

# Curtis Deutsch

## List of Publications by Year in descending order

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Version: 2024-02-01

67  
papers

6,287  
citations

109137

35  
h-index

95083

68  
g-index

73  
all docs

73  
docs citations

73  
times ranked

5795  
citing authors

#	ARTICLE	IF	CITATIONS
1	Avoiding ocean mass extinction from climate warming. <i>Science</i> , 2022, 376, 524-526.	6.0	72
2	Impact of warming on aquatic body sizes explained by metabolic scaling from microbes to macrofauna. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	21
3	Variable particle size distributions reduce the sensitivity of global export flux to climate change. <i>Biogeosciences</i> , 2021, 18, 229-250.	1.3	10
4	Coastal processes modify projections of some climate-driven stressors in the California Current System. <i>Biogeosciences</i> , 2021, 18, 2871-2890.	1.3	18
5	Coastal eutrophication drives acidification, oxygen loss, and ecosystem change in a major oceanic upwelling system. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	41
6	Evaluation of high-resolution atmospheric and oceanic simulations of the California Current System. <i>Progress in Oceanography</i> , 2021, 195, 102564.	1.5	23
7	Biochemical Barriers on the Path to Ocean Anoxia?. <i>MBio</i> , 2021, 12, e0133221.	1.8	6
8	Biogeochemical variability in the California Current System. <i>Progress in Oceanography</i> , 2021, 196, 102565.	1.5	26
9	Configuration and Validation of an Oceanic Physical and Biogeochemical Model to Investigate Coastal Eutrophication in the Southern California Bight. <i>Journal of Advances in Modeling Earth Systems</i> , 2021, 13, e2020MS002296.	1.3	5
10	Quantifying Cyanobacteria growth under DIC limitation. <i>Computational and Structural Biotechnology Journal</i> , 2021, 19, 6456-6464.	1.9	2
11	Mechanisms of Future Changes in Equatorial Upwelling: CMIP5 Intermodel Analysis. <i>Journal of Climate</i> , 2020, 33, 497-510.	1.2	13
12	Attributing Causes of Future Climate Change in the California Current System With Multimodel Downscaling. <i>Global Biogeochemical Cycles</i> , 2020, 34, e2020GB006646.	1.9	25
13	Metabolic trait diversity shapes marine biogeography. <i>Nature</i> , 2020, 585, 557-562.	13.7	127
14	Sea surface temperature across the Subarctic North Pacific and marginal seas through the past 20,000 years: A paleoceanographic synthesis. <i>Quaternary Science Reviews</i> , 2020, 246, 106519.	1.4	8
15	Quantitative models of nitrogen-fixing organisms. <i>Computational and Structural Biotechnology Journal</i> , 2020, 18, 3905-3924.	1.9	16
16	Oxygen supply capacity in animals evolves to meet maximum demand at the current oxygen partial pressure regardless of size or temperature. <i>Journal of Experimental Biology</i> , 2020, 223, .	0.8	50
17	Climate-driven aerobic habitat loss in the California Current System. <i>Science Advances</i> , 2020, 6, eaay3188.	4.7	75
18	Carbon Transfer from the Host Diatom Enables Fast Growth and High Rate of N <sub>2</sub> Fixation by Symbiotic Heterocystous Cyanobacteria. <i>Plants</i> , 2020, 9, 192.	1.6	18

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19	Heterogeneous nitrogen fixation rates confer energetic advantage and expanded ecological niche of unicellular diazotroph populations. <i>Communications Biology</i> , 2020, 3, 172.	2.0	10
20	A Mechanistic Model of Macromolecular Allocation, Elemental Stoichiometry, and Growth Rate in Phytoplankton. <i>Frontiers in Microbiology</i> , 2020, 11, 86.	1.5	34
21	Mechanistic Model for the Coexistence of Nitrogen Fixation and Photosynthesis in Marine <i>Trichodesmium</i> . <i>MSystems</i> , 2019, 4, .	1.7	23
22	Microbial ecosystem dynamics drive fluctuating nitrogen loss in marine anoxic zones. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 7220-7225.	3.3	27
23	Mechanisms of Low-Frequency Oxygen Variability in the North Pacific. <i>Global Biogeochemical Cycles</i> , 2019, 33, 110-124.	1.9	17
24	Quantifying Oxygen Management and Temperature and Light Dependencies of Nitrogen Fixation by <i>Crocospaera watsonii</i> . <i>MSphere</i> , 2019, 4, .	1.3	26
25	Biogeochemical Role of Subsurface Coherent Eddies in the Ocean: Tracer Cannonballs, Hypoxic Storms, and Microbial Stewpots?. <i>Global Biogeochemical Cycles</i> , 2018, 32, 226-249.	1.9	53
26	Oxygen minimum zone biotic baseline transects for paleoceanographic reconstructions in Santa Barbara Basin, CA. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2018, 150, 118-131.	0.6	4
27	Global niche of marine anaerobic metabolisms expanded by particle microenvironments. <i>Nature Geoscience</i> , 2018, 11, 263-268.	5.4	221
28	Temperature-dependent hypoxia explains biogeography and severity of end-Permian marine mass extinction. <i>Science</i> , 2018, 362, .	6.0	214
29	Projected Centennial Oxygen Trends and Their Attribution to Distinct Ocean Climate Forcings. <i>Global Biogeochemical Cycles</i> , 2018, 32, 1329-1349.	1.9	28
30	The Role of Particle Size, Ballast, Temperature, and Oxygen in the Sinking Flux to the Deep Sea. <i>Global Biogeochemical Cycles</i> , 2018, 32, 858-876.	1.9	65
31	Upper ocean O <sub>2</sub> trends: 1958–2015. <i>Geophysical Research Letters</i> , 2017, 44, 4214-4223.	1.5	133
32	The influence of variable slope water characteristics on dissolved oxygen levels in the northern California Current system. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 7674-7697.	1.0	11
33	A database of paleoceanographic sediment cores from the North Pacific, 1951–2016. <i>Earth System Science Data</i> , 2017, 9, 739-749.	3.7	6
34	Microbial functional diversity alters the structure and sensitivity of oxygen deficient zones. <i>Geophysical Research Letters</i> , 2016, 43, 9773-9780.	1.5	26
35	Deep ocean nutrients imply large latitudinal variation in particle transfer efficiency. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 8606-8611.	3.3	118
36	Finding forced trends in oceanic oxygen. <i>Global Biogeochemical Cycles</i> , 2016, 30, 381-397.	1.9	130

