Alessandro Tagliabue

List of Publications by Year
in descending order

118 papers	7,619 citations	61984 43 h-index	58581 82 g-index
135 all docs	135 docs citations	135 times ranked	6882 citing authors

#	Article	IF	Citations
1	The integral role of iron in ocean biogeochemistry. Nature, 2017, 543, 51-59.	27.8	482
2	PISCES-v2: an ocean biogeochemical model for carbon and ecosystem studies. Geoscientific Model Development, 2015, 8, 2465-2513.	3.6	422
3	Basin-scale transport of hydrothermal dissolved metals across the South Pacific Ocean. Nature, 2015, 523, 200-203.	27.8	397
4	Hydrothermal contribution to the oceanic dissolved iron inventory. Nature Geoscience, 2010, 3, 252-256.	12.9	353
5	Twenty-first century ocean warming, acidification, deoxygenation, and upper-ocean nutrient and primary production decline from CMIP6 model projections. Biogeosciences, 2020, 17, 3439-3470.	3.3	348
6	The GEOTRACES Intermediate Data Product 2017. Chemical Geology, 2018, 493, 210-223.	3.3	257
7	How well do global ocean biogeochemistry models simulate dissolved iron distributions?. Global Biogeochemical Cycles, 2016, 30, 149-174.	4.9	230
8	Surface-water iron supplies in the Southern Ocean sustained by deep winter mixing. Nature Geoscience, 2014, 7, 314-320.	12.9	223
9	Nutrient co-limitation at the boundary of an oceanic gyre. Nature, 2017, 551, 242-246.	27.8	169
10	A global compilation of dissolved iron measurements: focus on distributions and processes in the Southern Ocean. Biogeosciences, 2012, 9, 2333-2349.	3.3	165
11	Tracking Improvement in Simulated Marine Biogeochemistry Between CMIP5 and CMIP6. Current Climate Change Reports, 2020, 6, 95-119.	8.6	155
12	The impact of different external sources of iron on the global carbon cycle. Geophysical Research Letters, 2014, 41, 920-926.	4.0	149
13	Large inert carbon pool in the terrestrial biosphere during the Last Glacial Maximum. Nature Geoscience, 2012, 5, 74-79.	12.9	145
14	Slow-spreading submarine ridges in the South Atlantic as a significant oceanic iron source. Nature Geoscience, 2013, 6, 775-779.	12.9	140
15	Biogeochemical protocols and diagnostics for the CMIP6 Ocean Model Intercomparison Project (OMIP). Geoscientific Model Development, 2017, 10, 2169-2199.	3.6	137
16	Biology and airâ€“sea gas exchange controls on the distribution of carbon isotope ratios (Î´¹³C) in the ocean. Biogeosciences, 2013, 10, 5793-5816.	3.3	130
17	Taxon-specific response of marine nitrogen fixers to elevated carbon dioxide concentrations. Nature Geoscience, 2013, 6, 790-795.	12.9	126
18	Towards understanding global variability in ocean carbonâ€13. Global Biogeochemical Cycles, 2008, 22, .	4.9	117

