Rosalind E M Rickaby

List of Publications by Year
in descending order

98 papers	5,986 citations	81743 39 h-index	76769 74 g-index
99 all docs	99 docs citations	99 times ranked	5858 citing authors

#	Article	IF	Citations
1	Phytoplankton Calcification in a High-CO ₂ World. Science, 2008, 320, 336-340.	6.0	695
2	Sensitivity of coccolithophores to carbonate chemistry and ocean acidification. Nature, 2011, 476, 80-83.	13.7	389
3	The meaning of net zero and how to get it right. Nature Climate Change, 2022, 12, 15-21.	8.1	257
4	Oceanic Cd/P ratio and nutrient utilization in the glacial Southern Ocean. Nature, 2000, 405, 305-310.	13.7	219
5	Migration of the subtropical front as a modulator of glacial climate. Nature, 2009, 460, 380-383.	13.7	196
6	Why marine phytoplankton calcify. Science Advances, 2016, 2, e1501822.	4.7	181
7	Large variation in the Rubisco kinetics of diatoms reveals diversity among their carbon-concentrating mechanisms. Journal of Experimental Botany, 2016, 67, 3445-3456.	2.4	176
8	Iodine to calcium ratios in marine carbonate as a paleo-redox proxy during oceanic anoxic events. Geology, 2010, 38, 1107-1110.	2.0	175
9	Systematic change of foraminiferal Mg/Ca ratios across a strong salinity gradient. Earth and Planetary Science Letters, 2008, 265, 153-166.	1.8	149
10	Palaeoenvironmental significance of carbon- and oxygen-isotope stratigraphy of marine Triassicâ€“Jurassic boundary sections in SW Britain. Journal of the Geological Society, 2009, 166, 431-445.	0.9	139
11	Late inception of a resiliently oxygenated upper ocean. Science, 2018, 361, 174-177.	6.0	117
12	Poleward expansion of the coccolithophore Emiliania huxleyi. Journal of Plankton Research, 2014, 36, 316-325.	0.8	112
13	CO2 Removal With Enhanced Weathering and Ocean Alkalinity Enhancement: Potential Risks and Co-benefits for Marine Pelagic Ecosystems. Frontiers in Climate, 2019, 1, .	1.3	107
14	Planktonic foraminiferal Cd/Ca: Paleonutrients or paleotemperature?. Paleoceanography, 1999, 14, 293-303.	3.0	106
15	Glacialâ€“interglacial changes in bottom-water oxygen content on the Portuguese margin. Nature Geoscience, 2015, 8, 40-43.	5.4	103
16	Adaptive signals in algal Rubisco reveal a history of ancient atmospheric carbon dioxide. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 483-492.	1.8	102
17	Nonspecific uptake and homeostasis drive the oceanic cadmium cycle. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2500-2505.	3.3	99
18	Coccolith chemistry reveals secular variations in the global ocean carbon cycle?. Earth and Planetary Science Letters, 2007, 253, 83-95.	1.8	98

