

# Michael Behrenfeld

## List of Publications by Year in descending order

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Version: 2024-02-01

116  
papers

23,086  
citations

25034

57  
h-index

21540

114  
g-index

120  
all docs

120  
docs citations

120  
times ranked

18531  
citing authors

#	ARTICLE	IF	CITATIONS
1	North Atlantic Ocean SST-gradient-driven variations in aerosol and cloud evolution along Lagrangian cold-air outbreak trajectories. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 2795-2815.	4.9	4
2	Characterization of Sea Surface Microlayer and Marine Aerosol Organic Composition Using STXM-NEXAFS Microscopy and FTIR Spectroscopy. <i>ACS Earth and Space Chemistry</i> , 2022, 6, 1899-1913.	2.7	5
3	Particulate Backscattering in the Global Ocean: A Comparison of Independent Assessments. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL090909.	4.0	31
4	Linking marine phytoplankton emissions, meteorological processes, and downwind particle properties with FLEXPART. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 831-851.	4.9	15
5	Predictability of Seawater DMS During the North Atlantic Aerosol and Marine Ecosystem Study (NAAMES). <i>Frontiers in Marine Science</i> , 2021, 7, .	2.5	11
6	An operational overview of the EXport Processes in the Ocean from RemoTe Sensing (EXPORTS) Northeast Pacific field deployment. <i>Elementa</i> , 2021, 9, .	3.2	28
7	In Situ Estimates of Net Primary Production in the Western North Atlantic With Argo Profiling Floats. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2020JG006116.	3.0	15
8	Photoacclimation State of <i>Thalassiosira weissflogii</i> is not Affected by Changes in Optical Depth Under A Fluctuating Light Regime Simulating Deep Mixing <sup>1</sup> . <i>Journal of Phycology</i> , 2021, 57, 1212-1222.	2.3	2
9	Regional warming exacerbates match/mismatch vulnerability for cod larvae in Alaska. <i>Progress in Oceanography</i> , 2021, 193, 102555.	3.2	19
10	Phytoplankton community structuring and succession in a competition-neutral resource landscape. <i>ISME Communications</i> , 2021, 1, .	4.2	24
11	Thoughts on the evolution and ecological niche of diatoms. <i>Ecological Monographs</i> , 2021, 91, e01457.	5.4	50
12	The Seasonal Flux and Fate of Dissolved Organic Carbon Through Bacterioplankton in the Western North Atlantic. <i>Frontiers in Microbiology</i> , 2021, 12, 669883.	3.5	14
13	Seasonal bias in global ocean color observations. <i>Applied Optics</i> , 2021, 60, 6978.	1.8	30
14	Spring Accumulation Rates in North Atlantic Phytoplankton Communities Linked to Alterations in the Balance Between Division and Loss. <i>Frontiers in Microbiology</i> , 2021, 12, 706137.	3.5	5
15	Editorial: Unraveling Mechanisms Underlying Annual Plankton Blooms in the North Atlantic and Their Implications for Biogenic Aerosol Properties and Cloud Formation. <i>Frontiers in Marine Science</i> , 2021, 8, .	2.5	3
16	Seasonal Differences in Submicron Marine Aerosol Particle Organic Composition in the North Atlantic. <i>Frontiers in Marine Science</i> , 2021, 8, .	2.5	9
17	Phytoplankton biodiversity and the inverted paradox. <i>ISME Communications</i> , 2021, 1, .	4.2	14
18	Seasonal mixed layer depth shapes phytoplankton physiology, viral production, and accumulation in the North Atlantic. <i>Nature Communications</i> , 2021, 12, 6634.	12.8	19