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19	Evaluating the importance of atmospheric and sedimentary iron sources to Southern Ocean biogeochemistry. Geophysical Research Letters, 2009, 36, .	4.0	112
20	Biological uptake and reversible scavenging of zinc in the global ocean. Science, 2018, 361, 72-76.	12.6	112
21	Stratospheric ozone depletion reduces ocean carbon uptake and enhances ocean acidification. Geophysical Research Letters, 2009, 36, .	4.0	108
22	Biotic and abiotic retention, recycling and remineralization of metals in the ocean. Nature Geoscience, 2017, 10, 167-173.	12.9	98
23	Quantifying the roles of ocean circulation and biogeochemistry in governing ocean carbon-13 and atmospheric carbon dioxide at the last glacial maximum. Climate of the Past, 2009, 5, 695-706.	3.4	91
24	Dust fluxes and iron fertilization in Holocene and Last Glacial Maximum climates. Geophysical Research Letters, 2015, 42, 6014-6023.	4.0	83
25	Analysis of the Global Ocean Sampling (GOS) Project for Trends in Iron Uptake by Surface Ocean Microbes. PLoS ONE, 2012, 7, e30931.	2.5	79
26	Hydrothermal vents trigger massive phytoplankton blooms in the Southern Ocean. Nature Communications, 2019, 10, 2451.	12.8	79
27	Communityâ€Level Responses to Iron Availability in Open Ocean Plankton Ecosystems. Global Biogeochemical Cycles, 2019, 33, 391-419.	4.9	76
28	Manganese in the west Atlantic Ocean in the context of the first global ocean circulation model of manganese. Biogeosciences, 2017, 14, 1123-1152.	3.3	75
29	Modeling organic iron-binding ligands in a three-dimensional biogeochemical ocean model. Marine Chemistry, 2015, 173, 67-77.	2.3	70
30	Quantifying trace element and isotope fluxes at the oceanâ€"sediment boundary: a review. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20160246.	3.4	69
31	Iron in the Ross Sea: 1. Impact on CO2 fluxes via variation in phytoplankton functional group and non-Redfield stoichiometry. Journal of Geophysical Research, 2005, 110, .	3.3	59
32	Hydrothermal impacts on trace element and isotope ocean biogeochemistry. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20160035.	3.4	59
33	²³⁰Th Normalization: New Insights on an Essential Tool for Quantifying Sedimentary Fluxes in the Modern and Quaternary Ocean. Paleoceanography and Paleoclimatology, 2020, 35, e2019PA003820.	2.9	56
34	Physical speciation of iron in the Atlantic sector of the Southern Ocean along a transect from the subtropical domain to the Weddell Sea Gyre. Journal of Geophysical Research, 2010, 115, .	3.3	55
35	The response of marine carbon and nutrient cycles to ocean acidification: Large uncertainties related to phytoplankton physiological assumptions. Global Biogeochemical Cycles, 2011, 25, n/a-n/a.	4.9	53
36	Anomalously low zooplankton abundance in the Ross Sea: An alternative explanation. Limnology and Oceanography, 2003, 48, 686-699.	3.1	50

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37	Processes governing the supply of iron to phytoplankton in stratified seas. Journal of Geophysical Research, 2006, 111, .	3.3	49
38	Ocean biogeochemistry exhibits contrasting responses to a large scale reduction in dust deposition. Biogeosciences, 2008, 5, 11-24.	3.3	49
39	A multiâ€decadal delay in the onset of corrosive â€˜acidifiedâ€™ waters in the Ross Sea of Antarctica due to strong airâ€sea CO₂ disequilibrium. Geophysical Research Letters, 2010, 37, .	4.0	48
40	Aluminium in an ocean general circulation model compared with the West Atlantic Geotraces cruises. Journal of Marine Systems, 2013, 126, 3-23.	2.1	48
41	Projections of oceanic N₂O emissions in the 21st century using the IPSL Earth system model. Biogeosciences, 2015, 12, 4133-4148.	3.3	48
42	Earth, Wind, Fire, and Pollution: Aerosol Nutrient Sources and Impacts on Ocean Biogeochemistry. Annual Review of Marine Science, 2022, 14, 303-330.	11.6	48
43	Compound climate risks threaten aquatic food system benefits. Nature Food, 2021, 2, 673-682.	14.0	48
44	The response of phytoplankton biomass to transient mixing events in the Southern Ocean. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	47
45	Iron Biogeochemistry in the High Latitude North Atlantic Ocean. Scientific Reports, 2018, 8, 1283.	3.3	47
46	Towards accounting for dissolved iron speciation in global ocean models. Biogeosciences, 2011, 8, 3025-3039.	3.3	46
47	Global Ocean Sediment Composition and Burial Flux in the Deep Sea. Global Biogeochemical Cycles, 2021, 35, e2020GB006769.	4.9	46
48	Persistent Uncertainties in Ocean Net Primary Production Climate Change Projections at Regional Scales Raise Challenges for Assessing Impacts on Ecosystem Services. Frontiers in Climate, 2021, 3, .	2.8	46
49	WTO must ban harmful fisheries subsidies. Science, 2021, 374, 544-544.	12.6	45
50	Iron colloids dominate sedimentary supply to the ocean interior. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	44
51	Biogeochemical cycling of Fe and Fe stable isotopes in the Eastern Tropical South Pacific. Marine Chemistry, 2018, 201, 66-76.	2.3	42
52	The interplay between regeneration and scavenging fluxes drives ocean iron cycling. Nature Communications, 2019, 10, 4960.	12.8	41
53	Influence of light and temperature on the marine iron cycle: From theoretical to global modeling. Global Biogeochemical Cycles, 2009, 23, .	4.9	40
54	The Role of External Inputs and Internal Cycling in Shaping the Global Ocean Cobalt Distribution: Insights From the First Cobalt Biogeochemical Model. Global Biogeochemical Cycles, 2018, 32, 594-616.	4.9	40

