Martin Vancoppenolle

List of Publications by Year
in descending order

69 papers	4,561 citations	172207 29 h-index	110170 64 g-index
90 all docs	90 docs citations	90 times ranked	5163 citing authors

#	Article	IF	Citations
1	The EC-Earth3 Earth system model for the Coupled Model Intercomparison Project 6. Geoscientific Model Development, 2022, 15, 2973-3020.	1.3	192
2	A Multi-Sensor and Modeling Approach for Mapping Light Under Sea Ice During the Ice-Growth Season. Frontiers in Marine Science, 2021, 7, .	1.2	18
3	An inter-comparison of the mass budget of the Arctic sea ice in CMIP6 models. Cryosphere, 2021, 15, 951-982.	1.5	42
4	The Tuning Strategy of IPSLâ€CM6Aâ€LR. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002340.	1.3	10
5	Subâ€Ice Platelet Layer Physics: Insights From a Mushyâ€Layer Sea Ice Model. Journal of Geophysical Research: Oceans, 2021, 126, e2019JC015918.	1.0	2
6	Sensitivity of Arctic sea ice to melt pond processes and atmospheric forcing: A model study. Ocean Modelling, 2021, 167, 101872.	1.0	5
7	SITool (v1.0) â€“ a new evaluation tool for large-scale sea ice simulations: application to CMIP6 OMIP. Geoscientific Model Development, 2021, 14, 6331-6354.	1.3	2
8	Continental and Sea Ice Iron Sources Fertilize the Southern Ocean in Synergy. Geophysical Research Letters, 2021, 48, e2021GL094761.	1.5	7
9	Should Sea-Ice Modeling Tools Designed for Climate Research Be Used for Short-Term Forecasting?. Current Climate Change Reports, 2020, 6, 121-136.	2.8	14
10	The future of Arctic sea-ice biogeochemistry and ice-associated ecosystems. Nature Climate Change, 2020, 10, 983-992.	8.1	96
11	Presentation and Evaluation of the IPSLâ€CM6Aâ€LR Climate Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002010.	1.3	541
12	Physical and biological properties of early winter Antarctic sea ice in the Ross Sea. Annals of Glaciology, 2020, 61, 241-259.	2.8	9
13	Tracer Measurements in Growing Sea Ice Support Convective Gravity Drainage Parameterizations. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015791.	1.0	11
14	The Future of Sea Ice Modeling: Where Do We Go from Here?. Bulletin of the American Meteorological Society, 2020, 101, E1304-E1311.	1.7	22
15	Saroma-ko Lagoon Observations for sea ice Physico-chemistry and Ecosystems 2019 (SLOPE2019). Bulletin of Glaciological Research, 2020, 38, 1-12.	0.5	7
16	Iron Incorporation From Seawater Into Antarctic Sea Ice: A Model Study. Global Biogeochemical Cycles, 2020, 34, e2020GB006665.	1.9	3
17	ESD Reviews: Climate feedbacks in the Earth system and prospects for their evaluation. Earth System Dynamics, 2019, 10, 379-452.	2.7	46
18	On the discretization of the ice thickness distribution in the NEMO3.6-LIM3 global oceanâ€“sea ice model. Geoscientific Model Development, 2019, 12, 3745-3758.	1.3	14

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19	Field Observations and Physicalâ€Biogeochemical Modeling Suggest Low Silicon Affinity for Antarctic Fast Ice Diatoms. Journal of Geophysical Research: Oceans, 2019, 124, 7837-7853.	1.0	11
20	Thermodynamics of Sea Ice Phase Composition Revisited. Journal of Geophysical Research: Oceans, 2019, 124, 615-634.	1.0	12
21	Arctic sea-ice-free season projected to extend into autumn. Cryosphere, 2019, 13, 79-96.	1.5	21
22	Sensitivity of ocean biogeochemistry to the iron supply from the Antarctic Ice Sheet explored with a biogeochemical model. Biogeosciences, 2019, 16, 3583-3603.	1.3	19
23	Chlorophyllâ€a in Antarctic Landfast Sea Ice: A First Synthesis of Historical Ice Core Data. Journal of Geophysical Research: Oceans, 2018, 123, 8444-8459.	1.0	34
24	Quantifying climate feedbacks in polar regions. Nature Communications, 2018, 9, 1919.	5.8	254
25	Arctic sea-ice change tied to its mean state through thermodynamic processes. Nature Climate Change, 2018, 8, 599-603.	8.1	68
26	Biogeochemical Impact of Snow Cover and Cyclonic Intrusions on the Winter Weddell Sea Ice Pack. Journal of Geophysical Research: Oceans, 2017, 122, 9548-9571.	1.0	17
27	Macro-nutrient concentrations in Antarctic pack ice: Overall patterns and overlooked processes. Elementa, 2017, 5, .	1.1	39
28	Comparing sea ice, hydrography and circulation between NEMO3.6 LIM3 and LIM2. Geoscientific Model Development, 2017, 10, 1009-1031.	1.3	26
29	The CMIP6 Sea-Ice Model Intercomparison Project (SIMIP): understanding sea ice through climate-model simulations. Geoscientific Model Development, 2016, 9, 3427-3446.	1.3	83
30	Thermodynamics of slush and snowâ€“ice formation in the Antarctic sea-ice zone. Deep-Sea Research Part II: Topical Studies in Oceanography, 2016, 131, 75-83.	0.6	10
31	Air-ice carbon pathways inferred from a sea ice tank experiment. Elementa, 2016, 4, .	1.1	11
32	Assessment of the sea-ice carbon pump: Insights from a three-dimensional ocean-sea-ice biogeochemical model (NEMO-LIM-PISCES). Elementa, 2016, 4, .	1.1	20
33	Iron in sea ice: Review and new insights. Elementa, 2016, 4, .	1.1	65
34	Influence of short-term synoptic events and snow depth on DMS, DMSP, and DMSO dynamics in Antarctic spring sea ice. Elementa, 2016, 4, .	1.1	10
35	Drivers of inorganic carbon dynamics in firstâ€year sea ice: A model study. Journal of Geophysical Research: Oceans, 2015, 120, 471-495.	1.0	28
36	The Louvain-La-Neuve sea ice model LIM3.6: global and regional capabilities. Geoscientific Model Development, 2015, 8, 2991-3005.	1.3	171

