Mak A Saito

List of Publications by Year
in descending order

109	10,859	41344 49	32842 100
papers	citations	h-index	g-index

148	148	148	10545
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Why Environmental Biomarkers Work: Transcriptomeâ€“Proteome Correlations and Modeling of Multistressor Experiments in the Marine Bacterium Trichodesmium. Journal of Proteome Research, 2022, 21, 77-89.	3.7	7
2	Dynamic diel proteome and daytime nitrogenase activity supports buoyancy in the cyanobacterium Trichodesmium. Nature Microbiology, 2022, 7, 300-311.	13.3	21
3	Microbial metabolites in the marine carbon cycle. Nature Microbiology, 2022, 7, 508-523.	13.3	71
4	Adaptive responses of marine diatoms to zinc scarcity and ecological implications. Nature Communications, 2022, 13, 1995.	12.8	10
5	Major processes of the dissolved cobalt cycle in the North and equatorial Pacific Ocean. Biogeosciences, 2022, 19, 2365-2395.	3.3	9
6	Microbiomes of bloom-forming Phaeocystis algae are stable and consistently recruited, with both symbiotic and opportunistic modes. ISME Journal, 2022, 16, 2255-2264.	9.8	19
7	The Angola Gyre is a hotspot of dinitrogen fixation in the South Atlantic Ocean. Communications Earth & Environment, 2022, 3, .	6.8	9
8	Metabolic versatility of the nitrite-oxidizing bacterium Nitrospira marina and its proteomic response to oxygen-limited conditions. ISME Journal, 2021, 15, 1025-1039.	9.8	62
9	Development of an Ocean Protein Portal for Interactive Discovery and Education. Journal of Proteome Research, 2021, 20, 326-336.	3.7	9
10	Ideas and perspectives: Biogeochemistry â€“ some key foci for the future. Biogeosciences, 2021, 18, 3005-3013.	3.3	8
11	Inhibited Manganese Oxide Formation Hinders Cobalt Scavenging in the Ross Sea. Global Biogeochemical Cycles, 2021, 35, e2020GB006706.	4.9	8
12	Mechanisms and heterogeneity of in situ mineral processing by the marine nitrogen fixer Trichodesmium revealed by single-colony metaproteomics. ISME Communications, 2021, 1, .	4.2	9
13	Online Nanoflow Two-Dimension Comprehensive Active Modulation Reversed Phaseâ€“Reversed Phase Liquid Chromatography High-Resolution Mass Spectrometry for Metaproteomics of Environmental and Microbiome Samples. Journal of Proteome Research, 2021, 20, 4589-4597.	3.7	11
14	Dinoflagellates alter their carbon and nutrient metabolic strategies across environmental gradients in the central Pacific Ocean. Nature Microbiology, 2021, 6, 173-186.	13.3	45
15	Hydrothermal trace metal release and microbial metabolism in the northeastern Lau Basin of the South Pacific Ocean. Biogeosciences, 2021, 18, 5397-5422.	3.3	11
16	Characterization of the metalloproteome of Pseudoalteromonas (BB2-AT2): biogeochemical underpinnings for zinc, manganese, cobalt, and nickel cycling in a ubiquitous marine heterotroph. Metallomics, 2021, 13, .	2.4	6
17	METATRYP v 2.0: Metaproteomic Least Common Ancestor Analysis for Taxonomic Inference Using Specialized Sequence Assembliesâ€”Standalone Software and Web Servers for Marine Microorganisms and Coronaviruses. Journal of Proteome Research, 2020, 19, 4718-4729.	3.7	13
18	Revealing ocean-scale biochemical structure with a deep-diving vertical profiling autonomous vehicle. Science Robotics, 2020, 5, .	17.6	12