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55	Onset, intensification, and decline of phytoplankton blooms in the Southern Ocean. ICES Journal of Marine Science, 2015, 72, 1971-1984.	2.5	39
56	Large-scale shifts in phytoplankton groups in the Equatorial Pacific during ENSO cycles. Biogeosciences, 2011, 8, 539-550.	3.3	38
57	Phytoplankton growth formulation in marine ecosystem models: Should we take into account photo-acclimation and variable stoichiometry in oligotrophic areas?. Journal of Marine Systems, 2013, 125, 29-40.	2.1	38
58	Impact of hydrothermalism on the ocean iron cycle. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150291.	3.4	35
59	Oceanic Micronutrients: Trace Metals that are Essential for Marine Life. Elements, 2018, 14, 385-390.	0.5	35
60	Characterization of distinct bloom phenology regimes in the Southern Ocean. ICES Journal of Marine Science, 2015, 72, 1985-1998.	2.5	33
61	Insights Into the Major Processes Driving the Global Distribution of Copper in the Ocean From a Global Model. Global Biogeochemical Cycles, 2019, 33, 1594-1610.	4.9	30
62	Timing and magnitude of climateâ€driven range shifts in transboundary fish stocks challenge their management. Global Change Biology, 2022, 28, 2312-2326.	9.5	30
63	Impact of enhanced vertical mixing on marine biogeochemistry: lessons for geo-engineering and natural variability. Biogeosciences, 2009, 6, 901-912.	3.3	29
64	On the effects of circulation, sediment resuspension and biological incorporation by diatoms in an ocean model of aluminium*. Biogeosciences, 2014, 11, 3757-3779.	3.3	29
65	Resupply of mesopelagic dissolved iron controlled by particulate iron composition. Nature Geoscience, 2019, 12, 995-1000.	12.9	29
66	Marine productivity response to Heinrich events: a model-data comparison. Climate of the Past, 2012, 8, 1581-1598.	3.4	27
67	Impact of episodic vertical fluxes on sea surface pCO ₂. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 2009-2025.	3.4	26
68	Minimal cobalt metabolism in the marine cyanobacterium <i>Prochlorococcus</i>. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 15740-15747.	7.1	25
69	An iron cycle cascade governs the response of equatorial Pacific ecosystems to climate change. Global Change Biology, 2020, 26, 6168-6179.	9.5	25
70	Evidence that Pacific tuna mercury levels are driven by marine methylmercury production and anthropogenic inputs. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	25
71	Southern Ocean Seasonal Cycle Experiment 2012: Seasonal scale climate and carbon cycle links. South African Journal of Science, 2012, 108, .	0.7	24
72	Nonmonotonic Response of Primary Production and Export to Changes in Mixedâ€Layer Depth in the Southern Ocean. Geophysical Research Letters, 2019, 46, 3368-3377.	4.0	24