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19	Variability in Marine Plankton Ecosystems Are Not Observed in Freshly Emitted Sea Spray Aerosol Over the North Atlantic Ocean. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL085938.	4.0	30
20	Shifts in Phytoplankton Community Structure Across an Anticyclonic Eddy Revealed From High Spectral Resolution Lidar Scattering Measurements. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	15
21	Global Retrievals of Solar-Induced Chlorophyll Fluorescence at Red Wavelengths With TROPOMI. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087541.	4.0	31
22	Seasonal modulation of phytoplankton biomass in the Southern Ocean. <i>Nature Communications</i> , 2020, 11, 5364.	12.8	51
23	Seasonal Differences and Variability of Concentrations, Chemical Composition, and Cloud Condensation Nuclei of Marine Aerosol Over the North Atlantic. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD033145.	3.3	36
24	Temperate infection in a virus-host system previously known for virulent dynamics. <i>Nature Communications</i> , 2020, 11, 4626.	12.8	28
25	Exploring Vitamin B1 Cycling and Its Connections to the Microbial Community in the North Atlantic Ocean. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	17
26	Ice Nucleation by Marine Aerosols Over the North Atlantic Ocean in Late Spring. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD030913.	3.3	30
27	Net Community Production, Dissolved Organic Carbon Accumulation, and Vertical Export in the Western North Atlantic. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	30
28	Small phytoplankton dominate western North Atlantic biomass. <i>ISME Journal</i> , 2020, 14, 1663-1674.	9.8	74
29	Phytoplankton Growth and Productivity in the Western North Atlantic: Observations of Regional Variability From the NAAMES Field Campaigns. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	41
30	Phytoplankton Phenology in the North Atlantic: Insights From Profiling Float Measurements. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	19
31	Going Beyond Standard Ocean Color Observations: Lidar and Polarimetry. <i>Frontiers in Marine Science</i> , 2019, 6, .	2.5	80
32	Satellite-Detected Ocean Ecosystem Response to Volcanic Eruptions in the Subarctic Northeast Pacific Ocean. <i>Geophysical Research Letters</i> , 2019, 46, 11270-11280.	4.0	16
33	Factors driving the seasonal and hourly variability of sea-spray aerosol number in the North Atlantic. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 20309-20314.	7.1	43
34	Scientists' warning to humanity: microorganisms and climate change. <i>Nature Reviews Microbiology</i> , 2019, 17, 569-586.	28.6	1,138
35	The Plankton, Aerosol, Cloud, Ocean Ecosystem Mission: Status, Science, Advances. <i>Bulletin of the American Meteorological Society</i> , 2019, 100, 1775-1794.	3.3	199
36	The North Atlantic Aerosol and Marine Ecosystem Study (NAAMES): Science Motive and Mission Overview. <i>Frontiers in Marine Science</i> , 2019, 6, .	2.5	111

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37	Global satellite-observed daily vertical migrations of ocean animals. <i>Nature</i> , 2019, 576, 257-261.	27.8	111
38	Seasonal Variations in Western North Atlantic Remote Marine Aerosol Properties. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 14240-14261.	3.3	29
39	Evaluating satellite estimates of particulate backscatter in the global open ocean using autonomous profiling floats. <i>Optics Express</i> , 2019, 27, 30191.	3.4	43
40	Carbon: Chlorophyll Ratios and Net Primary Productivity of Subarctic Pacific Surface Waters Derived From Autonomous Shipboard Sensors. <i>Global Biogeochemical Cycles</i> , 2018, 32, 267-288.	4.9	32
41	Spaceborne Lidar in the Study of Marine Systems. <i>Annual Review of Marine Science</i> , 2018, 10, 121-147.	11.6	128
42	Student's tutorial on bloom hypotheses in the context of phytoplankton annual cycles. <i>Global Change Biology</i> , 2018, 24, 55-77.	9.5	130
43	Evidence of Systematic Triggering at Teleseismic Distances Following Large Earthquakes. <i>Scientific Reports</i> , 2018, 8, 11611.	3.3	9
44	Photoacclimation Responses in Subarctic Atlantic Phytoplankton Following a Natural Mixing-Restratification Event. <i>Frontiers in Marine Science</i> , 2018, 5, .	2.5	49
45	Annual boom&quot;bust cycles of polar phytoplankton biomass revealed by space-based lidar. <i>Nature Geoscience</i> , 2017, 10, 118-122.	12.9	150
46	Novel incubation&quot;free approaches to determine phytoplankton net primary productivity, growth, and biomass based on flow cytometry and quantification of ATP and NAD(H). <i>Limnology and Oceanography: Methods</i> , 2017, 15, 928-938.	2.0	3
47	Vertically- resolved phytoplankton carbon and net primary production from a high spectral resolution lidar. <i>Optics Express</i> , 2017, 25, 13577.	3.4	64
48	Evaluating Optical Proxies of Particulate Organic Carbon across the Surface Atlantic Ocean. <i>Frontiers in Marine Science</i> , 2017, 4, .	2.5	35
49	Combined Atmospheric and Ocean Profiling from an Airborne High Spectral Resolution Lidar. <i>EPJ Web of Conferences</i> , 2016, 119, 22001.	0.3	21
50	The CAFE model: A net production model for global ocean phytoplankton. <i>Global Biogeochemical Cycles</i> , 2016, 30, 1756-1777.	4.9	113
51	Annual cycles of phytoplankton biomass in the subarctic Atlantic and Pacific Ocean. <i>Global Biogeochemical Cycles</i> , 2016, 30, 175-190.	4.9	71
52	Phytoplankton in a witch's brew. <i>Nature Geoscience</i> , 2016, 9, 194-195.	12.9	0
53	Reevaluating ocean warming impacts on global&quot;phytoplankton. <i>Nature Climate Change</i> , 2016, 6, 323-330.	18.8	240
54	Photoacclimation of natural phytoplankton communities. <i>Marine Ecology - Progress Series</i> , 2016, 542, 51-62.	1.9	40

