Michael W Lomas

List of Publications by Year
in descending order

120 papers	13,169 citations	50244 46 h-index	24232 110 g-index
124 all docs	124 docs citations	124 times ranked	12852 citing authors

#	Article	IF	Citations
1	Environmental Genome Shotgun Sequencing of the Sargasso Sea. Science, 2004, 304, 66-74.	6.0	3,776
2	Present and future global distributions of the marine Cyanobacteria <i>Prochlorococcus</i> and <i>Synechococcus</i>. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9824-9829.	3.3	1,097
3	Phytoplankton in the ocean use non-phosphorus lipids in response to phosphorus scarcity. Nature, 2009, 458, 69-72.	13.7	662
4	Light intensity regulation of cab gene transcription is signaled by the redox state of the plastoquinone pool.. Proceedings of the National Academy of Sciences of the United States of America, 1995, 92, 10237-10241.	3.3	641
5	Strong latitudinal patterns in the elemental ratios of marine plankton and organic matter. Nature Geoscience, 2013, 6, 279-283.	5.4	432
6	COMPARISONS OF NITRATE UPTAKE, STORAGE, AND REDUCTION IN MARINE DIATOMS AND FLAGELLATES. Journal of Phycology, 2000, 36, 903-913.	1.0	296
7	Temperature regulation of nitrate uptake: A novel hypothesis about nitrate uptake and reduction in coolâ€water diatoms. Limnology and Oceanography, 1999, 44, 556-572.	1.6	273
8	Harmful Algal Blooms in the Chesapeake and Coastal Bays of Maryland, USA: Comparison of 1997, 1998, and 1999 Events. Estuaries and Coasts, 2001, 24, 875.	1.7	224
9	Forming the primary nitrite maximum: Nitrifiers or phytoplankton?. Limnology and Oceanography, 2006, 51, 2453-2467.	1.6	221
10	Total dissolved nitrogen analysis: comparisons between the persulfate, UV and high temperature oxidation methods. Marine Chemistry, 2000, 69, 163-178.	0.9	209
11	Picophytoplankton biomass distribution in the global ocean. Earth System Science Data, 2012, 4, 37-46.	3.7	197
12	Assimilation of upwelled nitrate by small eukaryotes in the Sargasso Sea. Nature Geoscience, 2011, 4, 717-722.	5.4	173
13	Accumulation and enhanced cycling of polyphosphate by Sargasso Sea plankton in response to low phosphorus. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8089-8094.	3.3	172
14	Challenges of modeling depthâ€integrated marine primary productivity over multiple decades: A case study at BATS and HOT. Global Biogeochemical Cycles, 2010, 24, .	1.9	150
15	Ocean time-series reveals recurring seasonal patterns of virioplankton dynamics in the northwestern Sargasso Sea. ISME Journal, 2012, 6, 273-284.	4.4	133
16	Regional variation in the particulate organic carbon to nitrogen ratio in the surface ocean. Global Biogeochemical Cycles, 2013, 27, 723-731.	1.9	128
17	Two decades and counting: 24-years of sustained open ocean biogeochemical measurements in the Sargasso Sea. Deep-Sea Research Part II: Topical Studies in Oceanography, 2013, 93, 16-32.	0.6	127
18	Evidence for aggregation and export of cyanobacteria and nano-eukaryotes from the Sargasso Sea euphotic zone. Biogeosciences, 2011, 8, 203-216.	1.3	124

