Thomas L. FrÃ¶licher

List of Publications by Year
in descending order

87 papers	8,860 citations	53660 45 h-index	48187 88 g-index
114 all docs	114 docs citations	114 times ranked	10299 citing authors

#	Article	IF	Citations
1	Marine heatwaves under global warming. Nature, 2018, 560, 360-364.	13.7	821
2	Shrinking of fishes exacerbates impacts of global ocean changes on marine ecosystems. Nature Climate Change, 2013, 3, 254-258.	8.1	527
3	Projected 21st century decrease in marine productivity: a multi-model analysis. Biogeosciences, 2010, 7, 979-1005.	1.3	520
4	Carbon dioxide and climate impulse response functions for the computation of greenhouse gas metrics: a multi-model analysis. Atmospheric Chemistry and Physics, 2013, 13, 2793-2825.	1.9	517
5	Dominance of the Southern Ocean in Anthropogenic Carbon and Heat Uptake in CMIP5 Models. Journal of Climate, 2015, 28, 862-886.	1.2	432
6	Imminent ocean acidification in the Arctic projected with the NCAR global coupled carbon cycle-climate model. Biogeosciences, 2009, 6, 515-533.	1.3	417
7	Emerging risks from marine heat waves. Nature Communications, 2018, 9, 650.	5.8	370
8	Rapid Progression of Ocean Acidification in the California Current System. Science, 2012, 337, 220-223.	6.0	353
9	Projecting shifts in thermal habitat for 686 species on the North American continental shelf. PLoS ONE, 2018, 13, e0196127.	1.1	209
10	High-impact marine heatwaves attributable to human-induced global warming. Science, 2020, 369, 1621-1625.	6.0	206
11	Large benefits to marine fisheries of meeting the 1.5Â°C global warming target. Science, 2016, 354, 1591-1594.	6.0	191
12	Connecting Changing Ocean Circulation with Changing Climate. Journal of Climate, 2013, 26, 2268-2278.	1.2	152
13	Emergence of multiple ocean ecosystem drivers in a large ensemble suite with an Earth system model. Biogeosciences, 2015, 12, 3301-3320.	1.3	144
14	Natural variability and anthropogenic trends in oceanic oxygen in a coupled carbon cycleâ€"climate model ensemble. Global Biogeochemical Cycles, 2009, 23, .	1.9	143
15	Sources of uncertainties in 21st century projections of potential ocean ecosystem stressors. Global Biogeochemical Cycles, 2016, 30, 1224-1243.	1.9	142
16	Oxygen and indicators of stress for marine life in multi-model global warming projections. Biogeosciences, 2013, 10, 1849-1868.	1.3	140
17	Climate change, tropical fisheries and prospects for sustainable development. Nature Reviews Earth & Environment, 2020, 1, 440-454.	12.2	136
18	Structural uncertainty in projecting global fisheries catches under climate change. Ecological Modelling, 2016, 325, 57-66.	1.2	124

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19	Marine heatwaves exacerbate climate change impacts for fisheries in the northeast Pacific. Scientific Reports, 2020, 10, 6678.	1.6	121
20	Continued global warming after CO2 emissions stoppage. Nature Climate Change, 2014, 4, 40-44.	8.1	115
21	Modelling the effects of climate change on the distribution and production of marine fishes: accounting for trophic interactions in a dynamic bioclimate envelope model. Global Change Biology, 2013, 19, 2596-2607.	4.2	106
22	Building confidence in projections of the responses of living marine resources to climate change. ICES Journal of Marine Science, 2016, 73, 1283-1296.	1.2	106
23	Tambora 1815 as a test case for high impact volcanic eruptions: Earth system effects. Wiley Interdisciplinary Reviews: Climate Change, 2016, 7, 569-589.	3.6	105
24	Climate-induced interannual variability of marine primary and export production in three global coupled climate carbon cycle models. Biogeosciences, 2008, 5, 597-614.	1.3	104
25	Reversible and irreversible impacts of greenhouse gas emissions in multi-century projections with the NCAR global coupled carbon cycle-climate model. Climate Dynamics, 2010, 35, 1439-1459.	1.7	98
26	Biogeochemical extremes and compound events in the ocean. Nature, 2021, 600, 395-407.	13.7	96
27	Regional Impacts of Climate Change and Atmospheric CO2 on Future Ocean Carbon Uptake: A Multimodel Linear Feedback Analysis. Journal of Climate, 2011, 24, 2300-2318.	1.2	95
28	Is there warming in the pipeline? A multi-model analysis of the Zero Emissions Commitment from CO₂. Biogeosciences, 2020, 17, 2987-3016.	1.3	87
29	Equilibrium Climate Sensitivity Estimated by Equilibrating Climate Models. Geophysical Research Letters, 2020, 47, e2019GL083898.	1.5	84
30	Predicting the Impact of Climate Change on Threatened Species in UK Waters. PLoS ONE, 2013, 8, e54216.	1.1	78
31	The importance of ENSO phase during volcanic eruptions for detection and attribution. Geophysical Research Letters, 2016, 43, 2851-2858.	1.5	75
32	Upwelling in the Southern Ocean. Physics Today, 2015, 68, 27-32.	0.3	70
33	Marine high temperature extremes amplify the impacts of climate change on fish and fisheries. Science Advances, 2021, 7, eabh0895.	4.7	70
34	The global ocean is an ecosystem: simulating marine life and fisheries. Global Ecology and Biogeography, 2015, 24, 507-517.	2.7	68
35	Opportunities and challenges in using remaining carbon budgets to guide climate policy. Nature Geoscience, 2020, 13, 769-779.	5.4	68
36	LongRunMIP: Motivation and Design for a Large Collection of Millennial-Length AOGCM Simulations. Bulletin of the American Meteorological Society, 2019, 100, 2551-2570.	1.7	65