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55	Analytical phytoplankton carbon measurements spanning diverse ecosystems. Deep-Sea Research Part I: Oceanographic Research Papers, 2015, 102, 16-25.	1.4	175
56	Advancing interpretations of $^{14}\text{C}$ -uptake measurements in the context of phytoplankton physiology and ecology: Fig. A1. Journal of Plankton Research, 2015, 37, 692-698.	1.8	47
57	Contrasting Strategies of Photosynthetic Energy Utilization Drive Lifestyle Strategies in Ecologically Important Picoeukaryotes. Metabolites, 2014, 4, 260-280.	2.9	44
58	Regional variations in the influence of mesoscale eddies on near-surface chlorophyll. Journal of Geophysical Research: Oceans, 2014, 119, 8195-8220.	2.6	231
59	Oceanic Net Primary Production. Springer Remote Sensing/photogrammetry, 2014, , 205-230.	0.4	12
60	Global assessment of ocean carbon export by combining satellite observations and food web models. Global Biogeochemical Cycles, 2014, 28, 181-196.	4.9	368
61	Resurrecting the Ecological Underpinnings of Ocean Plankton Blooms. Annual Review of Marine Science, 2014, 6, 167-194.	11.6	328
62	Improbability mapping: A metric for satellite-detection of submarine volcanic eruptions. Remote Sensing of Environment, 2014, 140, 596-603.	11.0	6
63	Climate-mediated dance of the plankton. Nature Climate Change, 2014, 4, 880-887.	18.8	124
64	Geostationary satellite observations of dynamic phytoplankton photophysiology. Geophysical Research Letters, 2014, 41, 5052-5059.	4.0	22
65	Regional to global assessments of phytoplankton dynamics from the SeaWiFS mission. Remote Sensing of Environment, 2013, 135, 77-91.	11.0	254
66	Satellite observations of chlorophyll, phytoplankton biomass, and Ekman pumping in nonlinear mesoscale eddies. Journal of Geophysical Research: Oceans, 2013, 118, 6349-6370.	2.6	208
67	Space-based lidar measurements of global ocean carbon stocks. Geophysical Research Letters, 2013, 40, 4355-4360.	4.0	117
68	A common partitioning strategy for photosynthetic products in evolutionarily distinct phytoplankton species. New Phytologist, 2013, 198, 1030-1038.	7.3	81
69	Photophysiological Expressions of Iron Stress in Phytoplankton. Annual Review of Marine Science, 2013, 5, 217-246.	11.6	207
70	Retrospective satellite ocean color analysis of purposeful and natural ocean iron fertilization. Deep-Sea Research Part I: Oceanographic Research Papers, 2013, 73, 1-16.	1.4	33
71	Annual cycles of ecological disturbance and recovery underlying the subarctic Atlantic spring plankton bloom. Global Biogeochemical Cycles, 2013, 27, 526-540.	4.9	119
72	Reply to a comment by Stephen M. Chiswell on: "Annual cycles of ecological disturbance and recovery underlying the subarctic Atlantic spring plankton bloom" by M. J. Behrenfeld et al. (2013). Global Biogeochemical Cycles, 2013, 27, 1294-1296.	4.9	9

