Curtis A Deutsch

List of Publications by Year
in descending order

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Version: 2024-02-01

71 papers	8,292 citations	126708 33 h-index	91712 69 g-index
81 all docs	81 docs citations	81 times ranked	10309 citing authors

#	Article	IF	Citations
1	Impacts of climate warming on terrestrial ectotherms across latitude. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6668-6672.	3.3	2,833
2	Increase in crop losses to insect pests in a warming climate. Science, 2018, 361, 916-919.	6.0	764
3	Spatial coupling of nitrogen inputs and losses in the ocean. Nature, 2007, 445, 163-167.	13.7	618
4	Climate change tightens a metabolic constraint on marine habitats. Science, 2015, 348, 1132-1135.	6.0	547
5	Climate-Forced Variability of Ocean Hypoxia. Science, 2011, 333, 336-339.	6.0	309
6	Global niche of marine anaerobic metabolisms expanded by particle microenvironments. Nature Geoscience, 2018, 11, 263-268.	5.4	221
7	Temperature-dependent hypoxia explains biogeography and severity of end-Permian marine mass extinction. Science, 2018, 362, .	6.0	214
8	Centennial changes in North Pacific anoxia linked to tropical trade winds. Science, 2014, 345, 665-668.	6.0	138
9	Upper ocean O₂ trends: 1958â€“2015. Geophysical Research Letters, 2017, 44, 4214-4223.	1.5	133
10	Global rates of water-column denitrification derived from nitrogen gas measurements. Nature Geoscience, 2012, 5, 547-550.	5.4	132
11	Finding forced trends in oceanic oxygen. Global Biogeochemical Cycles, 2016, 30, 381-397.	1.9	130
12	Metabolic trait diversity shapes marine biogeography. Nature, 2020, 585, 557-562.	13.7	127
13	Marine denitrification rates determined from a global 3-D inverse model. Biogeosciences, 2013, 10, 2481-2496.	1.3	121
14	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
15	Oceanic nitrogen reservoir regulated by plankton diversity and ocean circulation. Nature, 2012, 489, 419-422.	13.7	94
16	Large-scale variations in the stoichiometry of marine organic matter respiration. Nature Geoscience, 2014, 7, 890-894.	5.4	94
17	Ocean deoxygenation and zooplankton: Very small oxygen differences matter. Science Advances, 2018, 4, eaau5180.	4.7	87
18	Physical-biological interactions in North Pacific oxygen variability. Journal of Geophysical Research, 2006, 111, .	3.3	76

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19	Climate-driven aerobic habitat loss in the California Current System. Science Advances, 2020, 6, eaay3188.	4.7	75
20	Avoiding ocean mass extinction from climate warming. Science, 2022, 376, 524-526.	6.0	72
21	Acceleration of oxygen decline in the tropical Pacific over the past decades by aerosol pollutants. Nature Geoscience, 2016, 9, 443-447.	5.4	67
22	Fingerprints of climate change in North Pacific oxygen. Geophysical Research Letters, 2005, 32, .	1.5	66
23	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
24	Partial decoupling of primary productivity from upwelling in the California Current system. Nature Geoscience, 2016, 9, 505-508.	5.4	64
25	Climate variability in the North Pacific thermocline diagnosed from oxygen measurements: An update based on the U.S. CLIVAR/CO₂ Repeat Hydrography cruises. Global Biogeochemical Cycles, 2008, 22, .	1.9	60
26	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
27	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
28	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
29	Long-term stability of marine dissolved organic carbon emerges from a neutral network of compounds and microbes. Scientific Reports, 2019, 9, 17780.	1.6	41
30	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
31	From global change to a butterfly flapping: biophysics and behaviour affect tropical climate change impacts. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20141264.	1.2	38
32	Redfield's evolving legacy. Nature Geoscience, 2014, 7, 853-855.	5.4	37
33	A mechanistic particle flux model applied to the oceanic phosphorus cycle. Biogeosciences, 2014, 11, 5381-5398.	1.3	36
34	A Mechanistic Model of Macromolecular Allocation, Elemental Stoichiometry, and Growth Rate in Phytoplankton. Frontiers in Microbiology, 2020, 11, 86.	1.5	34
35	Projections of climateâ€driven changes in tuna vertical habitat based on speciesâ€specific differences in blood oxygen affinity. Global Change Biology, 2017, 23, 4019-4028.	4.2	33
36	Ventilation Pathways for the North Pacific Oxygen Deficient Zone. Global Biogeochemical Cycles, 2019, 33, 875-890.	1.9	32