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73	Quantifying the Impact of Climate Change on Marine Diazotrophy: Insights From Earth System Models. Frontiers in Marine Science, 2020, 7, .	2.5	24
74	A ventilationâ€based framework to explain the regenerationâ€scavenging balance of iron in the ocean. Geophysical Research Letters, 2014, 41, 7227-7236.	4.0	23
75	Taxonomic and nutrient controls on phytoplankton iron quotas in the ocean. Limnology and Oceanography Letters, 2021, 6, 96-106.	3.9	22
76	Seasonal Depletion of the Dissolved Iron Reservoirs in the Subâ€Antarctic Zone of the Southern Atlantic Ocean. Geophysical Research Letters, 2019, 46, 4386-4395.	4.0	21
77	Improving the parameters of a global ocean biogeochemical model via variational assimilation of in situ data at five time series stations. Journal of Geophysical Research, 2011, 116, .	3.3	20
78	Using the L* concept to explore controls on the relationship between paired ligand and dissolved iron concentrations in the ocean. Marine Chemistry, 2015, 173, 52-66.	2.3	20
79	DMS dynamics in the most oligotrophic subtropical zones of the global ocean. Biogeochemistry, 2012, 110, 215-241.	3.5	19
80	Developing Autonomous Observing Systems for Micronutrient Trace Metals. Frontiers in Marine Science, 2019, 6, .	2.5	19
81	Volcanic ash as an oceanic iron source and sink. Geophysical Research Letters, 2016, 43, 2732-2740.	4.0	18
82	Iron Distribution in the Subtropical North Atlantic: The Pivotal Role of Colloidal Iron. Global Biogeochemical Cycles, 2019, 33, 1532-1547.	4.9	18
83	Cellular costs underpin micronutrient limitation in phytoplankton. Science Advances, 2021, 7, .	10.3	17
84	Elevated sources of cobalt in the Arctic Ocean. Biogeosciences, 2020, 17, 4745-4767.	3.3	17
85	Iron in the Ross Sea: 2. Impact of discrete iron addition strategies. Journal of Geophysical Research, 2005, 110, .	3.3	15
86	An Arctic Strait of Two Halves: The Changing Dynamics of Nutrient Uptake and Limitation Across the Fram Strait. Global Biogeochemical Cycles, 2021, 35, e2021GB006961.	4.9	15
87	The Regional Importance of Oxygen Demand and Supply for Historical Ocean Oxygen Trends. Geophysical Research Letters, 2021, 48, .	4.0	15
88	Arctic seals as tracers of environmental and ecological change. Limnology and Oceanography Letters, 2021, 6, 24-32.	3.9	14
89	Impact of intensifying nitrogen limitation on ocean net primary production is fingerprinted by nitrogen isotopes. Nature Communications, 2021, 12, 6214.	12.8	14
90	The role of zinc in the adaptive evolution of polar phytoplankton. Nature Ecology and Evolution, 2022, 6, 965-978.	7.8	14