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73	The measurement of phytoplankton biomass using flow cytometric sorting and elemental analysis of carbon. <i>Limnology and Oceanography: Methods</i> , 2012, 10, 910-920.	2.0	60
74	Particulate optical scattering coefficients along an Atlantic Meridional Transect. <i>Optics Express</i> , 2012, 20, 21532.	3.4	48
75	Global net community production and the putative net heterotrophy of the oligotrophic oceans. <i>Global Biogeochemical Cycles</i> , 2012, 26, .	4.9	41
76	Fluorescence and nonphotochemical quenching responses to simulated vertical mixing in the marine diatom <i>Thalassiosira weissflogii</i> . <i>Marine Ecology - Progress Series</i> , 2012, 448, 67-78.	1.9	34
77	Inferring phytoplankton carbon and eco-physiological rates from diel cycles of spectral particulate beam-attenuation coefficient. <i>Biogeosciences</i> , 2011, 8, 3423-3439.	3.3	40
78	An evaluation of ocean color model estimates of marine primary productivity in coastal and pelagic regions across the globe. <i>Biogeosciences</i> , 2011, 8, 489-503.	3.3	177
79	LINKING TIME-DEPENDENT CARBON-FIXATION EFFICIENCIES IN <i>DUNALIELLA TERTIOLECTA</i> (CHLOROPHYCEAE) TO UNDERLYING METABOLIC PATHWAYS. <i>Journal of Phycology</i> , 2011, 47, 66-76.	2.3	64
80	Uncertain future for ocean algae. <i>Nature Climate Change</i> , 2011, 1, 33-34.	18.8	34
81	Surplus Photosynthetic Antennae Complexes Underlie Diagnostics of Iron Limitation in a Cyanobacterium. <i>PLoS ONE</i> , 2011, 6, e18753.	2.5	69
82	Comparison of primary productivity models in the Southern Ocean: preliminary results. <i>Proceedings of SPIE</i> , 2010, , .	0.8	6
83	Physiological optimization underlies growth rate-independent chlorophyll-specific gross and net primary production. <i>Photosynthesis Research</i> , 2010, 103, 125-137.	2.9	120
84	Underway and Moored Methods for Improving Accuracy in Measurement of Spectral Particulate Absorption and Attenuation. <i>Journal of Atmospheric and Oceanic Technology</i> , 2010, 27, 1733-1746.	1.3	90
85	Abandoning Sverdrup's Critical Depth Hypothesis on phytoplankton blooms. <i>Ecology</i> , 2010, 91, 977-989.	3.2	496
86	Challenges of modeling depth-integrated marine primary productivity over multiple decades: A case study at BATS and HOT. <i>Global Biogeochemical Cycles</i> , 2010, 24, .	4.9	150
87	Coherence of particulate beam attenuation and backscattering coefficients in diverse open ocean environments. <i>Optics Express</i> , 2010, 18, 15419.	3.4	67
88	Significant contribution of large particles to optical backscattering in the open ocean. <i>Biogeosciences</i> , 2009, 6, 947-967.	3.3	158
89	Satellite-detected fluorescence reveals global physiology of ocean phytoplankton. <i>Biogeosciences</i> , 2009, 6, 779-794.	3.3	280
90	Assessing the uncertainties of model estimates of primary productivity in the tropical Pacific Ocean. <i>Journal of Marine Systems</i> , 2009, 76, 113-133.	2.1	212

