Mario Hoppema

List of Publications by Year
in descending order

90 papers	9,561 citations	94433 37 h-index	43889 91 g-index
107 all docs	107 docs citations	107 times ranked	11014 citing authors

#	Article	IF	Citations
1	Climatological mean and decadal change in surface ocean pCO2, and net seaâ€“air CO2 flux over the global oceans. Deep-Sea Research Part II: Topical Studies in Oceanography, 2009, 56, 554-577.	1.4	1,540
2	Global Carbon Budget 2018. Earth System Science Data, 2018, 10, 2141-2194.	9.9	1,167
3	Global Carbon Budget 2016. Earth System Science Data, 2016, 8, 605-649.	9.9	905
4	The oceanic sink for anthropogenic CO ₂ from 1994 to 2007. Science, 2019, 363, 1193-1199.	12.6	505
5	Global carbon budget 2014. Earth System Science Data, 2015, 7, 47-85.	9.9	463
6	The Global Ocean Data Analysis Project version 2 (GLODAPv2) â€“ an internally consistent data product for the world ocean. Earth System Science Data, 2016, 8, 297-323.	9.9	424
7	A multi-decade record of high-quality <i>f</i>CO₂ data in version 3 of the Surface Ocean CO₂ Atlas (SOCAT). Earth System Science Data, 2016, 8, 383-413.	9.9	413
8	The reinvigoration of the Southern Ocean carbon sink. Science, 2015, 349, 1221-1224.	12.6	331
9	A new global interior ocean mapped climatology: the 1Â°â€Ã—â€‰â€1Â° GLODAP version 2. Earth System Science Data, 2016, 8, 325-340.	9.9	284
10	Seaâ€“air CO₂ fluxes in the Southern Ocean for the period 1990â€“2009. Biogeosciences, 2013, 10, 4037-4054.	3.3	162
11	A uniform, quality controlled Surface Ocean CO₂ Atlas (SOCAT). Earth System Science Data, 2013, 5, 125-143.	9.9	158
12	An update to the Surface Ocean CO₂ Atlas (SOCAT version 2). Earth System Science Data, 2014, 6, 69-90.	9.9	158
13	The CARINA data synthesis project: introduction and overview. Earth System Science Data, 2010, 2, 105-121.	9.9	116
14	Decadal-scale variations of water mass properties in the deep Weddell Sea. Ocean Dynamics, 2004, 54, 77-91.	2.2	113
15	Seasonally different carbon flux changes in the Southern Ocean inâ€‰response to the southern annular mode. Global Biogeochemical Cycles, 2013, 27, 1236-1245.	4.9	107
16	The Weddell Gyre, Southern Ocean: Present Knowledge and Future Challenges. Reviews of Geophysics, 2019, 57, 623-708.	23.0	105
17	GLODAPv2.2019 â€“ an update of GLODAPv2. Earth System Science Data, 2019, 11, 1437-1461.	9.9	102
18	Surface Ocean CO₂ Atlas (SOCAT) gridded data products. Earth System Science Data, 2013, 5, 145-153.	9.9	101