#	Article	IF	Citations
19	Isotopic fractionation of cadmium into calcite. Earth and Planetary Science Letters, 2011, 312, 243-253.	1.8	98
20	The role of SO4 in the switch from calcite to aragonite seas. Geology, 2011, 39, 331-334.	2.0	95
21	Perturbing phytoplankton: response and isotopic fractionation with changing carbonate chemistry in two coccolithophore species. Climate of the Past, 2010, 6, 771-785.	1.3	94
22	Globally increased pelagic carbonate production during the Mid-Brunhes dissolution interval and the CO2 paradox of MIS 11. Quaternary Science Reviews, 2006, 25, 3278-3293.	1.4	87
23	Oxygen depletion recorded in upper waters of the glacial Southern Ocean. Nature Communications, 2016, 7, 11146.	5.8	83
24	Glacial expansion of oxygen-depleted seawater in the eastern tropical Pacific. Nature, 2018, 562, 410-413.	13.7	78
25	Deep ocean nutrients during the Last Glacial Maximum deduced from sponge silicon isotopic compositions. Earth and Planetary Science Letters, 2010, 292, 290-300.	1.8	77
26	Controls on stable strontium isotope fractionation in coccolithophores with implications for the marine Sr cycle. Geochimica Et Cosmochimica Acta, 2014, 128, 225-235.	1.6	75
27	I/Ca evidence for upper ocean deoxygenation during the PETM. Paleoceanography, 2014, 29, 964-975.	3.0	73
28	Cool La Nina During the Warmth of the Pliocene?. Science, 2005, 307, 1948-1952.	6.0	72
29	Diatom silicon isotopes as a proxy for silicic acid utilisation: A Southern Ocean core top calibration. Geochimica Et Cosmochimica Acta, 2012, 96, 174-192.	1.6	72
30	A synthesis of marine sediment core Î´¹³C data over the last 150 000 years. Climate of the Past, 2010, 6, 645-673.	1.3	71
31	Opening the gateways for diatoms primes Earth for Antarctic glaciation. Earth and Planetary Science Letters, 2013, 375, 34-43.	1.8	63
32	Repeated species radiations in the recent evolution of the key marine phytoplankton lineage Gephyrocapsa. Nature Communications, 2019, 10, 4234.	5.8	61
33	Specimen preparation for NanoSIMS analysis of biological materials. Applied Surface Science, 2006, 252, 6917-6924.	3.1	58
34	The role of Rubisco kinetics and pyrenoid morphology in shaping the CCM of haptophyte microalgae. Journal of Experimental Botany, 2017, 68, 3959-3969.	2.4	54
35	Controls on stable isotope and trace metal uptake in Neogloboquadrina pachyderma (sinistral) from an Antarctic sea-ice environment. Earth and Planetary Science Letters, 2009, 278, 67-77.	1.8	52
36	Silicon isotopes in Antarctic sponges: an interlaboratory comparison. Antarctic Science, 2011, 23, 34-42.	0.5	46

#	Article	IF	Citations
37	The origin of carbon isotope vital effects in coccolith calcite. Nature Communications, 2017, 8, 14511.	5.8	46
38	Juvenile life history of NE Atlantic orange roughy from otolith stable isotopes. Deep-Sea Research Part I: Oceanographic Research Papers, 2007, 54, 1221-1230.	0.6	44
39	Breathing more deeply: Deep ocean carbon storage during the mid-Pleistocene climate transition. Geology, 2016, 44, 1035-1038.	2.0	44
40	Calcification response of a key phytoplankton family to millennial-scale environmental change. Scientific Reports, 2016, 6, 34263.	1.6	43
41	Constraints on the vital effect in coccolithophore and dinoflagellate calcite by oxygen isotopic modification of seawater. Geochimica Et Cosmochimica Acta, 2014, 141, 612-627.	1.6	40
42	Ikaite Abundance Controlled by Porewater Phosphorus Level: Potential Links to Dust and Productivity. Journal of Geology, 2015, 123, 269-281.	0.7	40
43	Expanded oxygen minimum zones during the late Paleoceneâ€early Eocene: Hints from multiproxy comparison and ocean modeling. Paleoceanography, 2016, 31, 1532-1546.	3.0	40
44	Overcoming adversity through diversity: aquatic carbon concentrating mechanisms. Journal of Experimental Botany, 2017, 68, 3689-3695.	2.4	39
45	The Giant Pacific Oyster (<i>Crassostrea gigas</i>) as a modern analog for fossil ostreoids: Isotopic (Ca, O, C) and elemental (Mg/Ca, Sr/Ca, Mn/Ca) proxies. Geochemistry, Geophysics, Geosystems, 2013, 14, 4109-4120.	1.0	38
46	Iron requirements and uptake strategies of the globally abundant marine ammonia-oxidising archaeon, <i>Nitrosopumilus maritimus</i> SCM1. ISME Journal, 2019, 13, 2295-2305.	4.4	38
47	The effect of ocean alkalinity and carbon transfer on deep-sea carbonate ion concentration during the past five glacial cycles. Earth and Planetary Science Letters, 2017, 471, 42-53.	1.8	37
48	Genotyping an <i>Emiliania huxleyi</i> (prymnesiophyceae) bloom event in the North Sea reveals evidence of asexual reproduction. Biogeosciences, 2014, 11, 5215-5234.	1.3	35
49	Vanishing coccolith vital effects with alleviated carbon limitation. Biogeosciences, 2016, 13, 301-312.	1.3	34
50	Environmental carbonate chemistry selects for phenotype of recently isolated strains of Emiliania huxleyi. Deep-Sea Research Part II: Topical Studies in Oceanography, 2016, 127, 28-40.	0.6	34
51	Cadmium and phosphate in coastal Antarctic seawater: Implications for Southern Ocean nutrient cycling. Marine Chemistry, 2008, 112, 149-157.	0.9	33
52	Evidence for changes in carbon isotopic fractionation by phytoplankton between 1960 and 2010. Global Biogeochemical Cycles, 2013, 27, 505-515.	1.9	31
53	Interactions of thallium with marine phytoplankton. Geochimica Et Cosmochimica Acta, 2020, 276, 1-13.	1.6	30
54	Potential of ikaite to record the evolution of oceanic Î´18O. Geology, 2006, 34, 497.	2.0	29

