Tim DeVries

List of Publications by Year
in descending order

51 papers	3,185 citations	201674 27 h-index	189892 50 g-index
53 all docs	53 docs citations	53 times ranked	3683 citing authors

#	Article	IF	Citations
1	Recent increase in oceanic carbon uptake driven by weaker upper-ocean overturning. Nature, 2017, 542, 215-218.	27.8	242
2	Global estimate of submarine groundwater discharge based on an observationally constrained radium isotope model. Geophysical Research Letters, 2014, 41, 8438-8444.	4.0	236
3	The oceanic anthropogenic CO₂ sink: Storage, airâ€sea fluxes, and transports over the industrial era. Global Biogeochemical Cycles, 2014, 28, 631-647.	4.9	207
4	Dynamically and Observationally Constrained Estimates of Water-Mass Distributions and Ages in the Global Ocean. Journal of Physical Oceanography, 2011, 41, 2381-2401.	1.7	168
5	The export and fate of organic matter in the ocean: New constraints from combining satellite and oceanographic tracer observations. Global Biogeochemical Cycles, 2017, 31, 535-555.	4.9	165
6	Global rates of water-column denitrification derived from nitrogen gas measurements. Nature Geoscience, 2012, 5, 547-550.	12.9	132
7	Recent Changes in the Ventilation of the Southern Oceans. Science, 2013, 339, 568-570.	12.6	129
8	Reviews and syntheses: The biogeochemical cycle of silicon in the modern ocean. Biogeosciences, 2021, 18, 1269-1289.	3.3	124
9	The sequestration efficiency of the biological pump. Geophysical Research Letters, 2012, 39, .	4.0	122
10	Marine denitrification rates determined from a global 3-D inverse model. Biogeosciences, 2013, 10, 2481-2496.	3.3	121
11	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.	7.1	118
12	Carbon isotope records reveal precise timing of enhanced Southern Ocean upwelling during the last deglaciation. Nature Communications, 2013, 4, 2758.	12.8	112
13	Biological uptake and reversible scavenging of zinc in the global ocean. Science, 2018, 361, 72-76.	12.6	112
14	Efficient dissolved organic carbon production and export in the oligotrophic ocean. Nature Communications, 2017, 8, 2036.	12.8	106
15	Large-scale variations in the stoichiometry of marine organic matter respiration. Nature Geoscience, 2014, 7, 890-894.	12.9	94
16	Decadal trends in the ocean carbon sink. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11646-11651.	7.1	94
17	Southern Ocean nutrient trapping and the efficiency of the biological pump. Journal of Geophysical Research: Oceans, 2013, 118, 2547-2564.	2.6	73
18	Quantifying the Carbon Export and Sequestration Pathways of the Ocean's Biological Carbon Pump. Global Biogeochemical Cycles, 2022, 36, .	4.9	63