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37	Partial decoupling of primary productivity from upwelling in the California Current system. <i>Nature Geoscience</i> , 2016, 9, 505-508.	5.4	64
38	The North Pacific Oxygen Uptake Rates over the Past Half Century. <i>Journal of Climate</i> , 2016, 29, 61-76.	1.2	27
39	Sustained growth of the Southern Ocean carbon storage in a warming climate. <i>Geophysical Research Letters</i> , 2015, 42, 4516-4522.	1.5	28
40	Climate change tightens a metabolic constraint on marine habitats. <i>Science</i> , 2015, 348, 1132-1135.	6.0	547
41	Comparative biogeochemistryâ€‘ecosystemâ€‘human interactions on dynamic continental margins. <i>Journal of Marine Systems</i> , 2015, 141, 3-17.	0.9	49
42	Local versus basin-scale limitation of marine nitrogen fixation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 8741-8746.	3.3	65
43	Large-scale variations in the stoichiometry of marine organic matter respiration. <i>Nature Geoscience</i> , 2014, 7, 890-894.	5.4	94
44	Extensive hydrogen supersaturations in the western South Atlantic Ocean suggest substantial underestimation of nitrogen fixation. <i>Journal of Geophysical Research: Oceans</i> , 2014, 119, 4340-4350.	1.0	14
45	Centennial changes in North Pacific anoxia linked to tropical trade winds. <i>Science</i> , 2014, 345, 665-668.	6.0	138
46	Role of the Seasonal Cycle in the Subduction Rates of Upperâ€‘Southern Ocean Waters. <i>Journal of Physical Oceanography</i> , 2013, 43, 1096-1113.	0.7	10
47	Parameterizing bubbleâ€‘mediated airâ€‘sea gas exchange and its effect on ocean ventilation. <i>Global Biogeochemical Cycles</i> , 2013, 27, 894-905.	1.9	100
48	Variability of the oxygen minimum zone in the tropical North Pacific during the late twentieth century. <i>Global Biogeochemical Cycles</i> , 2013, 27, 1119-1128.	1.9	56
49	The dynamics of the marine nitrogen cycle across the last deglaciation. <i>Paleoceanography</i> , 2013, 28, 116-129.	3.0	30
50	Global rates of water-column denitrification derived from nitrogen gas measurements. <i>Nature Geoscience</i> , 2012, 5, 547-550.	5.4	132
51	Nutrient Ratios as a Tracer and Driver of Ocean Biogeochemistry. <i>Annual Review of Marine Science</i> , 2012, 4, 113-141.	5.1	148
52	Oceanic nitrogen reservoir regulated by plankton diversity and ocean circulation. <i>Nature</i> , 2012, 489, 419-422.	13.7	94
53	Reduced isotope fractionation by denitrification under conditions relevant to the ocean. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 92, 243-259.	1.6	125
54	Climate-Forced Variability of Ocean Hypoxia. <i>Science</i> , 2011, 333, 336-339.	6.0	309

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55	Ocean nutrient ratios governed by plankton biogeography. <i>Nature</i> , 2010, 467, 550-554.	13.7	253
56	A conceptual model for the temporal spectrum of oceanic oxygen variability. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	25
57	The dual isotopes of deep nitrate as a constraint on the cycle and budget of oceanic fixed nitrogen. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2009, 56, 1419-1439.	0.6	177
58	Sinking organic matter spreads the nitrogen isotope signal of pelagic denitrification in the North Pacific. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	66
59	Nitrate isotopic composition between Bermuda and Puerto Rico: Implications for N <sub>2</sub> fixation in the Atlantic Ocean. <i>Global Biogeochemical Cycles</i> , 2008, 22, .	1.9	113
60	New Developments in the Marine Nitrogen Cycle. <i>Chemical Reviews</i> , 2007, 107, 577-589.	23.0	233
61	Spatial coupling of nitrogen inputs and losses in the ocean. <i>Nature</i> , 2007, 445, 163-167.	13.7	618
62	Spatial coupling of nitrogen inputs and losses in the ocean. <i>Nature</i> , 2007, 445, 163-167.	13.7	379
63	Physical-biological interactions in North Pacific oxygen variability. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	76
64	Fingerprints of climate change in North Pacific oxygen. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	66
65	Correction to "Fingerprints of climate change in North Pacific oxygen": <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	18
66	Isotopic constraints on glacial/interglacial changes in the oceanic nitrogen budget. <i>Global Biogeochemical Cycles</i> , 2004, 18, n/a-n/a.	1.9	194
67	Denitrification and N <sub>2</sub> fixation in the Pacific Ocean. <i>Global Biogeochemical Cycles</i> , 2001, 15, 483-506.	1.9	314