#	Article	IF	Citations
55	A coccolithophore concept for constraining the Cenozoic carbon cycle. Biogeosciences, 2007, 4, 323-329.	1.3	28
56	Evolution of Mutation Rate in Astronomically Large Phytoplankton Populations. Genome Biology and Evolution, 2020, 12, 1051-1059.	1.1	28
57	I/Ca in epifaunal benthic foraminifera: A semi-quantitative proxy for bottom water oxygen in a multi-proxy compilation for glacial ocean deoxygenation. Earth and Planetary Science Letters, 2020, 533, 116055.	1.8	26
58	Cd in planktonic and benthic foraminiferal shells determined by thermal ionisation mass spectrometry. Geochimica Et Cosmochimica Acta, 2000, 64, 1229-1236.	1.6	25
59	Cloning, Expression and Characterization of the Î´â€carbonic Anhydrase of <i>Thalassiosira weissflogii</i> (Bacillariophyceae). Journal of Phycology, 2013, 49, 170-177.	1.0	25
60	Refining our estimate of atmospheric CO 2 across the Eoceneâ€“Oligocene climatic transition. Earth and Planetary Science Letters, 2015, 409, 329-338.	1.8	24
61	Evidence for a multi-species coccolith volume change over the past two centuries: understanding a potential ocean acidification response. Biogeosciences, 2008, 5, 1651-1655.	1.3	22
62	Carbon isotope ratios of coccolithâ€“associated polysaccharides of Emiliania huxleyi as a function of growth rate and CO2 concentration. Organic Geochemistry, 2018, 119, 1-10.	0.9	22
63	The mode of speciation during a recent radiation in open-ocean phytoplankton. Current Biology, 2021, 31, 5439-5449.e5.	1.8	22
64	On the potential role of marine calcifiers in glacialâ€interglacial dynamics. Global Biogeochemical Cycles, 2013, 27, 692-704.	1.9	21
65	Polymorph Selectivity of Coccolithâ€Associated Polysaccharides from <i>Gephyrocapsa Oceanica</i> on Calcium Carbonate Formation In Vitro. Advanced Functional Materials, 2019, 29, 1807168.	7.8	21
66	Carbon Export Buffering and CO₂ Drawdown by Flexible Phytoplankton C:N:P Under Glacial Conditions. Paleoceanography and Paleoclimatology, 2020, 35, e2019PA003823.	1.3	21
67	Upper ocean oxygenation, evolution of RuBisCO and the Phanerozoic succession of phytoplankton. Free Radical Biology and Medicine, 2019, 140, 295-304.	1.3	20
68	Refining the planktic foraminiferal I/Ca proxy: Results from the Southeast Atlantic Ocean. Geochimica Et Cosmochimica Acta, 2020, 287, 318-327.	1.6	20
69	The role of sea ice formation in cycling of aluminium in northern Marguerite Bay, Antarctica. Estuarine, Coastal and Shelf Science, 2010, 87, 103-112.	0.9	18
70	Thermal, trophic and metabolic life histories of inaccessible fishes revealed from stableâ€isotope analyses: a case study using orange roughy <i>Hoplostethus atlanticus</i>. Journal of Fish Biology, 2013, 83, 1613-1636.	0.7	18
71	Direct measurement of multi-elements in high matrix samples with a flow injection ICP-MS: application to the extended<i>Emiliania huxleyi</i>Redfield ratio. Journal of Analytical Atomic Spectrometry, 2018, 33, 1196-1208.	1.6	18
72	Interaction of the coccolithophore <i>Gephyrocapsa oceanica</i> with its carbon environment: response to a recreated highâ€CO₂ geological past. Geobiology, 2012, 10, 72-81.	1.1	15

