

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	Spatial coupling of nitrogen inputs and losses in the ocean. <i>Nature</i> , 2007, 445, 163-167.	13.7	618
2	Climate change tightens a metabolic constraint on marine habitats. <i>Science</i> , 2015, 348, 1132-1135.	6.0	547
3	Spatial coupling of nitrogen inputs and losses in the ocean. <i>Nature</i> , 2007, 445, 163-167.	13.7	379
4	Denitrification and N ₂ fixation in the Pacific Ocean. <i>Global Biogeochemical Cycles</i> , 2001, 15, 483-506.	1.9	314
5	Climate-Forced Variability of Ocean Hypoxia. <i>Science</i> , 2011, 333, 336-339.	6.0	309
6	Ocean nutrient ratios governed by plankton biogeography. <i>Nature</i> , 2010, 467, 550-554.	13.7	253
7	New Developments in the Marine Nitrogen Cycle. <i>Chemical Reviews</i> , 2007, 107, 577-589.	23.0	233
8	Global niche of marine anaerobic metabolisms expanded by particle microenvironments. <i>Nature Geoscience</i> , 2018, 11, 263-268.	5.4	221
9	Temperature-dependent hypoxia explains biogeography and severity of end-Permian marine mass extinction. <i>Science</i> , 2018, 362, .	6.0	214
10	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
11	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
12	Nutrient Ratios as a Tracer and Driver of Ocean Biogeochemistry. <i>Annual Review of Marine Science</i> , 2012, 4, 113-141.	5.1	148
13	Centennial changes in North Pacific anoxia linked to tropical trade winds. <i>Science</i> , 2014, 345, 665-668.	6.0	138
14	Upper ocean O ₂ trends: 1958–2015. <i>Geophysical Research Letters</i> , 2017, 44, 4214-4223.	1.5	133
15	Global rates of water-column denitrification derived from nitrogen gas measurements. <i>Nature Geoscience</i> , 2012, 5, 547-550.	5.4	132
16	Finding forced trends in oceanic oxygen. <i>Global Biogeochemical Cycles</i> , 2016, 30, 381-397.	1.9	130
17	Metabolic trait diversity shapes marine biogeography. <i>Nature</i> , 2020, 585, 557-562.	13.7	127
18	Reduced isotope fractionation by denitrification under conditions relevant to the ocean. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 92, 243-259.	1.6	125

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19	Deep ocean nutrients imply large latitudinal variation in particle transfer efficiency. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8606-8611.	3.3	118
20	Nitrate isotopic composition between Bermuda and Puerto Rico: Implications for N ₂ fixation in the Atlantic Ocean. Global Biogeochemical Cycles, 2008, 22, .	1.9	113
21	Parameterizing bubble-mediated air-sea gas exchange and its effect on ocean ventilation. Global Biogeochemical Cycles, 2013, 27, 894-905.	1.9	100
22	Oceanic nitrogen reservoir regulated by plankton diversity and ocean circulation. Nature, 2012, 489, 419-422.	13.7	94
23	Large-scale variations in the stoichiometry of marine organic matter respiration. Nature Geoscience, 2014, 7, 890-894.	5.4	94
24	Physical-biological interactions in North Pacific oxygen variability. Journal of Geophysical Research, 2006, 111, .	3.3	76
25	Climate-driven aerobic habitat loss in the California Current System. Science Advances, 2020, 6, eaay3188.	4.7	75
26	Avoiding ocean mass extinction from climate warming. Science, 2022, 376, 524-526.	6.0	72
27	Fingerprints of climate change in North Pacific oxygen. Geophysical Research Letters, 2005, 32, .	1.5	66
28	Sinking organic matter spreads the nitrogen isotope signal of pelagic denitrification in the North Pacific. Geophysical Research Letters, 2009, 36, .	1.5	66
29	Local versus basin-scale limitation of marine nitrogen fixation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8741-8746.	3.3	65
30	The Role of Particle Size, Ballast, Temperature, and Oxygen in the Sinking Flux to the Deep Sea. Global Biogeochemical Cycles, 2018, 32, 858-876.	1.9	65
31	Partial decoupling of primary productivity from upwelling in the California Current system. Nature Geoscience, 2016, 9, 505-508.	5.4	64
32	Variability of the oxygen minimum zone in the tropical North Pacific during the late twentieth century. Global Biogeochemical Cycles, 2013, 27, 1119-1128.	1.9	56
33	Biogeochemical Role of Subsurface Coherent Eddies in the Ocean: Tracer Cannonballs, Hypoxic Storms, and Microbial Stewpots?. Global Biogeochemical Cycles, 2018, 32, 226-249.	1.9	53
34	Oxygen supply capacity in animals evolves to meet maximum demand at the current oxygen partial pressure regardless of size or temperature. Journal of Experimental Biology, 2020, 223, .	0.8	50
35	Comparative biogeochemistry of ecosystem-human interactions on dynamic continental margins. Journal of Marine Systems, 2015, 141, 3-17.	0.9	49
36	Coastal eutrophication drives acidification, oxygen loss, and ecosystem change in a major oceanic upwelling system. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	41