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19	The transport of the Weddell Gyre across the Prime Meridian. Deep-Sea Research Part II: Topical Studies in Oceanography, 2005, 52, 513-528.	1.4	88
20	Warming of deep and abyssal water masses along the Greenwich meridian on decadal time scales: The Weddell gyre as a heat buffer. Deep-Sea Research Part II: Topical Studies in Oceanography, 2011, 58, 2509-2523.	1.4	83
21	An updated version of the global interior ocean biogeochemical data product, GLODAPv2.2020. Earth System Science Data, 2020, 12, 3653-3678.	9.9	76
22	Winter-summer differences of carbon dioxide and oxygen in the Weddell Sea surface layer. Marine Chemistry, 1995, 51, 177-192.	2.3	69
23	Mapping of the airâ€“sea CO2 flux in the Arctic Ocean and its adjacent seas: Basin-wide distribution and seasonal to interannual variability. Polar Science, 2016, 10, 323-334.	1.2	67
24	The contribution of the Weddell Gyre to the lower limb of the Global Overturning Circulation. Journal of Geophysical Research: Oceans, 2014, 119, 3357-3377.	2.6	61
25	Arctic Ocean CO₂ uptake: an improved multiyear estimate of the airâ€“sea CO₂ flux incorporating chlorophyllÂ<i>a</i> concentrations. Biogeosciences, 2018, 15, 1643-1661.	3.3	56
26	An updated version of the global interior ocean biogeochemical data product, GLODAPv2.2021. Earth System Science Data, 2021, 13, 5565-5589.	9.9	54
27	Annual uptake of atmospheric CO2 by the Weddell Sea derived from a surface layer balance, including estimations of entrainment and new production. Journal of Marine Systems, 1999, 19, 219-233.	2.1	52
28	A rapid transition from ice covered CO₂â€“rich waters to a biologically mediated CO₂ sink in the eastern Weddell Gyre. Biogeosciences, 2008, 5, 1373-1386.	3.3	50
29	Direct observation of increasing CO2 in the Weddell Gyre along the Prime Meridian during 1973â€“2008. Deep-Sea Research Part II: Topical Studies in Oceanography, 2011, 58, 2613-2635.	1.4	48
30	Redfield behavior of carbon, nitrogen, and phosphorus depletions in Antarctic surface water. Limnology and Oceanography, 1999, 44, 220-224.	3.1	47
31	Decline of deep and bottom water ventilation and slowing down of anthropogenic carbon storage in the Weddell Sea, 1984â€“2011. Deep-Sea Research Part I: Oceanographic Research Papers, 2013, 76, 66-84.	1.4	45
32	Prominent renewal of Weddell Sea Deep Water from a remote source. Journal of Marine Research, 2001, 59, 257-279.	0.3	44
33	Spatiotemporal variations of <i>f</i>CO₂ in the North Sea. Ocean Science, 2010, 6, 77-89.	3.4	44
34	On the relation between organic and inorganic carbon in the Weddell Sea. Journal of Marine Systems, 1998, 17, 59-76.	2.1	42
35	Controls of primary production in two phytoplankton blooms in the Antarctic Circumpolar Current. Deep-Sea Research Part II: Topical Studies in Oceanography, 2017, 138, 63-73.	1.4	42
36	Repeated CFC sections at the Greenwich Meridian in the Weddell Sea. Journal of Geophysical Research, 2002, 107, 5-1.	3.3	40