#	Article	IF	Citations
73	Postâ€mortem oxygen isotope exchange within cultured diatom silica. Rapid Communications in Mass Spectrometry, 2017, 31, 1749-1760.	0.7	15
74	Marine ammonia-oxidising archaea and bacteria occupy distinct iron and copper niches. ISME Communications, 2021, 1, .	1.7	15
75	An explanation for the 18O excess in Noelaerhabdaceae coccolith calcite. Geochimica Et Cosmochimica Acta, 2016, 189, 132-142.	1.6	14
76	Biophysical analysis of the structural evolution of substrate specificity in RuBisCO. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 30451-30457.	3.3	14
77	Goldilocks and the three inorganic equilibria: how Earthâ€™s chemistry and life coevolve to be nearly in tune. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140188.	1.6	13
78	The cadmium-phosphate relationship in brine: biological versus physical control over micronutrients in sea ice environments. Antarctic Science, 2010, 22, 11.	0.5	11
79	Fluoro-electrochemical microscopy reveals group specific differential susceptibility of phytoplankton towards oxidative damage. Chemical Science, 2019, 10, 7988-7993.	3.7	11
80	Calcite crystal growth orientation: implications for trace metal uptake into coccoliths. Mineralogical Magazine, 2008, 72, 269-272.	0.6	10
81	Optoâ€Electrochemical Dissolution Reveals Coccolith Calcium Carbonate Content. Angewandte Chemie, 2021, 133, 21167-21174.	1.6	10
82	Inherent characteristics of sawtooth cycles can explain different glacial periodicities. Climate Dynamics, 2016, 46, 557-569.	1.7	9
83	Susceptibility of algae to Cr toxicity reveals contrasting metal management strategies. Limnology and Oceanography, 2019, 64, 2271-2282.	1.6	9
84	Optoâ€Electrochemical Dissolution Reveals Coccolith Calcium Carbonate Content. Angewandte Chemie - International Edition, 2021, 60, 20999-21006.	7.2	9
85	Single-entity coccolithophore electrochemistry shows size is no guide to the degree of calcification. Environmental Science Advances, 2022, 1, 156-163.	1.0	8
86	Proteomic response of the marine ammoniaâ€oxidising archaeon <i>Nitrosopumilus maritimus</i> to iron limitation reveals strategies to compensate for nutrient scarcity. Environmental Microbiology, 2022, 24, 835-849.	1.8	6
87	Proxies for paleo-oxygenation: A downcore comparison between benthic foraminiferal surface porosity and I/Ca. Palaeogeography, Palaeoclimatology, Palaeoecology, 2021, 579, 110588.	1.0	6
88	Rapid Opto-electrochemical Differentiation of Marine Phytoplankton. ACS Measurement Science Au, 2022, 2, 342-350.	1.9	6
89	Reply to Morel: Cadmium as a micronutrient and macrotoxin in the oceans. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E1878-E1878.	3.3	5
90	The influence of elevated SiO₂(<i>aq</i>) on intracellular silica uptake and microbial metabolism. Geobiology, 2021, 19, 421-433.	1.1	4

#	Article	IF	Citations
91	Deuterium in marine organic biomarkers: toward a new tool for quantifying aquatic mixotrophy. New Phytologist, 2022, 234, 776-782.	3.5	4
92	Antagonistic co-limitation through ion promiscuity â€“ On the metal sensitivity of Thalassiosira oceanica under phosphorus stress. Science of the Total Environment, 2020, 699, 134080.	3.9	3
93	Towards the use of the coccolith vital effects in palaeoceanography: A field investigation during the middle Miocene in the SW Pacific Ocean. Deep-Sea Research Part I: Oceanographic Research Papers, 2020, 160, 103262.	0.6	3
94	Carbonate ions, orbits and Mg/Ca at ODP 1123. Geochimica Et Cosmochimica Acta, 2018, 236, 384-398.	1.6	2
95	Harry Elderfield (1943â€“2016). Nature, 2016, 533, 322-322.	13.7	1
96	Reaction: Chemical Cycle of Life and the Environment in the Anthropocene. CheM, 2017, 2, 157-158.	5.8	0
97	Rubisco Extraction and Purification from Diatoms. Bio-protocol, 2017, 7, e2191.	0.2	0
98	Earthâ€™s eccentric orbit paced the evolution of marine phytoplankton. Nature, 2021, , .	13.7	0