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19	Global-scale variations of the ratios of carbon to phosphorus in exported marine organic matter. Nature Geoscience, 2014, 7, 895-898.	5.4	123
20	Concentrations and ratios of particulate organic carbon, nitrogen, and phosphorus in the global ocean. Scientific Data, 2014, 1, 140048.	2.4	120
21	Nitrogen Uptake and Assimilation. , 2008, , 303-384.		116
22	Prochlorococcuscontributes to new production in the Sargasso Sea deep chlorophyll maximum. Geophysical Research Letters, 2007, 34, .	1.5	110
23	Longâ€term increase in mesozooplankton biomass in the Sargasso Sea: Linkage to climate and implications for food web dynamics and biogeochemical cycling. Global Biogeochemical Cycles, 2012, 26, .	1.9	96
24	Impact of ocean phytoplankton diversity on phosphate uptake. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17540-17545.	3.3	93
25	Phytoplankton taxon-specific orthophosphate (Pi) and ATP utilization in the western subtropical North Atlantic. Aquatic Microbial Ecology, 2009, 58, 31-44.	0.9	87
26	Taxonomic variability of phosphorus stress in Sargasso Sea phytoplankton. Limnology and Oceanography, 2004, 49, 2303-2309.	1.6	84
27	Biogeochemical controls of surface ocean phosphate. Science Advances, 2019, 5, eaax0341.	4.7	84
28	Rare earth element association with foraminifera. Geochimica Et Cosmochimica Acta, 2012, 94, 57-71.	1.6	82
29	Polyphosphate in <i>Trichodesmium</i> from the lowâ€phosphorus Sargasso Sea. Limnology and Oceanography, 2010, 55, 2161-2169.	1.6	79
30	Effect of ocean acidification on cyanobacteria in the subtropical North Atlantic. Aquatic Microbial Ecology, 2012, 66, 211-222.	0.9	77
31	Sea change: Charting the course for biogeochemical ocean time-series research in a new millennium. Deep-Sea Research Part II: Topical Studies in Oceanography, 2013, 93, 2-15.	0.6	77
32	CHARACTERIZATION OF NITROGEN UPTAKE BY NATURAL POPULATIONS OF AUREOCOCCUS ANOPHAGEFFERENS (CHRYSOPHYCEAE) AS A FUNCTION OF INCUBATION DURATION, SUBSTRATE CONCENTRATION, LIGHT, AND TEMPERATURE1. Journal of Phycology, 1996, 32, 907-916.	1.0	76
33	Dissolved inorganic and organic phosphorus uptake in <i>Trichodesmium</i> and the microbial community: The importance of phosphorus ester in the Sargasso Sea. Limnology and Oceanography, 2010, 55, 1390-1399.	1.6	73
34	Mediation of benthicâ€"pelagic coupling by microphytobenthos: an energy- and material-based model for initiation of blooms of Aureococcus anophagefferens. Harmful Algae, 2004, 3, 403-437.	2.2	71
35	Changes in partitioning of carbon amongst photosynthetic pico- and nano-plankton groups in the Sargasso Sea in response to changes in the North Atlantic Oscillation. Deep-Sea Research Part II: Topical Studies in Oceanography, 2013, 93, 58-70.	0.6	68
36	Temporal and spatial dynamics of urea uptake and regeneration rates and concentrations in Chesapeake Bay. Estuaries and Coasts, 2002, 25, 469-482.	1.7	67

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37	Ambient nitrate switches the ammonium consumption pathway in the euphotic ocean. Nature Communications, 2018, 9, 915.	5.8	67
38	Microbial processes and temperature in Chesapeake Bay: current relationships and potential impacts of regional warming. Global Change Biology, 2002, 8, 51-70.	4.2	66
39	High Variability in Cellular Stoichiometry of Carbon, Nitrogen, and Phosphorus Within Classes of Marine Eukaryotic Phytoplankton Under Sufficient Nutrient Conditions. Frontiers in Microbiology, 2018, 9, 543.	1.5	66
40	Potential controls on interannual partitioning of organic carbon during the winter/spring phytoplankton bloom at the Bermuda Atlantic time-series study (BATS) site. Deep-Sea Research Part I: Oceanographic Research Papers, 2004, 51, 1619-1636.	0.6	65
41	Microbial sources of intact polar diacylglycerolipids in the Western North Atlantic Ocean. Organic Geochemistry, 2011, 42, 803-811.	0.9	64
42	Variation in annual production of copepods, euphausiids, and juvenile walleye pollock in the southeastern Bering Sea. Deep-Sea Research Part II: Topical Studies in Oceanography, 2016, 134, 223-234.	0.6	63
43	Phosphate and adenosineâ€5'â€triphosphate uptake by cyanobacteria and heterotrophic bacteria in the Sargasso Sea. Limnology and Oceanography, 2011, 56, 323-332.	1.6	58
44	Biogeochemical responses to late-winter storms in the Sargasso Sea, II: Increased rates of biogenic silica production and export. Deep-Sea Research Part I: Oceanographic Research Papers, 2009, 56, 861-874.	0.6	57
45	Putative sponge biomarkers in unicellular Rhizaria question an early rise of animals. Nature Ecology and Evolution, 2019, 3, 577-581.	3.4	57
46	Decoupling of net community and export production on submesoscales in the Sargasso Sea. Global Biogeochemical Cycles, 2015, 29, 1266-1282.	1.9	56
47	Parallel phylogeography of <i>Prochlorococcus</i> and <i>Synechococcus</i>. ISME Journal, 2019, 13, 430-441.	4.4	55
48	Phosphorus cycling in the Sargasso Sea: Investigation using the oxygen isotopic composition of phosphate, enzymeâ€labeled fluorescence, and turnover times. Global Biogeochemical Cycles, 2013, 27, 375-387.	1.9	51
49	Seasonal distribution of dissolved inorganic carbon and net community production on the Bering Sea shelf. Biogeosciences, 2010, 7, 1769-1787.	1.3	47
50	Mesozooplankton grazing during spring sea-ice conditions in the eastern Bering Sea. Deep-Sea Research Part II: Topical Studies in Oceanography, 2016, 134, 157-172.	0.6	47
51	Nutrient supply controls particulate elemental concentrations and ratios in the low latitude eastern Indian Ocean. Nature Communications, 2018, 9, 4868.	5.8	47
52	Seasonal POC fluxes at BATS estimated from 210Po deficits. Deep-Sea Research Part I: Oceanographic Research Papers, 2010, 57, 113-124.	0.6	45
53	The counterintuitive effect of summerâ€toâ€fall mixed layer deepening on eukaryotic new production in the Sargasso Sea. Global Biogeochemical Cycles, 2014, 28, 86-102.	1.9	45
54	The MAREDAT global database of high performance liquid chromatography marine pigment measurements. Earth System Science Data, 2013, 5, 109-123.	3.7	44

