Are Olsen

List of Publications by Year
in descending order

119 papers	13,819 citations	57631 44 h-index	23472 111 g-index
189 all docs	189 docs citations	189 times ranked	13979 citing authors

#	Article	IF	Citations
1	Long-term surface pCO₂ trends from observations and models. Tellus, Series B: Chemical and Physical Meteorology, 2022, 66, 23083.	0.8	46
2	Continued warming, salinification and oxygenation of the Greenland Sea gyre. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 70, 1476434.	0.8	29
3	Best Practice Data Standards for Discrete Chemical Oceanographic Observations. Frontiers in Marine Science, 2022, 8, .	1.2	16
4	Acidification of the Nordic Seas. Biogeosciences, 2022, 19, 979-1012.	1.3	21
5	Nordic Seas Heat Loss, Atlantic Inflow, and Arctic Sea Ice Cover Over the Last Century. Reviews of Geophysics, 2022, 60, .	9.0	43
6	How Is the Ocean Anthropogenic Carbon Reservoir Filled?. Global Biogeochemical Cycles, 2022, 36, .	1.9	9
7	Preformed Properties for Marine Organic Matter and Carbonate Mineral Cycling Quantification. Global Biogeochemical Cycles, 2021, 35, e2020GB006623.	1.9	25
8	The northern European shelf as an increasing net sink for CO₂. Biogeosciences, 2021, 18, 1127-1147.	1.3	14
9	Inâ€air oneâ€point calibration of oxygen optodes in underway systems. Limnology and Oceanography: Methods, 2021, 19, 293-302.	1.0	1
10	Sea surface pCO2 variability and air-sea CO2 exchange in the coastal Sudanese Red Sea. Regional Studies in Marine Science, 2021, 44, 101796.	0.4	0
11	A vision for FAIR ocean data products. Communications Earth & Environment, 2021, 2, .	2.6	11
12	An updated version of the global interior ocean biogeochemical data product, GLODAPv2.2021. Earth System Science Data, 2021, 13, 5565-5589.	3.7	54
13	Processes Driving Global Interior Ocean pH Distribution. Global Biogeochemical Cycles, 2020, 34, e2019GB006229.	1.9	35
14	Ocean Biogeochemical Predictionsâ€”Initialization and Limits of Predictability. Frontiers in Marine Science, 2020, 7, .	1.2	14
15	A multi-decadal record of oceanographic changes of the past ~165 years (1850-2015 AD) from Northwest of Iceland. PLoS ONE, 2020, 15, e0239373.	1.1	6
16	A global monthly climatology of oceanic total dissolved inorganic carbon: a neural network approach. Earth System Science Data, 2020, 12, 1725-1743.	3.7	22
17	Global Carbon Budget 2020. Earth System Science Data, 2020, 12, 3269-3340.	3.7	1,477
18	An updated version of the global interior ocean biogeochemical data product, GLODAPv2.2020. Earth System Science Data, 2020, 12, 3653-3678.	3.7	76

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19	A Framework for the Development, Design and Implementation of a Sustained Arctic Ocean Observing System. Frontiers in Marine Science, 2019, 6, .	1.2	14
20	On the Future of Argo: A Global, Full-Depth, Multi-Disciplinary Array. Frontiers in Marine Science, 2019, 6, .	1.2	235
21	Large Decadal Changes in Airâ€Sea CO₂ Fluxes in the Caribbean Sea. Journal of Geophysical Research: Oceans, 2019, 124, 6960-6982.	1.0	14
22	A Surface Ocean CO2 Reference Network, SOCONET and Associated Marine Boundary Layer CO2 Measurements. Frontiers in Marine Science, 2019, 6, .	1.2	26
23	Constraining the Oceanic Uptake and Fluxes of Greenhouse Gases by Building an Ocean Network of Certified Stations: The Ocean Component of the Integrated Carbon Observation System, ICOS-Oceans. Frontiers in Marine Science, 2019, 6, .	1.2	13
24	Trends of Ocean Acidification and pCO₂ in the Northern North Sea, 2003â€“2015. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 3088-3103.	1.3	24
25	Trends in anthropogenic carbon in the Arctic Ocean. Progress in Oceanography, 2019, 178, 102177.	1.5	10
26	Wintertime fCO₂ Variability in the Subpolar North Atlantic Since 2004. Geophysical Research Letters, 2019, 46, 1580-1590.	1.5	13
27	The oceanic sink for anthropogenic CO ₂ from 1994 to 2007. Science, 2019, 363, 1193-1199.	6.0	505
28	Winter weather controls net influx of atmospheric CO2 on the north-west European shelf. Scientific Reports, 2019, 9, 20153.	1.6	25
29	Surface ocean pH and buffer capacity: past, present and future. Scientific Reports, 2019, 9, 18624.	1.6	207
30	A global monthly climatology of total alkalinity: a neural network approach. Earth System Science Data, 2019, 11, 1109-1127.	3.7	31
31	GLODAPv2.2019 â€“ an update of GLODAPv2. Earth System Science Data, 2019, 11, 1437-1461.	3.7	102
32	A Modelâ€Based Evaluation of the Inverse Gaussian Transitâ€Time Distribution Method for Inferring Anthropogenic Carbon Storage in the Ocean. Journal of Geophysical Research: Oceans, 2018, 123, 1777-1800.	1.0	13
33	Inorganic carbon and water masses in the Irminger Sea sinceÂ1991. Biogeosciences, 2018, 15, 51-72.	1.3	14
34	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.	1.3	56
35	Constraining Projection-Based Estimates of the Future North Atlantic Carbon Uptake. Journal of Climate, 2018, 31, 3959-3978.	1.2	34
36	Mechanisms and Early Detections of Multidecadal Oxygen Changes in the Interior Subpolar North Atlantic. Geophysical Research Letters, 2018, 45, 4218-4229.	1.5	11