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91	Skill metrics for confronting global upper ocean ecosystem-biogeochemistry models against field and remote sensing data. <i>Journal of Marine Systems</i> , 2009, 76, 95-112.	2.1	204
92	Sensitivity of remote sensing-derived phytoplankton productivity to mixed layer depth: Lessons from the carbon-based productivity model. <i>Global Biogeochemical Cycles</i> , 2009, 23, .	4.9	12
93	Basin-wide modification of dynamical and biogeochemical processes by the positive phase of the Indian Ocean dipole during the SeaWiFS era. <i>Geophysical Monograph Series</i> , 2009, , 385-407.	0.1	32
94	Spatial and temporal variability of the phytoplankton carbon to chlorophyll ratio in the equatorial Pacific: A basin-scale modeling study. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	20
95	Carbon-based primary productivity modeling with vertically resolved photoacclimation. <i>Global Biogeochemical Cycles</i> , 2008, 22, .	4.9	535
96	Evolved physiological responses of phytoplankton to their integrated growth environment. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2008, 363, 2687-2703.	4.0	167
97	Climate-induced interannual variability of marine primary and export production in three global coupled climate carbon cycle models. <i>Biogeosciences</i> , 2008, 5, 597-614.	3.3	104
98	Seasonal rhythms of net primary production and particulate organic carbon flux to depth describe the efficiency of biological pump in the global ocean. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	383
99	A comparison of global estimates of marine primary production from ocean color. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2006, 53, 741-770.	1.4	574
100	Controls on tropical Pacific Ocean productivity revealed through nutrient stress diagnostics. <i>Nature</i> , 2006, 442, 1025-1028.	27.8	231
101	Climate-driven trends in contemporary ocean productivity. <i>Nature</i> , 2006, 444, 752-755.	27.8	1,873
102	Beam attenuation and chlorophyll concentration as alternative optical indices of phytoplankton biomass. <i>Journal of Marine Research</i> , 2006, 64, 431-451.	0.3	166
103	Diel variations in the photosynthetic parameters of <i>Prochlorococcus</i> strain PCC 9511: Combined effects of light and cell cycle. <i>Limnology and Oceanography</i> , 2005, 50, 850-863.	3.1	67
104	Carbon-based ocean productivity and phytoplankton physiology from space. <i>Global Biogeochemical Cycles</i> , 2005, 19, .	4.9	872
105	Independence and interdependencies among global ocean color properties: Reassessing the bio-optical assumption. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	170
106	Colored dissolved organic matter and its influence on the satellite-based characterization of the ocean biosphere. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	143
107	IN SEARCH OF A PHYSIOLOGICAL BASIS FOR COVARIATIONS IN LIGHT-LIMITED AND LIGHT-SATURATED PHOTOSYNTHESIS <sup>1</sup> . <i>Journal of Phycology</i> , 2004, 40, 4-25.	2.3	212
108	The beam attenuation to chlorophyll ratio: an optical index of phytoplankton physiology in the surface ocean?. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2003, 50, 1537-1549.	1.4	95

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109	Comparison of algorithms for estimating ocean primary production from surface chlorophyll, temperature, and irradiance. <i>Global Biogeochemical Cycles</i> , 2002, 16, 9-1-9-15.	4.9	232
110	Biospheric Primary Production During an ENSO Transition. <i>Science</i> , 2001, 291, 2594-2597.	12.6	523
111	Widespread Iron Limitation of Phytoplankton in the South Pacific Ocean. <i>Science</i> , 1999, 283, 840-843.	12.6	314
112	Title is missing!. <i>Photosynthesis Research</i> , 1998, 58, 259-268.	2.9	176
113	Primary Production of the Biosphere: Integrating Terrestrial and Oceanic Components. , 1998, 281, 237-240.		4,598
114	Photosynthetic rates derived from satellite-based chlorophyll concentration. <i>Limnology and Oceanography</i> , 1997, 42, 1-20.	3.1	2,270
115	A consumer's guide to phytoplankton primary productivity models. <i>Limnology and Oceanography</i> , 1997, 42, 1479-1491.	3.1	598
116	Confirmation of iron limitation of phytoplankton photosynthesis in the equatorial Pacific Ocean. <i>Nature</i> , 1996, 383, 508-511.	27.8	421