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55	Plankton community composition, organic carbon and thorium-234 particle size distributions, and particle export in the Sargasso Sea. Journal of Marine Research, 2009, 67, 845-868.	0.3	43
56	A Framework for a Marine Biodiversity Observing Network Within Changing Continental Shelf Seascapes. Oceanography, 2014, 27, 18-23.	0.5	43
57	Inorganic and Organic Nitrogen Use by Phytoplankton Along Chesapeake Bay, Measured Using a Flow Cytometric Sorting Approach. Estuaries and Coasts, 2010, 33, 971-984.	1.0	41
58	Phytoplankton responses to atmospheric metal deposition in the coastal and open-ocean Sargasso Sea. Frontiers in Microbiology, 2012, 3, 359.	1.5	41
59	DNA-based molecular fingerprinting of eukaryotic protists and cyanobacteria contributing to sinking particle flux at the Bermuda Atlantic time-series study. Deep-Sea Research Part II: Topical Studies in Oceanography, 2013, 93, 71-83.	0.6	41
60	Influence of nutrient utilization and remineralization stoichiometry on phytoplankton species and carbon export: A modeling study at BATS. Deep-Sea Research Part I: Oceanographic Research Papers, 2008, 55, 73-107.	0.6	40
61	Biogenic silica at the Bermuda Atlantic Timeâ€series Study site in the Sargasso Sea: Temporal changes and their inferred controls based on a 15â€year record. Global Biogeochemical Cycles, 2009, 23, .	1.9	39
62	Stimulation of the brown tide organism, Aureococcus anophagefferens, by selective nutrient additions to in situ mesocosms. Harmful Algae, 2004, 3, 377-388.	2.2	38
63	C : N : P stoichiometry at the Bermuda Atlantic Time-series Study station in the North Atlantic Ocean. Biogeosciences, 2015, 12, 6389-6403.	1.3	37
64	A nutrient limitation mosaic in the eastern tropical Indian Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2019, 166, 125-140.	0.6	36
65	How Does Climate Change Affect the Bering Sea Ecosystem?. Eos, 2010, 91, 457-458.	0.1	34
66	Cross-basin differences in particulate organic carbon export and flux attenuation in the subtropical North Atlantic gyre. Deep-Sea Research Part I: Oceanographic Research Papers, 2010, 57, 213-227.	0.6	34
67	Vertical decoupling of nitrate assimilation and nitrification in the Sargasso Sea. Deep-Sea Research Part I: Oceanographic Research Papers, 2015, 103, 64-72.	0.6	34
68	A new time series of particle export from neutrally buoyant sediments traps at the Bermuda Atlantic Time-series Study site. Deep-Sea Research Part I: Oceanographic Research Papers, 2013, 72, 34-47.	0.6	33
69	Linking regional shifts in microbial genome adaptation with surface ocean biogeochemistry. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190254.	1.8	33
70	Enhanced Solubility and Ecological Impact of Atmospheric Phosphorus Deposition upon Extended Seawater Exposure. Environmental Science & Technology, 2012, 46, 10438-10446.	4.6	32
71	Clade and strain specific contributions of <i>Synechococcus</i> and <i>Prochlorococcus</i> to carbon export in the Sargasso Sea. Limnology and Oceanography, 2018, 63, S448.	1.6	32
72	Pumped Up by the Cold: Elemental Quotas and Stoichiometry of Cold-Water Diatoms. Frontiers in Marine Science, 2019, 6, .	1.2	32