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37	Global Carbon Budget 2018. Earth System Science Data, 2018, 10, 2141-2194.	3.7	1,167
38	A global estimate of the full oceanic ¹³C Suess effect since the preindustrial. Global Biogeochemical Cycles, 2017, 31, 492-514.	1.9	87
39	A global ocean climatology of preindustrial and modern ocean Î´¹³C. Global Biogeochemical Cycles, 2017, 31, 515-534.	1.9	68
40	Arctic Intermediate Water in the Nordic Seas, 1991â€“2009. Deep-Sea Research Part I: Oceanographic Research Papers, 2017, 128, 82-97.	0.6	29
41	Effects of seaâ€ice and biogeochemical processes and storms on underâ€ice water fCO₂ during the winterâ€spring transition in the high <scp>A</scp>rctic <scp>O</scp>cean: Implications for seaâ€air CO₂ fluxes. Journal of Geophysical Research: Oceans, 2017, 122, 5566-5587.	1.0	38
42	Autonomous observing platform CO₂ data shed new light on the Southern Ocean carbon cycle. Global Biogeochemical Cycles, 2017, 31, 1032-1035.	1.9	1
43	chapter 2 A Statistical Gap-Filling Method to Interpolate Global Monthly Surface Ocean Carbon Dioxide Data. , 2017, , 15-62.		0
44	Aragonite saturation states and pH in western Norwegian fjords: seasonal cycles and controlling factors, 2005â€“2009. Ocean Science, 2016, 12, 937-951.	1.3	18
45	Ocean acidification in the subpolar North Atlantic: rates and mechanisms controlling pH changes. Biogeosciences, 2016, 13, 3701-3715.	1.3	21
46	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.	0.5	67
47	Irminger Sea deep convection injects oxygen and anthropogenic carbon to the ocean interior. Nature Communications, 2016, 7, 13244.	5.8	69
48	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.	3.7	424
49	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.	3.7	284
50	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.	3.7	413
51	Global Carbon Budget 2016. Earth System Science Data, 2016, 8, 605-649.	3.7	905
52	A statistical gapâ€filling method to interpolate global monthly surface ocean carbon dioxide data. Journal of Advances in Modeling Earth Systems, 2015, 7, 1554-1575.	1.3	31
53	Trends and drivers in global surface ocean pH over the past 3 decades. Biogeosciences, 2015, 12, 1285-1298.	1.3	112
54	Data-based estimates of the ocean carbon sink variability â€“ first results of the Surface Ocean <i>p</i>CO₂ Mapping intercomparison (SOCOM). Biogeosciences, 2015, 12, 7251-7278.	1.3	163