#	Article	IF	Citations
19	Assessing the sequestration time scales of some ocean-based carbon dioxide reduction strategies. Environmental Research Letters, 2021, 16, 104003.	5.2	61
20	The Southern Ocean silicon trap: Dataâ€constrained estimates of regenerated silicic acid, trapping efficiencies, and global transport paths. Journal of Geophysical Research: Oceans, 2014, 119, 313-331.	2.6	56
21	Radiocarbon and Helium Isotope Constraints on Deep Ocean Ventilation and Mantleâ€³He Sources. Journal of Geophysical Research: Oceans, 2019, 124, 3036-3057.	2.6	54
22	Estimating global biomass and biogeochemical cycling of marine fish with and without fishing. Science Advances, 2021, 7, eabd7554.	10.3	54
23	Biogeochemical cycling of Fe and Fe stable isotopes in the Eastern Tropical South Pacific. Marine Chemistry, 2018, 201, 66-76.	2.3	42
24	The interplay between regeneration and scavenging fluxes drives ocean iron cycling. Nature Communications, 2019, 10, 4960.	12.8	41
25	A mechanistic particle flux model applied to the oceanic phosphorus cycle. Biogeosciences, 2014, 11, 5381-5398.	3.3	36
26	How Data Set Characteristics Influence Ocean Carbon Export Models. Global Biogeochemical Cycles, 2018, 32, 1312-1328.	4.9	33
27	The Internal Cycling of Zinc in the Ocean. Global Biogeochemical Cycles, 2018, 32, 1833-1849.	4.9	31
28	Diagnosing Mechanisms of Ocean Carbon Export in a Satellite-Based Food Web Model. Frontiers in Marine Science, 2020, 7, .	2.5	30
29	Diffusion controls the ventilation of a Pacific Shadow Zone above abyssal overturning. Nature Communications, 2021, 12, 4348.	12.8	29
30	An improved method for estimating water-mass ventilation age from radiocarbon data. Earth and Planetary Science Letters, 2010, 295, 367-378.	4.4	27
31	20th century cooling of the deep ocean contributed to delayed acceleration of Earthâ€™s energy imbalance. Nature Communications, 2021, 12, 4604.	12.8	27
32	Preformed Properties for Marine Organic Matter and Carbonate Mineral Cycling Quantification. Global Biogeochemical Cycles, 2021, 35, e2020GB006623.	4.9	25
33	Objective estimates of mantle 3He in the ocean and implications for constraining the deep ocean circulation. Earth and Planetary Science Letters, 2017, 458, 305-314.	4.4	23
34	Global trends in marine nitrate N isotopes from observations and a neural network-based climatology. Biogeosciences, 2019, 16, 2617-2633.	3.3	22
35	Reversible scavenging traps hydrothermal iron in the deep ocean. Earth and Planetary Science Letters, 2020, 542, 116297.	4.4	21
36	Data-based estimates of interannual seaâ€“air CO₂ flux variations 1957â€“2020 and their relation to environmental drivers. Biogeosciences, 2022, 19, 2627-2652.	3.3	21

#	Article	IF	Citations
37	Atmospheric CO₂ and Sea Surface Temperature Variability Cannot Explain Recent Decadal Variability of the Ocean CO₂ Sink. Geophysical Research Letters, 2022, 49, .	4.0	19
38	Stable Carbon Isotopes Suggest Large Terrestrial Carbon Inputs to the Global Ocean. Global Biogeochemical Cycles, 2021, 35, e2020GB006684.	4.9	18
39	Controls on the Cadmiumâ€Phosphate Relationship in the Tropical South Pacific. Global Biogeochemical Cycles, 2017, 31, 1516-1527.	4.9	16
40	AWESOME OCIM: A simple, flexible, and powerful tool for modeling elemental cycling in the oceans. Chemical Geology, 2020, 533, 119403.	3.3	15
41	Constraints on the global marine iron cycle from a simple inverse model. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 28-51.	3.0	14
42	Global Contrasts Between Oceanic Cycling of Cadmium and Phosphate. Global Biogeochemical Cycles, 2021, 35, e2021GB006952.	4.9	14
43	Constraining the Global Ocean Cu Cycle With a Dataâ€Assimilated Diagnostic Model. Global Biogeochemical Cycles, 2020, 34, e2020GB006741.	4.9	7
44	On the effects of the ocean on atmospheric CFC-11 lifetimes and emissions. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2021528118.	7.1	5
45	New directions for ocean nutrients. Nature Geoscience, 2018, 11, 15-16.	12.9	4
46	Ventilation of the Deep Ocean Carbon Reservoir During the Last Deglaciation: Results From the Southeast Pacific. Paleoceanography and Paleoclimatology, 2019, 34, 2080-2097.	2.9	4
47	The Ocean's Global 39 Ar Distribution Estimated With an Ocean Circulation Inverse Model. Geophysical Research Letters, 2019, 46, 7491-7499.	4.0	4
48	CYCLOCIM: A 4-D variational assimilation system for the climatological mean seasonal cycle of the ocean circulation. Ocean Modelling, 2021, 159, 101762.	2.4	3
49	Correcting Biases in Historical Bathythermograph Data Using Artificial Neural Networks. Journal of Atmospheric and Oceanic Technology, 2020, 37, 1781-1800.	1.3	3
50	Decline in the Nutrient Inventories of the Upper Subtropical Northwest Pacific Ocean. Geophysical Research Letters, 2022, 49, .	4.0	3
51	Diatom Physiology Controls Silicic Acid Leakage in Response to Iron Fertilization. Global Biogeochemical Cycles, 2019, 33, 1631-1653.	4.9	0