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37	Global vulnerability of marine mammals to global warming. Scientific Reports, 2020, 10, 548.	1.6	63
38	The declining uptake rate of atmospheric CO₂ by land and ocean sinks. Biogeosciences, 2014, 11, 3453-3475.	1.3	62
39	Extending the relationship between global warming and cumulative carbon emissions to multi-millennial timescales. Environmental Research Letters, 2015, 10, 075002.	2.2	62
40	Quantifying Errors in Observationally Based Estimates of Ocean Carbon Sink Variability. Global Biogeochemical Cycles, 2021, 35, e2020GB006788.	1.9	60
41	The Zero Emissions Commitment Model Intercomparison Project (ZECMIP) contribution to C4MIP: quantifying committed climate changes following zero carbon emissions. Geoscientific Model Development, 2019, 12, 4375-4385.	1.3	56
42	Emergence of anthropogenic signals in the ocean carbon cycle. Nature Climate Change, 2019, 9, 719-725.	8.1	54
43	Atmospheric CO₂ response to volcanic eruptions: The role of ENSO, season, and variability. Global Biogeochemical Cycles, 2013, 27, 239-251.	1.9	53
44	Increase in ocean acidity variability and extremes under increasing atmospheric CO₂. Biogeosciences, 2020, 17, 4633-4662.	1.3	52
45	Opportunities for climateâ€risk reduction through effective fisheries management. Global Change Biology, 2018, 24, 5149-5163.	4.2	50
46	Compound climate risks threaten aquatic food system benefits. Nature Food, 2021, 2, 673-682.	6.2	48
47	Sensitivity of atmospheric CO₂ and climate to explosive volcanic eruptions. Biogeosciences, 2011, 8, 2317-2339.	1.3	46
48	Mechanisms of millennial-scale atmospheric CO2 change in numerical model simulations. Quaternary Science Reviews, 2019, 220, 30-74.	1.4	46
49	WTO must ban harmful fisheries subsidies. Science, 2021, 374, 544-544.	6.0	45
50	Ocean (De)oxygenation Across the Last Deglaciation: Insights for the Future. Oceanography, 2014, 27, 26-35.	0.5	43
51	Southern Ocean anthropogenic carbon sink constrained by sea surface salinity. Science Advances, 2021, 7, .	4.7	42
52	An observing system simulation for Southern Ocean carbon dioxide uptake. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130046.	1.6	41
53	Sensitivity of radiative forcing, ocean heat uptake, and climate feedback to changes in anthropogenic greenhouse gases and aerosols. Journal of Geophysical Research D: Atmospheres, 2015, 120, 9837-9854.	1.2	34
54	Time of Emergence and Large Ensemble Intercomparison for Ocean Biogeochemical Trends. Global Biogeochemical Cycles, 2020, 34, e2019GB006453.	1.9	33