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37	A Mechanistic Model of Macromolecular Allocation, Elemental Stoichiometry, and Growth Rate in Phytoplankton. <i>Frontiers in Microbiology</i> , 2020, 11, 86.	1.5	34
38	The dynamics of the marine nitrogen cycle across the last deglaciation. <i>Paleoceanography</i> , 2013, 28, 116-129.	3.0	30
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	Projected Centennial Oxygen Trends and Their Attribution to Distinct Ocean Climate Forcings. <i>Global Biogeochemical Cycles</i> , 2018, 32, 1329-1349.	1.9	28
41	The North Pacific Oxygen Uptake Rates over the Past Half Century. <i>Journal of Climate</i> , 2016, 29, 61-76.	1.2	27
42	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
43	Microbial functional diversity alters the structure and sensitivity of oxygen deficient zones. <i>Geophysical Research Letters</i> , 2016, 43, 9773-9780.	1.5	26
44	Quantifying Oxygen Management and Temperature and Light Dependencies of Nitrogen Fixation by <i>Crocospaera watsonii</i> . <i>MSphere</i> , 2019, 4, .	1.3	26
45	Biogeochemical variability in the California Current System. <i>Progress in Oceanography</i> , 2021, 196, 102565.	1.5	26
46	A conceptual model for the temporal spectrum of oceanic oxygen variability. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	25
47	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
48	Mechanistic Model for the Coexistence of Nitrogen Fixation and Photosynthesis in Marine <i>Trichodesmium</i> . <i>MSystems</i> , 2019, 4, .	1.7	23
49	Evaluation of high-resolution atmospheric and oceanic simulations of the California Current System. <i>Progress in Oceanography</i> , 2021, 195, 102564.	1.5	23
50	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
51	Correction to "Fingerprints of climate change in North Pacific oxygen". <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	18
52	Carbon Transfer from the Host Diatom Enables Fast Growth and High Rate of N ₂ Fixation by Symbiotic Heterocystous Cyanobacteria. <i>Plants</i> , 2020, 9, 192.	1.6	18
53	Coastal processes modify projections of some climate-driven stressors in the California Current System. <i>Biogeosciences</i> , 2021, 18, 2871-2890.	1.3	18
54	Mechanisms of Low-Frequency Oxygen Variability in the North Pacific. <i>Global Biogeochemical Cycles</i> , 2019, 33, 110-124.	1.9	17

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55	Quantitative models of nitrogen-fixing organisms. Computational and Structural Biotechnology Journal, 2020, 18, 3905-3924.	1.9	16
56	Extensive hydrogen supersaturations in the western South Atlantic Ocean suggest substantial underestimation of nitrogen fixation. Journal of Geophysical Research: Oceans, 2014, 119, 4340-4350.	1.0	14
57	Mechanisms of Future Changes in Equatorial Upwelling: CMIP5 Intermodel Analysis. Journal of Climate, 2020, 33, 497-510.	1.2	13
58	The influence of variable slope water characteristics on dissolved oxygen levels in the northern California current system. Journal of Geophysical Research: Oceans, 2017, 122, 7674-7697.	1.0	11
59	Role of the Seasonal Cycle in the Subduction Rates of Upper Southern Ocean Waters. Journal of Physical Oceanography, 2013, 43, 1096-1113.	0.7	10
60	Heterogeneous nitrogen fixation rates confer energetic advantage and expanded ecological niche of unicellular diazotroph populations. Communications Biology, 2020, 3, 172.	2.0	10
61	Variable particle size distributions reduce the sensitivity of global export flux to climate change. Biogeosciences, 2021, 18, 229-250.	1.3	10
62	Sea surface temperature across the Subarctic North Pacific and marginal seas through the past 20,000 years: A paleoceanographic synthesis. Quaternary Science Reviews, 2020, 246, 106519.	1.4	8
63	Biochemical Barriers on the Path to Ocean Anoxia?. MBio, 2021, 12, e0133221.	1.8	6
64	A database of paleoceanographic sediment cores from the North Pacific, 1951-2016. Earth System Science Data, 2017, 9, 739-749.	3.7	6
65	Configuration and Validation of an Oceanic Physical and Biogeochemical Model to Investigate Coastal Eutrophication in the Southern California Bight. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002296.	1.3	5
66	Oxygen minimum zone biotic baseline transects for paleoceanographic reconstructions in Santa Barbara Basin, CA. Deep-Sea Research Part II: Topical Studies in Oceanography, 2018, 150, 118-131.	0.6	4
67	Quantifying Cyanobacteria growth under DIC limitation. Computational and Structural Biotechnology Journal, 2021, 19, 6456-6464.	1.9	2