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55	Surface ocean-lower atmosphere study: Scientific synthesis and contribution to Earth system science. Anthropocene, 2015, 12, 54-68.	1.6	13
56	Arctic Carbon Cycle: Patterns, Impacts and Possible Changes. , 2015, , 95-115.		21
57	Global Carbon Budget 2015. Earth System Science Data, 2015, 7, 349-396.	3.7	616
58	Global carbon budget 2014. Earth System Science Data, 2015, 7, 47-85.	3.7	463
59	Interannual seaâ€“air CO₂ flux variability from an observation-driven ocean mixed-layer scheme. Biogeosciences, 2014, 11, 4599-4613.	1.3	111
60	Modelling ocean acidification in the Nordic and Barents Seas in present and future climate. Journal of Marine Systems, 2014, 131, 10-20.	0.9	27
61	Perspectives and Integration in SOLAS Science. Springer Earth System Sciences, 2014, , 247-306.	0.1	2
62	Productivity in the Barents Sea - Response to Recent Climate Variability. PLoS ONE, 2014, 9, e95273.	1.1	123
63	An update to the Surface Ocean CO₂ Atlas (SOCAT version 2). Earth System Science Data, 2014, 6, 69-90.	3.7	158
64	Seasonal Variations of the Surface Nutrients and Hydrography in the Norwegian Sea. International Journal of Environmental Science and Development, 2014, 5, 496-505.	0.2	9
65	Anthropogenic carbon changes in the Irminger Basin (1981â€“2006): Coupling Î´13CDIC and DIC observations. Journal of Marine Systems, 2013, 126, 24-32.	0.9	13
66	Annual and seasonal fCO2 and airâ€“sea CO2 fluxes in the Barents Sea. Journal of Marine Systems, 2013, 113-114, 62-74.	0.9	20
67	THE ROLE OF THE BARENTS SEA IN THE ARCTIC CLIMATE SYSTEM. Reviews of Geophysics, 2013, 51, 415-449.	9.0	362
68	An assessment of the Atlantic and Arctic seaâ€“air CO₂ fluxes, 1990â€“2009. Biogeosciences, 2013, 10, 607-627.	1.3	131
69	Global surface-ocean <i>p</i>^{CO₂} and seaâ€“air CO₂ flux variability from an observation-driven ocean mixed-layer scheme. Ocean Science, 2013, 9, 193-216.	1.3	141
70	A uniform, quality controlled Surface Ocean CO₂ Atlas (SOCAT). Earth System Science Data, 2013, 5, 125-143.	3.7	158
71	Surface Ocean CO₂ Atlas (SOCAT) gridded data products. Earth System Science Data, 2013, 5, 145-153.	3.7	101
72	The role of phytoplankton dynamics in the seasonal and interannual variability of carbon in the subpolar North Atlantic â€“ a modeling study. Geoscientific Model Development, 2012, 5, 683-707.	1.3	13

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73	Surface water fCO2 algorithms for the high-latitude Pacific sector of the Southern Ocean. Remote Sensing of Environment, 2012, 119, 184-196.	4.6	25
74	Global data products help assess changes to ocean carbon sink. Eos, 2012, 93, 125-126.	0.1	14
75	A model study of the seasonal and longâ€“term North Atlantic surface <i>p</i>CO₂ variability. Biogeosciences, 2012, 9, 907-923.	1.3	25
76	The Nordic Seas carbon budget: Sources, sinks, and uncertainties. Global Biogeochemical Cycles, 2011, 25, n/a-n/a.	1.9	46
77	Direct measurements of CO2flux in the Greenland Sea. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	13
78	Spatiotemporal variations of <i>f</i>CO₂ in the North Sea. Ocean Science, 2010, 6, 77-89.	1.3	44
79	Large Î´ ¹³ C Gradients in the Preindustrial North Atlantic Revealed. Science, 2010, 330, 658-659.	6.0	49
80	Nordic Seas nutrients data in CARINA. Earth System Science Data, 2010, 2, 205-213.	3.7	7
81	Recent acceleration of the sea surface fCO₂ growth rate in the North Atlantic subpolar gyre (1993â€“2008) revealed by winter observations. Global Biogeochemical Cycles, 2010, 24, .	1.9	67
82	Nordic seas transit time distributions and anthropogenic CO₂. Journal of Geophysical Research, 2010, 115, .	3.3	27
83	Expanding Carbon Data Collection From the Ocean's Interior. Eos, 2010, 91, 457-458.	0.1	6
84	The CARINA data synthesis project: introduction and overview. Earth System Science Data, 2010, 2, 105-121.	3.7	116
85	Nordic Seas dissolved oxygen data in CARINA. Earth System Science Data, 2010, 2, 123-131.	3.7	5
86	CARINA data synthesis project: pH data scale unification and cruise adjustments. Earth System Science Data, 2010, 2, 133-155.	3.7	16
87	Atlantic Ocean CARINA data: overview and salinity adjustments. Earth System Science Data, 2010, 2, 17-34.	3.7	20
88	Quality control procedures and methods of the CARINA database. Earth System Science Data, 2010, 2, 35-49.	3.7	89
89	Arctic Ocean data in CARINA. Earth System Science Data, 2010, 2, 71-78.	3.7	23
90	Estimating the monthly <i>p</i>CO₂ distribution in the North Atlantic using a self-organizing neural network. Biogeosciences, 2009, 6, 1405-1421.	1.3	109