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73	Biogeochemical responses to late-winter storms in the Sargasso Sea. IV. Rapid succession of major phytoplankton groups. Deep-Sea Research Part I: Oceanographic Research Papers, 2009, 56, 892-908.	0.6	30
74	Use of Flow Cytometry to Measure Biogeochemical Rates and Processes in the Ocean. Annual Review of Marine Science, 2011, 3, 537-566.	5.1	30
75	Revisiting N2 fixation in the North Atlantic Ocean: Significance of deviations from the Redfield Ratio, atmospheric deposition and climate variability. Deep-Sea Research Part II: Topical Studies in Oceanography, 2013, 93, 148-158.	0.6	30
76	Microzooplankton: Abundance, biomass and contribution to chlorophyll in the Eastern Bering Sea in summer. Deep-Sea Research Part II: Topical Studies in Oceanography, 2014, 109, 134-144.	0.6	30
77	The U.S. Culture Collection Network Responding to the Requirements of the Nagoya Protocol on Access and Benefit Sharing. MBio, 2017, 8, .	1.8	30
78	Picoheterotroph (<i>Bacteria</i> and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 547 Td (<i>Ar Science Data, 2012, 4, 101-106.	3.7	30
79	Interannual variability of Aureococcus anophagefferens in Quantuck Bay, Long Island: natural test of the DON hypothesis. Harmful Algae, 2004, 3, 389-402.	2.2	29
80	Biogeochemical responses to late-winter storms in the Sargasso Sea, Iâ€"Pulses of primary and new production. Deep-Sea Research Part I: Oceanographic Research Papers, 2009, 56, 843-860.	0.6	28
81	Phosphonate utilization by eukaryotic phytoplankton. Limnology and Oceanography Letters, 2019, 4, 18-24.	1.6	28
82	Carbon and nitrogen productivity during spring in the oligotrophic Indian Ocean along the GO-SHIP IO9N transect. Deep-Sea Research Part II: Topical Studies in Oceanography, 2019, 161, 81-91.	0.6	27
83	Machine learning identifies a strong association between warming and reduced primary productivity in an oligotrophic ocean gyre. Scientific Reports, 2020, 10, 3287.	1.6	27
84	Abundance and diversity of heterotrophic bacterial cells assimilating phosphate in the subtropical North Atlantic Ocean. Environmental Microbiology, 2010, 12, 2773-2782.	1.8	26
85	Nitrogen isotopic response of prokaryotic and eukaryotic phytoplankton to nitrate availability in Sargasso Sea surface waters. Limnology and Oceanography, 2014, 59, 972-985.	1.6	26
86	Production, dissolution, accumulation, and potential export of biogenic silica in a Sargasso Sea mode-water eddy. Limnology and Oceanography, 2010, 55, 569-579.	1.6	25
87	Seasonal decoupling of particulate organic carbon export and net primary production in relation to sea-ice at the shelf break of the eastern Bering Sea: Implications for off-shelf carbon export. Journal of Geophysical Research: Oceans, 2013, 118, 5504-5522.	1.0	25
88	Stoichiometry of <i>Prochlorococcus, Synechococcus</i>, and small eukaryotic populations in the western North Atlantic Ocean. Environmental Microbiology, 2017, 19, 1568-1583.	1.8	25
89	Direct comparison of 210Po, 234Th and POC particle-size distributions and export fluxes at the Bermuda Atlantic Time-series Study (BATS) site. Journal of Environmental Radioactivity, 2011, 102, 479-489.	0.9	24
90	Biogeochemical responses to late-winter storms in the Sargasso Sea, IIIâ€"Estimates of export production using 234Th:238U disequilibria and sediment traps. Deep-Sea Research Part I: Oceanographic Research Papers, 2009, 56, 875-891.	0.6	23