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37	Comparison of different numerical approaches to the 1D sea-ice thermodynamics problem. Ocean Modelling, 2015, 87, 20-29.	1.0	9
38	Climate change enhances primary production in the western Antarctic Peninsula. Global Change Biology, 2015, 21, 2191-2205.	4.2	58
39	Benefits from representing snow properties and related processes in coupled oceanâ€“sea ice models. Ocean Modelling, 2015, 87, 81-85.	1.0	4
40	Interactions between wind-blown snow redistribution and melt ponds in a coupled oceanâ€“sea ice model. Ocean Modelling, 2015, 87, 67-80.	1.0	24
41	Methods for biogeochemical studies of sea ice: The state of the art, caveats, and recommendations. Elementa, 2015, 3, .	1.1	77
42	Assessing the O2 budget under sea ice: An experimental and modelling approach. Elementa, 2015, 3, .	1.1	3
43	Modelling argon dynamics in first-year sea ice. Ocean Modelling, 2014, 73, 1-18.	1.0	29
44	Southern Ocean CO₂ sink: The contribution of the sea ice. Journal of Geophysical Research: Oceans, 2014, 119, 6340-6355.	1.0	72
45	A model reconstruction of the Antarctic sea ice thickness and volume changes over 1980â€“2008 using data assimilation. Ocean Modelling, 2013, 64, 67-75.	1.0	75
46	Role of sea ice in global biogeochemical cycles: emerging views and challenges. Quaternary Science Reviews, 2013, 79, 207-230.	1.4	202
47	On the formulation of snow thermal conductivity in largeâ€scale sea ice models. Journal of Advances in Modeling Earth Systems, 2013, 5, 542-557.	1.3	40
48	Future Arctic Ocean primary productivity from CMIP5 simulations: Uncertain outcome, but consistent mechanisms. Global Biogeochemical Cycles, 2013, 27, 605-619.	1.9	185
49	Physical and biogeochemical properties in landfast sea ice (Barrow, Alaska): Insights on brine and gas dynamics across seasons. Journal of Geophysical Research: Oceans, 2013, 118, 3172-3189.	1.0	75
50	Fullâ€depth desalination of warm sea ice. Journal of Geophysical Research: Oceans, 2013, 118, 435-447.	1.0	30
51	Investigations on physical and textural properties of Arctic first-year sea ice in the Amundsen Gulf, Canada, November 2007â€“June 2008 (IPY-CFL system study). Journal of Glaciology, 2013, 59, 819-837.	1.1	22
52	Better constraints on the sea-ice state using global sea-ice data assimilation. Geoscientific Model Development, 2012, 5, 1501-1515.	1.3	23
53	Chlorophyll a in Antarctic sea ice from historical ice core data. Geophysical Research Letters, 2012, 39, .	1.5	95
54	Development and validation of a one-dimensional snow-ice algae model against observations in Resolute Passage, Canadian Arctic Archipelago. Journal of Geophysical Research, 2011, 116, .	3.3	25

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55	The influence of winds, sea-surface temperature and precipitation anomalies on Antarctic regional sea-ice conditions during IPY 2007. Deep-Sea Research Part II: Topical Studies in Oceanography, 2011, 58, 999-1018.	0.6	23
56	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.	0.6	31
57	The vertical age profile in sea ice: Theory and numerical results. Ocean Modelling, 2011, 40, 211-226.	1.0	3
58	A new snow thermodynamic scheme for large-scale sea-ice models. Annals of Glaciology, 2011, 52, 337-346.	2.8	32
59	On the influence of model physics on simulations of Arctic and Antarctic sea ice. Cryosphere, 2011, 5, 687-699.	1.5	62
60	The multiphase physics of sea ice: a review for model developers. Cryosphere, 2011, 5, 989-1009.	1.5	101
61	EC-Earth. Bulletin of the American Meteorological Society, 2010, 91, 1357-1364.	1.7	474
62	Modeling brine and nutrient dynamics in Antarctic sea ice: The case of dissolved silica. Journal of Geophysical Research, 2010, 115, .	3.3	117
63	Spatial distribution of the iron supply to phytoplankton in the Southern Ocean: a model study. Biogeosciences, 2009, 6, 2861-2878.	1.3	111
64	Simulating the mass balance and salinity of Arctic and Antarctic sea ice. 1. Model description and validation. Ocean Modelling, 2009, 27, 33-53.	1.0	230
65	Simulating the mass balance and salinity of Arctic and Antarctic sea ice. 2. Importance of sea ice salinity variations. Ocean Modelling, 2009, 27, 54-69.	1.0	78
66	Increased variability of the Arctic summer ice extent in a warmer climate. Geophysical Research Letters, 2009, 36, .	1.5	80
67	Summer landfast sea ice desalination at Point Barrow, Alaska: Modeling and observations. Journal of Geophysical Research, 2007, 112, .	3.3	56
68	Modeling the salinity profile of undeformed Arctic sea ice. Geophysical Research Letters, 2006, 33, .	1.5	31
69	On the sensitivity of undeformed Arctic sea ice to its vertical salinity profile. Geophysical Research Letters, 2005, 32, .	1.5	29