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37	Substantial advective iron loss diminishes phytoplankton production in the Antarctic Zone. Global Biogeochemical Cycles, 2003, 17, .	4.9	40
38	An update of anthropogenic CO2 storage rates in the western South Atlantic basin and the role of Antarctic Bottom Water. Journal of Marine Systems, 2012, 94, 197-203.	2.1	39
39	Late summer net community production in the central Arctic Ocean using multiple approaches. Global Biogeochemical Cycles, 2014, 28, 1129-1148.	4.9	39
40	Distribution and mineralogy of carbonate sediments on Antarctic shelves. Journal of Marine Systems, 2012, 90, 77-87.	2.1	36
41	Whole season net community production in the Weddell Sea. Polar Biology, 2007, 31, 101-111.	1.2	32
42	The seasonal behaviour of carbon dioxide and oxygen in the coastal North Sea along The Netherlands. Journal of Sea Research, 1991, 28, 167-179.	1.0	31
43	CO2 in the Weddell Gyre and Antarctic Circumpolar Current: austral autumn and early winter. Marine Chemistry, 2000, 72, 203-220.	2.3	31
44	Distribution of barium in the Weddell Gyre: Impact of circulation and biogeochemical processes. Marine Chemistry, 2010, 122, 118-129.	2.3	31
45	A global monthly climatology of total alkalinity: a neural network approach. Earth System Science Data, 2019, 11, 1109-1127.	9.9	31
46	Sea-ice derived meltwater stratification slows the biological carbon pump: results from continuous observations. Nature Communications, 2021, 12, 7309.	12.8	31
47	Weddell Sea is a globally significant contributor to deep-sea sequestration of natural carbon dioxide. Deep-Sea Research Part I: Oceanographic Research Papers, 2004, 51, 1169-1177.	1.4	30
48	Dataâ€based estimation of anthropogenic carbon and acidification in the Weddell Sea on a decadal timescale. Journal of Geophysical Research, 2010, 115, .	3.3	29
49	Annual export production in the interior Weddell Gyre estimated from a chemical mass balance of nutrients. Deep-Sea Research Part II: Topical Studies in Oceanography, 2002, 49, 1675-1689.	1.4	28
50	Transient tracer distributions in the Fram Strait in 2012 and inferred anthropogenic carbon content and transport. Ocean Science, 2016, 12, 319-333.	3.4	28
51	Perspectives of transient tracer applications and limiting cases. Ocean Science, 2015, 11, 699-718.	3.4	28
52	Direct measurements reveal insignificant storage of anthropogenic CO2in the Abyssal Weddell Sea. Geophysical Research Letters, 2001, 28, 1747-1750.	4.0	26
53	Rapid invasion of anthropogenic CO₂into the deep circulation of the Weddell Gyre. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130056.	3.4	26
54	The distribution and seasonal variation of alkalinity in the Southern Bight of the North Sea and in the Western Wadden Sea. Journal of Sea Research, 1990, 26, 11-23.	1.0	25

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55	Reframing the carbon cycle of the subpolar Southern Ocean. Science Advances, 2019, 5, eaav6410.	10.3	25
56	Winter weather controls net influx of atmospheric CO2 on the north-west European shelf. Scientific Reports, 2019, 9, 20153.	3.3	25
57	The oxygen budget of the western Wadden Sea, The Netherlands. Estuarine, Coastal and Shelf Science, 1991, 32, 483-502.	2.1	24
58	Weddell Sea turned from source to sink for atmospheric CO2 between pre-industrial time and present. Global and Planetary Change, 2004, 40, 219-231.	3.5	24
59	Carbon dynamics of the Weddell Gyre, Southern Ocean. Global Biogeochemical Cycles, 2015, 29, 288-306.	4.9	24
60	Increase of carbon dioxide in the bottom water of the Weddell Sea, Antarctica. Marine Chemistry, 1998, 59, 201-210.	2.3	22
61	Intense nutrient removal in the remote area off Larsen Ice Shelf (Weddell Sea). Polar Biology, 2000, 23, 85-94.	1.2	22
62	Biological and physical controls on N₂, O₂, and CO₂ distributions in contrasting Southern Ocean surface waters. Global Biogeochemical Cycles, 2015, 29, 994-1013.	4.9	22
63	A global monthly climatology of oceanic total dissolved inorganic carbon: a neural network approach. Earth System Science Data, 2020, 12, 1725-1743.	9.9	22
64	Interannual variations of the Antarctic Ocean CO2 uptake from 1986 to 1994. Marine Chemistry, 2000, 72, 103-114.	2.3	21
65	High productivity in an ice melting hot spot at the eastern boundary of the Weddell Gyre. Global Biogeochemical Cycles, 2010, 24, .	4.9	21
66	Estimating the recharge properties of the deep ocean using noble gases and helium isotopes. Journal of Geophysical Research: Oceans, 2016, 121, 5959-5979.	2.6	21
67	Distributions, trends and inter-annual variability of nutrients along a repeat section through the Weddell Sea (1996â€“2011). Marine Chemistry, 2015, 177, 545-553.	2.3	20
68	Mesoscale features create hotspots of carbon uptake in the Antarctic Circumpolar Current. Deep-Sea Research Part II: Topical Studies in Oceanography, 2017, 138, 39-51.	1.4	20
69	Particulate organic carbon export across the Antarctic Circumpolar Current at 10Â°E: Differences between north and south of the Antarctic Polar Front. Deep-Sea Research Part II: Topical Studies in Oceanography, 2017, 138, 86-101.	1.4	20
70	Multidecadal Warming and Density Loss in the Deep Weddell Sea, Antarctica. Journal of Climate, 2020, 33, 9863-9881.	3.2	19
71	Mercury and methylmercury in the Atlantic sector of the Southern Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2017, 138, 52-62.	1.4	18
72	Consistency of cruise data of the CARINA database in the Atlantic sector of the Southern Ocean. Earth System Science Data, 2009, 1, 63-75.	9.9	17