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91	Seasonal and longâ€term changes in elemental concentrations and ratios of marine particulate organic matter. Global Biogeochemical Cycles, 2016, 30, 1699-1711.	1.9	23
92	Adaptive carbon export response to warming in the Sargasso Sea. Nature Communications, 2022, 13, 1211.	5.8	23
93	Mesoscale and sub-mesoscale variability in phytoplankton community composition in the Sargasso Sea. Deep-Sea Research Part I: Oceanographic Research Papers, 2016, 110, 106-122.	0.6	22
94	Subtle biogeochemical regimes in the Indian Ocean revealed by spatial and diel frequency of <i>Prochlorococcus</i> haplotypes. Limnology and Oceanography, 2020, 65, S220.	1.6	22
95	Seasonal changes in water quality and Sargassum biomass in southwest Australia. Marine Ecology - Progress Series, 2016, 551, 63-79.	0.9	22
96	Influence of growth rate on the physiological response of marine Synechococcus to phosphate limitation. Frontiers in Microbiology, 2015, 6, 85.	1.5	20
97	Decadal variability in the oxygen inventory of North Atlantic subtropical underwater captured by sustained, longâ€term oceanographic time series observations. Global Biogeochemical Cycles, 2016, 30, 460-478.	1.9	18
98	Growth on ATP Elicits a P-Stress Response in the Picoeukaryote Micromonas pusilla. PLoS ONE, 2016, 11, e0155158.	1.1	17
99	Varying influence of phytoplankton biodiversity and stoichiometric plasticity on bulk particulate stoichiometry across ocean basins. Communications Earth & Environment, 2021, 2, .	2.6	17
100	Integrated assessment of the carbon budget in the southeastern Bering Sea. Deep-Sea Research Part II: Topical Studies in Oceanography, 2014, 109, 112-124.	0.6	15
101	Marine phytoplankton resilience may moderate oligotrophic ecosystem responses and biogeochemical feedbacks to climate change. Limnology and Oceanography, 2022, 67, .	1.6	15
102	Forecasting community reassembly using climateâ€linked spatioâ€temporal ecosystem models. Ecography, 2021, 44, 612-625.	2.1	14
103	Genomic adaptation of marine phytoplankton populations regulates phosphate uptake. Limnology and Oceanography, 2020, 65, S340.	1.6	13
104	Longâ€term variability of phytoplankton carbon biomass in the Sargasso Sea. Global Biogeochemical Cycles, 2014, 28, 825-841.	1.9	12
105	Development and Bias Assessment of a Method for Targeted Metagenomic Sequencing of Marine Cyanobacteria. Applied and Environmental Microbiology, 2014, 80, 1116-1125.	1.4	12
106	Understanding Diatomsâ€™ Past and Future Biogeochemical Role in Highâ€Latitude Seas. Geophysical Research Letters, 2020, 47, e2019GL085602.	1.5	12
107	Radiometric approach for the detection of picophytoplankton assemblages across oceanic fronts. Optics Express, 2020, 28, 25682.	1.7	12
108	Spring plankton dynamics in the Eastern Bering Sea, 1971â€“2050: Mechanisms of interannual variability diagnosed with a numerical model. Journal of Geophysical Research: Oceans, 2016, 121, 1476-1501.	1.0	11

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109	Satellite-derived estimates of primary production during the Sargasso Sea winter/spring bloom: Integration of in-situ time-series data and ocean color remote sensing observations. Regional Studies in Marine Science, 2016, 3, 131-143.	0.4	11
110	Reply to: Sources of C30 steroid biomarkers in Neoproterozoicâ€“Cambrian rocks and oils. Nature Ecology and Evolution, 2020, 4, 37-39.	3.4	10
111	Seasonal and geographic variations in modeled primary production and phytoplankton losses from the mixed layer between warm and cold years on the eastern Bering Sea shelf. Deep-Sea Research Part II: Topical Studies in Oceanography, 2016, 134, 141-156.	0.6	9
112	Extraction of Photosynthesis Parameters from Time Series Measurements of In Situ Production: Bermuda Atlantic Time-Series Study. Remote Sensing, 2018, 10, 915.	1.8	9
113	Linking the distribution of 210Po and 210Pb with plankton community along Line P, Northeast Subarctic Pacific. Journal of Environmental Radioactivity, 2014, 138, 390-401.	0.9	8
114	Size-fractionated biomass and primary productivity of Sargasso Sea phytoplankton. Deep-Sea Research Part I: Oceanographic Research Papers, 2020, 156, 103141.	0.6	7
115	Nutrient and phytoplankton dynamics on the inner shelf of the eastern B ering S ea. Journal of Geophysical Research: Oceans, 2017, 122, 2422-2440.	1.0	6
116	Spatiotemporal variability of the nitrogen deficit in bottom waters on the eastern Bering Sea shelf. Continental Shelf Research, 2021, 224, 104423.	0.9	4
117	Diatom growth, biogenic silica production, and grazing losses to microzooplankton during spring in the northern Bering and Chukchi Seas. Deep-Sea Research Part II: Topical Studies in Oceanography, 2021, 191-192, 104950.	0.6	3
118	Microalgal Systematics. , 2018, , 73-107.		2
119	Drawdown of Atmospheric pCO₂ Via Variable Particle Flux Stoichiometry in the Ocean Twilight Zone. Geophysical Research Letters, 2021, 48, e2021GL094924.	1.5	2
120	Exploring long-term trends in marine ecosystems: machine-learning approaches to global change biology. , 2021, , .		0