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91	Tracking the Variable North Atlantic Sink for Atmospheric CO ₂. Science, 2009, 326, 1391-1393.	6.0	173
92	Recommendations for autonomous underway pCO2 measuring systems and data-reduction routines. Deep-Sea Research Part II: Topical Studies in Oceanography, 2009, 56, 512-522.	0.6	265
93	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.	0.6	1,540
94	Algorithms to estimate the carbon dioxide uptake in the northern North Atlantic using shipboard observations, satellite and ocean analysis data. Deep-Sea Research Part II: Topical Studies in Oceanography, 2009, 56, 630-639.	0.6	38
95	Optimal evaluation of the surface ocean CO₂ system in the northern North Atlantic using data from voluntary observing ships. Limnology and Oceanography: Methods, 2009, 7, 109-118.	1.0	28
96	Modelling recent changes in carbon uptake in the North Atlantic. IOP Conference Series: Earth and Environmental Science, 2009, 6, 032011.	0.2	0
97	Overview of the Nordic Seas CARINA data and salinity measurements. Earth System Science Data, 2009, 1, 25-34.	3.7	15
98	Nordic Seas total dissolved inorganic carbon data in CARINA. Earth System Science Data, 2009, 1, 35-43.	3.7	13
99	Nordic Seas total alkalinity data in CARINA. Earth System Science Data, 2009, 1, 77-86.	3.7	10
100	Sea-surface CO₂ fugacity in the subpolar North Atlantic. Biogeosciences, 2008, 5, 535-547.	1.3	60
101	Seasonal and interannual variability of the airâ€“sea CO2 flux in the Atlantic sector of the Barents Sea. Marine Chemistry, 2007, 104, 203-213.	0.9	44
102	Airâ€“sea CO2 fluxes in the Caribbean Sea from 2002â€“2004. Journal of Marine Systems, 2007, 66, 272-284.	0.9	34
103	Magnitude and origin of the anthropogenic CO2increase and13C Suess effect in the Nordic seas since 1981. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	1.9	89
104	Mg/Ca ratios in the planktonic foraminiferNeogloboquadrina pachyderma(sinistral) in the northern North Atlantic/Nordic Seas. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	1.0	31
105	Reconstructing the time history of the air-sea CO2disequilibrium and its rate of change in the eastern subpolar North Atlantic, 1972â€“1989. Geophysical Research Letters, 2006, 33, .	1.5	42
106	The effect of wind speed products and wind speed-gas exchange relationships on interannual variability of the air-sea CO2 gas transfer velocity. Tellus, Series B: Chemical and Physical Meteorology, 2005, 57, 95-106.	0.8	28
107	Sea-ice and brine formation in Storfjorden: Implications for the Arctic wintertime airâ€”sea CO2 flux. Geophysical Monograph Series, 2005, , 177-187.	0.1	13
108	A review of the inorganic carbon cycle of the Nordic Seas and Barents Sea. Geophysical Monograph Series, 2005, , 157-175.	0.1	15

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109	Response of the surface ocean CO2 system in the Nordic seas and northern North Atlantic to climate change. Geophysical Monograph Series, 2005, , 189-197.	0.1	28
110	The effect of wind speed products and wind speedâ€"gas exchange relationships on interannual variability of the airâ€"sea CO2gas transfer velocity. Tellus, Series B: Chemical and Physical Meteorology, 2005, 57, 95-106.	0.8	4
111	Seaâ€"air flux of CO2 in the Caribbean Sea estimated using in situ and remote sensing data. Remote Sensing of Environment, 2004, 89, 309-325.	4.6	72
112	A decrease in the sink for atmospheric CO2in the North Atlantic. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	92
113	Diurnal variations of surface oceanpCO2and sea-air CO2flux evaluated using remotely sensed data. Geophysical Research Letters, 2004, 31, .	1.5	17
114	Anthropogenic increase of oceanicpCO2in the Barents Sea surface water. Journal of Geophysical Research, 2003, 108, .	3.3	30
115	On the nature of the factors that control spring bloom development at the entrance to the Barents Sea and their interannual variability. Sarsia, 2003, 88, 379-393.	0.5	32
116	Interannual variability in the wintertime airâ€"sea flux of carbon dioxide in the northern North Atlantic, 1981â€"2001. Deep-Sea Research Part I: Oceanographic Research Papers, 2003, 50, 1323-1338.	0.6	55
117	Air-sea flux of anthropogenic carbon dioxide in the North Atlantic. Geophysical Research Letters, 2002, 29, 16-1-16-4.	1.5	24
118	A high precision spectrophotometric method for on-line shipboard seawater pH measurements: the automated marine pH sensor (AMpS). Talanta, 2002, 56, 61-69.	2.9	60
119	The impact of climate variations on fluxes of oxygen in the Barents Sea. Continental Shelf Research, 2002, 22, 1117-1128.	0.9	5