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37	Sustained growth of the Southern Ocean carbon storage in a warming climate. Geophysical Research Letters, 2015, 42, 4516-4522.	1.5	28
38	Projected Centennial Oxygen Trends and Their Attribution to Distinct Ocean Climate Forcings. Global Biogeochemical Cycles, 2018, 32, 1329-1349.	1.9	28
39	Understanding the saturation state of argon in the thermocline: The role of air-sea gas exchange and diapycnal mixing. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	1.9	27
40	Early Detection of Changes in the North Atlantic Meridional Overturning Circulation: Implications for the Design of Ocean Observation Systems. Journal of Climate, 2007, 20, 145-157.	1.2	27
41	The North Pacific Oxygen Uptake Rates over the Past Half Century. Journal of Climate, 2016, 29, 61-76.	1.2	27
42	Microbial ecosystem dynamics drive fluctuating nitrogen loss in marine anoxic zones. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 7220-7225.	3.3	27
43	Activity niches outperform thermal physiological limits in predicting global ant distributions. Journal of Biogeography, 2020, 47, 829-842.	1.4	27
44	Microbial functional diversity alters the structure and sensitivity of oxygen deficient zones. Geophysical Research Letters, 2016, 43, 9773-9780.	1.5	26
45	Quantifying Oxygen Management and Temperature and Light Dependencies of Nitrogen Fixation by Crocosphaera watsonii. MSphere, 2019, 4, .	1.3	26
46	Biogeochemical variability in the California Current System. Progress in Oceanography, 2021, 196, 102565.	1.5	26
47	A conceptual model for the temporal spectrum of oceanic oxygen variability. Geophysical Research Letters, 2010, 37, .	1.5	25
48	Attributing Causes of Future Climate Change in the California Current System With Multimodel Downscaling. Global Biogeochemical Cycles, 2020, 34, e2020GB006646.	1.9	25
49	Submesoscale Currents Modulate the Seasonal Cycle of Nutrients and Productivity in the California Current System. Global Biogeochemical Cycles, 2020, 34, e2020GB006578.	1.9	25
50	Mechanistic Model for the Coexistence of Nitrogen Fixation and Photosynthesis in Marine Trichodesmium. MSystems, 2019, 4, .	1.7	23
51	Evaluation of high-resolution atmospheric and oceanic simulations of the California Current System. Progress in Oceanography, 2021, 195, 102564.	1.5	23
52	Impact of warming on aquatic body sizes explained by metabolic scaling from microbes to macrofauna. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	21
53	Paleobiology provides glimpses of future ocean. Science, 2022, 375, 25-26.	6.0	19
54	Carbon Transfer from the Host Diatom Enables Fast Growth and High Rate of N2 Fixation by Symbiotic Heterocystous Cyanobacteria. Plants, 2020, 9, 192.	1.6	18

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55	Coastal processes modify projections of some climate-driven stressors in the California Current System. Biogeosciences, 2021, 18, 2871-2890.	1.3	18
56	Mechanisms of Lowâ€Frequency Oxygen Variability in the North Pacific. Global Biogeochemical Cycles, 2019, 33, 110-124.	1.9	17
57	Impact of diapycnal mixing on the saturation state of argon in the subtropical North Pacific. Geophysical Research Letters, 2007, 34, .	1.5	16
58	Quantitative models of nitrogen-fixing organisms. Computational and Structural Biotechnology Journal, 2020, 18, 3905-3924.	1.9	16
59	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
60	Mechanisms of Future Changes in Equatorial Upwelling: CMIP5 Intermodel Analysis. Journal of Climate, 2020, 33, 497-510.	1.2	13
61	The influence of variable slopeâ€water characteristics on dissolved oxygen levels in the northern <scp>C</scp>alifornia <scp>C</scp>urrent <scp>S</scp>ystem. Journal of Geophysical Research: Oceans, 2017, 122, 7674-7697.	1.0	11
62	Heterogeneous nitrogen fixation rates confer energetic advantage and expanded ecological niche of unicellular diazotroph populations. Communications Biology, 2020, 3, 172.	2.0	10
63	Variable particle size distributions reduce the sensitivity of global export flux to climate change. Biogeosciences, 2021, 18, 229-250.	1.3	10
64	Biochemical Barriers on the Path to Ocean Anoxia?. MBio, 2021, 12, e0133221.	1.8	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	How frigate birds soar around the doldrums. Science, 2016, 353, 26-27.	6.0	4
67	Sensitivity of Global Ocean Deoxygenation to Vertical and Isopycnal Mixing in an Ocean Biogeochemistry Model. Global Biogeochemical Cycles, 2022, 36, .	1.9	4
68	Quantifying Cyanothece growth under DIC limitation. Computational and Structural Biotechnology Journal, 2021, 19, 6456-6464.	1.9	2
69	NCARâ€™s Summer Colloquium: Capacity Building in Cross-Disciplinary Research of Earth System Carbonâ€“Climate Connections. Bulletin of the American Meteorological Society, 2015, 96, 1381-1384.	1.7	1
70	Interpreting intraseasonal variability of subsurface tracers observed by a profiling float. Journal of Geophysical Research: Oceans, 2014, 119, 288-296.	1.0	0
71	Model vs. experiment to predict crop lossesâ€”Response. Science, 2018, 362, 1122-1123.	6.0	0