	3.5	4
71	A combined approach of remote sensing and airborne electromagnetics to determine the volume of polynya sea ice in the Laptev Sea. Cryosphere, 2013, 7, 947-959.	3.9	4
72	An Adaptive Approach to Derive Sea Ice Draft from Upward-Looking Acoustic Doppler Current Profilers (ADCPs), Validated by Upward-Looking Sonar (ULS) Data. Remote Sensing, 2021, 13, 4335.	4.0	3

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73	Shelf-Sourced Methane in Surface Seawater at the Eurasian Continental Slope (Arctic Ocean). Frontiers in Environmental Science, 2022, 10, .	3.3	3
74	Comparison of helicopter-borne thin sea ice thickness profiles with polarimetric signatures of dual-pol Terrasar-X data. , 2009, , .		2
75	Daily thin-ice thickness maps from modis thermal infrared imagery. , 2012, , .		1
76	Corrigendum to "A combined approach of remote sensing and airborne electromagnetics to determine the volume of polynya sea ice in the Laptev Sea" published in The Cryosphere, 7, 947â˜959, 2013. Cryosphere, 2013, 7, 1107-1108.	3.9	1
77	Sea Ice Thickness Surveying with Airborne Electromagnetics - Grounded Ridges and Ice Shear Zones near Barrow, Alaska. , 2014, , .		0
78	Implementation of an On-Site Sea Ice Information System. , 2015, , .		0
79	Predicted Ice Images PRIIMA: Methodology and System Evaluation. , 2018, , .		0