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55	Equilibrium Climate Sensitivity Obtained From Multimillennial Runs of Two GFDL Climate Models. Journal of Geophysical Research D: Atmospheres, 2018, 123, 1921-1941.	1.2	32
56	Compound high-temperature and low-chlorophyll extremes in the ocean over the satellite period. Biogeosciences, 2021, 18, 2119-2137.	1.3	32
57	Projecting coral responses to intensifying marine heatwaves under ocean acidification. Global Change Biology, 2022, 28, 1753-1765.	4.2	32
58	Timing and magnitude of climateâ€driven range shifts in transboundary fish stocks challenge their management. Global Change Biology, 2022, 28, 2312-2326.	4.2	30
59	Aerobic growth index (AGI): An index to understand the impacts of ocean warming and deoxygenation on global marine fisheries resources. Progress in Oceanography, 2021, 195, 102588.	1.5	28
60	Variability of the ocean carbon cycle in response to the North Atlantic Oscillation. Tellus, Series B: Chemical and Physical Meteorology, 2022, 64, 18738.	0.8	27
61	Climate, ocean circulation, and sea level changes under stabilization and overshoot pathways to 1.5â€‰K warming. Earth System Dynamics, 2018, 9, 817-828.	2.7	26
62	Can we project changes in fish abundance and distribution in response to climate?. Global Change Biology, 2020, 26, 3891-3905.	4.2	25
63	Contrasting Impact of Future CO₂ Emission Scenarios on the Extent of CaCO₃ Mineral Undersaturation in the Humboldt Current System. Journal of Geophysical Research: Oceans, 2018, 123, 2018-2036.	1.0	24
64	Contrasting Upper and Deep Ocean Oxygen Response to Protracted Global Warming. Global Biogeochemical Cycles, 2020, 34, e2020GB006601.	1.9	24
65	Potential predictability of marine ecosystem drivers. Biogeosciences, 2020, 17, 2061-2083.	1.3	24
66	Integrating environmental variability to broaden the research on coral responses to future ocean conditions. Global Change Biology, 2021, 27, 5532-5546.	4.2	23
67	Ocean planning for species on the move provides substantial benefits and requires few trade-offs. Science Advances, 2020, 6, .	4.7	22
68	Local Drivers of Marine Heatwaves: A Global Analysis With an Earth System Model. Frontiers in Climate, 2022, 4, .	1.3	21
69	Drivers of Continued Surface Warming After Cessation of Carbon Emissions. Geophysical Research Letters, 2017, 44, 10,633.	1.5	18
70	Climate Change-Induced Emergence of Novel Biogeochemical Provinces. Frontiers in Marine Science, 2020, 7, .	1.2	18
71	When can ocean acidification impacts be detected from decadal alkalinity measurements?. Global Biogeochemical Cycles, 2016, 30, 595-612.	1.9	17
72	Severe Lake Heatwaves Attributable to Humanâ€Induced Global Warming. Geophysical Research Letters, 2022, 49, .	1.5	16

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73	Hiatusâ€like decades in the absence of equatorial Pacific cooling and accelerated global ocean heat uptake. Geophysical Research Letters, 2017, 44, 7909-7918.	1.5	12
74	Impact of Climate Change Mitigation On Ocean Acidification Projections. , 2011, , .		12
75	Projecting global mariculture production and adaptation pathways under climate change. Global Change Biology, 2022, 28, 1315-1331.	4.2	12
76	Risk Management and Adaptation for Extremes and Abrupt Changes in Climate and Oceans: Current Knowledge Gaps. Frontiers in Climate, 2022, 3, .	1.3	11
77	Strong warming at high emissions. Nature Climate Change, 2016, 6, 823-824.	8.1	8
78	Characterizing uncertainty in climate impact projections: a case study with seven marine species on the North American continental shelf. ICES Journal of Marine Science, 2020, 77, 2118-2133.	1.2	8
79	Reemergence of Anthropogenic Carbon Into the Ocean's Mixed Layer Strongly Amplifies Transient Climate Sensitivity. Geophysical Research Letters, 2020, 47, e2020GL089275.	1.5	8
80	Coupling of Surface Ocean Heat and Carbon Perturbations over the Subtropical Cells under Twenty-First Century Climate Change. Journal of Climate, 2020, 33, 10321-10338.	1.2	6
81	ESTIMATING THE ECONOMIC IMPACTS OF CLIMATE CHANGE ON 16 MAJOR US FISHERIES. Climate Change Economics, 2021, 12, .	2.9	6
82	Extreme climatic events in the ocean. , 2019, , 53-60.		5
83	Changes of potential catches for North-East Atlantic small pelagic fisheries under climate change scenarios. Regional Environmental Change, 2020, 20, 1.	1.4	5
84	Linking observed changes in pelagic catches to temperature and oxygen in the Eastern Tropical Pacific. Fish and Fisheries, 2022, 23, 1371-1382.	2.7	4
85	Is deoxygenation detectable before warming in the thermocline?. Biogeosciences, 2020, 17, 1877-1895.	1.3	3
86	Temperature and oxygen supply shape the demersal community in a tropical Oxygen Minimum Zone. Environmental Biology of Fishes, 2022, 105, 1317-1333.	0.4	3
87	Thermal forces in the Southern Ocean upwelling. Physics Today, 2015, 68, 11-12.	0.3	0