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91	Phytoplankton plasticity drives large variability in carbon fixation efficiency. Geophysical Research Letters, 2014, 41, 8994-9000.	4.0	13
92	Prey Stoichiometry Drives Iron Recycling by Zooplankton in the Global Ocean. Frontiers in Marine Science, 2020, 7, .	2.5	13
93	Variability in iron (II) oxidation kinetics across diverse hydrothermal sites on the northern Mid Atlantic Ridge. Geochimica Et Cosmochimica Acta, 2021, 297, 143-157.	3.9	13
94	Biogeochemical feedbacks associated with the response of micronutrient recycling by zooplankton to climate change. Global Change Biology, 2021, 27, 4758-4770.	9.5	13
95	Constraints on the Cycling of Iron Isotopes From a Global Ocean Model. Global Biogeochemical Cycles, 2021, 35, e2021GB006968.	4.9	13
96	Iron bioavailability in the Southern Ocean. Oceanography and Marine Biology, 2012, , 1-64.	1.0	13
97	Modelling the role of marine particle on large scale 231Pa, 230Th, Iron and Aluminium distributions. Progress in Oceanography, 2015, 133, 66-72.	3.2	12
98	More to hydrothermal iron input than meets the eye. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 16641-16642.	7.1	11
99	Resource Availability and Entrainment Are Driven by Offsets Between Nutriclines and Winter Mixedâ€Layer Depth. Global Biogeochemical Cycles, 2020, 34, e2019GB006497.	4.9	10
100	Resource Colimitation Drives Competition Between Phytoplankton and Bacteria in the Southern Ocean. Geophysical Research Letters, 2021, 48, e2020GL088369.	4.0	9
101	Probing the Bioavailability of Dissolved Iron to Marine Eukaryotic Phytoplankton Using In Situ Single Cell Iron Quotas. Global Biogeochemical Cycles, 2021, 35, e2021GB006979.	4.9	9
102	Major processes of the dissolved cobalt cycle in the North and equatorial Pacific Ocean. Biogeosciences, 2022, 19, 2365-2395.	3.3	9
103	Decadal trends in airâ€sea CO₂ exchange in the Ross Sea (Antarctica). Geophysical Research Letters, 2016, 43, 5271-5278.	4.0	8
104	Effects of light and phosphorus on summer DMS dynamics in subtropical waters using a global ocean biogeochemical model. Environmental Chemistry, 2016, 13, 379.	1.5	8
105	Impact of Inorganic Particles of Sedimentary Origin on Global Dissolved Iron and Phytoplankton Distribution. Journal of Geophysical Research: Oceans, 2019, 124, 8626-8646.	2.6	8
106	Dissolved iron in the Bermuda region of the subtropical North Atlantic Ocean: Seasonal dynamics, mesoscale variability, and physicochemical speciation. Marine Chemistry, 2020, 219, 103748.	2.3	7
107	Heme b distributions through the Atlantic Ocean: evidence for â€œanemicâ€•phytoplankton populations. Scientific Reports, 2020, 10, 4551.	3.3	7
108	Data-Driven Modeling of Dissolved Iron in the Global Ocean. Frontiers in Marine Science, 2022, 9, .	2.5	6

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109	Surface Ocean Biogeochemistry Regulates the Impact of Anthropogenic Aerosol Fe Deposition on the Cycling of Iron and Iron Isotopes in the North Pacific. Geophysical Research Letters, 2022, 49, .	4.0	6
110	Drivers of nonâ€Redfield nutrient utilization in the Atlantic sector of the Southern Ocean. Geophysical Research Letters, 2012, 39, .	4.0	5
111	Oceanographic and biogeochemical drivers cause divergent trends in the nitrogen isoscape in a changing Arctic Ocean. Ambio, 2022, 51, 383-397.	5.5	5
112	Multiâ€decadal environmental change in the Barents Sea recorded by seal teeth. Global Change Biology, 2022, 28, 3054-3065.	9.5	5
113	Elemental Distribution: Overview. , 2019, , 122-127.		4
114	The Importance of Bottom-Up Approaches to International Cooperation in Ocean Science: The Iron Story. Oceanography, 2020, 33, 11-15.	1.0	4
115	GEOTRACES DATA PRODUCTS: STANDARDISING AND LINKING OCEAN TRACE ELEMENT AND ISOTOPE DATA AT A GLOBAL SCALE. Elements, 2018, 14, 436-437.	0.5	3
116	Diurnal variability in alkaline phosphatase activity and the potential role of zooplankton. Limnology and Oceanography Letters, 2019, 4, 71-78.	3.9	3
117	Examining the Interaction Between Freeâ€Living Bacteria and Iron in the Global Ocean. Global Biogeochemical Cycles, 2022, 36, .	4.9	3
118	Constraining the Contribution of Hydrothermal Iron to Southern Ocean Export Production Using Deep Ocean Iron Observations. Frontiers in Marine Science, 2022, 9, .	2.5	2