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73	Interannual controls on Weddell Sea surface water fCO2 during the autumnâ€“winter transition phase. Deep-Sea Research Part I: Oceanographic Research Papers, 2004, 51, 793-808.	1.4	16
74	Enrichment of silicate and CO2 and circulation of the bottom water in the Weddell Sea. Deep-Sea Research Part I: Oceanographic Research Papers, 1998, 45, 1797-1817.	1.4	15
75	Chapter 6 Biogeochemistry of Polynyas and Their Role in Sequestration of Anthropogenic Constituents. Elsevier Oceanography Series, 2007, 74, 193-221.	0.1	15
76	Assessing the internal consistency of the CARINA database in the Indian sector of the Southern Ocean. Earth System Science Data, 2010, 2, 51-70.	9.9	14
77	Variations of Winter Water properties and sea ice along the Greenwich meridian on decadal time scales. Deep-Sea Research Part II: Topical Studies in Oceanography, 2011, 58, 2524-2532.	1.4	13
78	Temporal changes in ventilation and the carbonate system in the Atlantic sector of the Southern Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2017, 138, 26-38.	1.4	13
79	Variability of nutrients and carbon dioxide in the Antarctic Intermediate Water between 1990 and 2014. Ocean Dynamics, 2018, 68, 295-308.	2.2	13
80	Carbon dioxide and oxygen disequilibrium in a tidal basin (Dutch wadden sea). Journal of Sea Research, 1993, 31, 221-229.	1.0	12
81	Meteorology and oceanography of the Atlantic sector of the Southern Oceanâ€”a review of German achievements from the last decade. Ocean Dynamics, 2016, 66, 1379-1413.	2.2	12
82	Importance of deep mixing and silicic acid in regulating phytoplankton biomass and community in the iron-limited Antarctic Polar Front region in summer. Deep-Sea Research Part II: Topical Studies in Oceanography, 2017, 138, 74-85.	1.4	12
83	Abruptly attenuated carbon sequestration with Weddell Sea dense waters by 2100. Nature Communications, 2022, 13, .	12.8	12
84	A vision for FAIR ocean data products. Communications Earth & Environment, 2021, 2, .	6.8	11
85	Review of Ostracoda (Crustacea) living below the Carbonate Compensation Depth and the deepest record of a calcified ostracod. Progress in Oceanography, 2019, 178, 102144.	3.2	9
86	Renewal time and transport of unventilated Central Intermediate Water of the Weddell Sea derived from biogeochemical properties. Journal of Marine Research, 2002, 60, 677-697.	0.3	8
87	Causes of deep-water variation: Comment on the paper by L.H. Smedsrud â€œWarming of the deep water in the Weddell Sea along the Greenwich meridian: 1977â€“2001â€• Deep-Sea Research Part I: Oceanographic Research Papers, 2006, 53, 574-577.	1.4	6
88	Expanding Carbon Data Collection From the Ocean's Interior. Eos, 2010, 91, 457-458.	0.1	6
89	Insignificant buffering capacity of Antarctic shelf carbonates. Global Biogeochemical Cycles, 2013, 27, 11-20.	4.9	6
90	Calcium carbonate saturation states along the West Antarctic Peninsula. Antarctic Science, 2021, 33, 575-595.	0.9	1