Curtis A Deutsch

List of Publications by Year
in descending order

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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	Paleobiology provides glimpses of future ocean. Science, 2022, 375, 25-26.	6.0	19
2	Sensitivity of Global Ocean Deoxygenation to Vertical and Isopycnal Mixing in an Ocean Biogeochemistry Model. Global Biogeochemical Cycles, 2022, 36, .	1.9	4
3	Avoiding ocean mass extinction from climate warming. Science, 2022, 376, 524-526.	6.0	72
4	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
5	Variable particle size distributions reduce the sensitivity of global export flux to climate change. Biogeosciences, 2021, 18, 229-250.	1.3	10
6	Coastal processes modify projections of some climate-driven stressors in the California Current System. Biogeosciences, 2021, 18, 2871-2890.	1.3	18
7	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
8	Evaluation of high-resolution atmospheric and oceanic simulations of the California Current System. Progress in Oceanography, 2021, 195, 102564.	1.5	23
9	Biochemical Barriers on the Path to Ocean Anoxia?. MBio, 2021, 12, e0133221.	1.8	6
10	Biogeochemical variability in the California Current System. Progress in Oceanography, 2021, 196, 102565.	1.5	26
11	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
12	Quantifying Cyanothece growth under DIC limitation. Computational and Structural Biotechnology Journal, 2021, 19, 6456-6464.	1.9	2
13	Mechanisms of Future Changes in Equatorial Upwelling: CMIP5 Intermodel Analysis. Journal of Climate, 2020, 33, 497-510.	1.2	13
14	Attributing Causes of Future Climate Change in the California Current System With Multimodel Downscaling. Global Biogeochemical Cycles, 2020, 34, e2020GB006646.	1.9	25
15	Submesoscale Currents Modulate the Seasonal Cycle of Nutrients and Productivity in the California Current System. Global Biogeochemical Cycles, 2020, 34, e2020GB006578.	1.9	25
16	Metabolic trait diversity shapes marine biogeography. Nature, 2020, 585, 557-562.	13.7	127
17	Quantitative models of nitrogen-fixing organisms. Computational and Structural Biotechnology Journal, 2020, 18, 3905-3924.	1.9	16
18	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

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19	Climate-driven aerobic habitat loss in the California Current System. Science Advances, 2020, 6, eaay3188.	4.7	75
20	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
21	Activity niches outperform thermal physiological limits in predicting global ant distributions. Journal of Biogeography, 2020, 47, 829-842.	1.4	27
22	Heterogeneous nitrogen fixation rates confer energetic advantage and expanded ecological niche of unicellular diazotroph populations. Communications Biology, 2020, 3, 172.	2.0	10
23	A Mechanistic Model of Macromolecular Allocation, Elemental Stoichiometry, and Growth Rate in Phytoplankton. Frontiers in Microbiology, 2020, 11, 86.	1.5	34
24	Mechanistic Model for the Coexistence of Nitrogen Fixation and Photosynthesis in Marine Trichodesmium. MSystems, 2019, 4, .	1.7	23
25	Ventilation Pathways for the North Pacific Oxygen Deficient Zone. Global Biogeochemical Cycles, 2019, 33, 875-890.	1.9	32
26	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
27	Mechanisms of Lowâ€Frequency Oxygen Variability in the North Pacific. Global Biogeochemical Cycles, 2019, 33, 110-124.	1.9	17
28	Quantifying Oxygen Management and Temperature and Light Dependencies of Nitrogen Fixation by Crocosphaera watsonii. MSphere, 2019, 4, .	1.3	26
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	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
31	Global niche of marine anaerobic metabolisms expanded by particle microenvironments. Nature Geoscience, 2018, 11, 263-268.	5.4	221
32	Ocean deoxygenation and zooplankton: Very small oxygen differences matter. Science Advances, 2018, 4, eaau5180.	4.7	87
33	Temperature-dependent hypoxia explains biogeography and severity of end-Permian marine mass extinction. Science, 2018, 362, .	6.0	214
34	Model vs. experiment to predict crop lossesâ€"Response. Science, 2018, 362, 1122-1123.	6.0	0
35	Projected Centennial Oxygen Trends and Their Attribution to Distinct Ocean Climate Forcings. Global Biogeochemical Cycles, 2018, 32, 1329-1349.	1.9	28
36	Increase in crop losses to insect pests in a warming climate. Science, 2018, 361, 916-919.	6.0	764

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37	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
38	Upper ocean O₂ trends: 1958â€“2015. Geophysical Research Letters, 2017, 44, 4214-4223.	1.5	133
39	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
40	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
41	Acceleration of oxygen decline in the tropical Pacific over the past decades by aerosol pollutants. Nature Geoscience, 2016, 9, 443-447.	5.4	67
42	Microbial functional diversity alters the structure and sensitivity of oxygen deficient zones. Geophysical Research Letters, 2016, 43, 9773-9780.	1.5	26
43	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
44	Finding forced trends in oceanic oxygen. Global Biogeochemical Cycles, 2016, 30, 381-397.	1.9	130
45	Partial decoupling of primary productivity from upwelling in the California Current system. Nature Geoscience, 2016, 9, 505-508.	5.4	64
46	How frigate birds soar around the doldrums. Science, 2016, 353, 26-27.	6.0	4
47	The North Pacific Oxygen Uptake Rates over the Past Half Century. Journal of Climate, 2016, 29, 61-76.	1.2	27
48	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
49	Sustained growth of the Southern Ocean carbon storage in a warming climate. Geophysical Research Letters, 2015, 42, 4516-4522.	1.5	28
50	Climate change tightens a metabolic constraint on marine habitats. Science, 2015, 348, 1132-1135.	6.0	547
51	A mechanistic particle flux model applied to the oceanic phosphorus cycle. Biogeosciences, 2014, 11, 5381-5398.	1.3	36
52	Redfield's evolving legacy. Nature Geoscience, 2014, 7, 853-855.	5.4	37
53	Large-scale variations in the stoichiometry of marine organic matter respiration. Nature Geoscience, 2014, 7, 890-894.	5.4	94
54	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

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55	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
56	Centennial changes in North Pacific anoxia linked to tropical trade winds. Science, 2014, 345, 665-668.	6.0	138
57	Interpreting intraseasonal variability of subsurface tracers observed by a profiling float. Journal of Geophysical Research: Oceans, 2014, 119, 288-296.	1.0	0
58	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
59	Marine denitrification rates determined from a global 3-D inverse model. Biogeosciences, 2013, 10, 2481-2496.	1.3	121
60	Global rates of water-column denitrification derived from nitrogen gas measurements. Nature Geoscience, 2012, 5, 547-550.	5.4	132
61	Oceanic nitrogen reservoir regulated by plankton diversity and ocean circulation. Nature, 2012, 489, 419-422.	13.7	94
62	Climate-Forced Variability of Ocean Hypoxia. Science, 2011, 333, 336-339.	6.0	309
63	A conceptual model for the temporal spectrum of oceanic oxygen variability. Geophysical Research Letters, 2010, 37, .	1.5	25
64	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
65	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
66	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
67	Impact of diapycnal mixing on the saturation state of argon in the subtropical North Pacific. Geophysical Research Letters, 2007, 34, .	1.5	16
68	Spatial coupling of nitrogen inputs and losses in the ocean. Nature, 2007, 445, 163-167.	13.7	618
69	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
70	Physical-biological interactions in North Pacific oxygen variability. Journal of Geophysical Research, 2006, 111, .	3.3	76
71	Fingerprints of climate change in North Pacific oxygen. Geophysical Research Letters, 2005, 32, .	1.5	66