#	Article	IF	Citations
19	Abundant nitrite-oxidizing metalloenzymes in the mesopelagic zone of the tropical Pacific Ocean. Nature Geoscience, 2020, 13, 355-362.	12.9	41
20	Co-occurrence of Fe and P stress in natural populations of the marine diazotroph <i>Trichodesmium</i>. Biogeosciences, 2020, 17, 2537-2551.	3.3	26
21	Characterization of the Fe metalloproteome of a ubiquitous marine heterotroph, Pseudoalteromonas (BB2-AT2): multiple bacterioferritin copies enable significant Fe storage. Metallomics, 2020, 12, 654-667.	2.4	16
22	Minimal cobalt metabolism in the marine cyanobacterium Prochlorococcus. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 15740-15747.	7.1	25
23	Efficient zinc/cobalt interâ€replacement in northeast Pacific diatoms and relationship to high surface dissolved Co : Zn ratios. Limnology and Oceanography, 2020, 65, 2557-2582.	3.1	22
24	Trace Metal Substitution in Marine Phytoplankton. Annual Review of Earth and Planetary Sciences, 2020, 48, 491-517.	11.0	52
25	The Transpolar Drift as a Source of Riverine and Shelfâ€Derived Trace Elements to the Central Arctic Ocean. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015920.	2.6	80
26	Elevated sources of cobalt in the Arctic Ocean. Biogeosciences, 2020, 17, 4745-4767.	3.3	17
27	Copper stress in Staphylococcus aureus leads to adaptive changes in central carbon metabolism. Metallomics, 2019, 11, 183-200.	2.4	51
28	Progress and Challenges in Ocean Metaproteomics and Proposed Best Practices for Data Sharing. Journal of Proteome Research, 2019, 18, 1461-1476.	3.7	73
29	Unique Patterns and Biogeochemical Relevance of Two-Component Sensing in Marine Bacteria. MSystems, 2019, 4, .	3.8	29
30	Marine Synechococcus isolates representing globally abundant genomic lineages demonstrate a unique evolutionary path of genome reduction without a decrease in GC content. Environmental Microbiology, 2019, 21, 1677-1686.	3.8	28
31	Quantifying Oxygen Management and Temperature and Light Dependencies of Nitrogen Fixation by Crocosphaera watsonii. MSphere, 2019, 4, .	2.9	26
32	NADPH-dependent extracellular superoxide production is vital to photophysiology in the marine diatom Thalassiosira oceanica. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 16448-16453.	7.1	43
33	Heterozygous huntingtin promotes cadmium neurotoxicity and neurodegeneration in striatal cells via altered metal transport and protein kinase C delta dependent oxidative stress and apoptosis signaling mechanisms. NeuroToxicology, 2019, 70, 48-61.	3.0	25
34	Transcriptional Activities of the Microbial Consortium Living with the Marine Nitrogen-Fixing Cyanobacterium Trichodesmium Reveal Potential Roles in Community-Level Nitrogen Cycling. Applied and Environmental Microbiology, 2018, 84, .	3.1	18
35	Cobalt scavenging in the mesopelagic ocean and its influence on global mass balance: Synthesizing water column and sedimentary fluxes. Marine Chemistry, 2018, 201, 151-166.	2.3	40
36	Nutrient-Colimited Trichodesmium as a Nitrogen Source or Sink in a Future Ocean. Applied and Environmental Microbiology, 2018, 84, .	3.1	28

#	Article	IF	Citations
37	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
38	Dynamic mercury methylation and demethylation in oligotrophic marine water. Biogeosciences, 2018, 15, 6451-6460.	3.3	49
39	Clio: An Autonomous Vertical Sampling Vehicle for Global Ocean Biogeochemical Mapping. , 2018, , .		10
40	Colony formation in <i>Phaeocystis antarctica</i>: connecting molecular mechanisms with iron biogeochemistry. Biogeosciences, 2018, 15, 4923-4942.	3.3	44
41	The GEOTRACES Intermediate Data Product 2017. Chemical Geology, 2018, 493, 210-223.	3.3	257
42	Distinct Siderophores Contribute to Iron Cycling in the Mesopelagic at Station ALOHA. Frontiers in Marine Science, 2018, 5, .	2.5	67
43	Functional Genomics and Phylogenetic Evidence Suggest Genus-Wide Cobalamin Production by the Globally Distributed Marine Nitrogen Fixer Trichodesmium. Frontiers in Microbiology, 2018, 9, 189.	3.5	10
44	Competitive inhibition of cobalt uptake by zinc and manganese in a pacific Prochlorococcus strain: Insights into metal homeostasis in a streamlined oligotrophic cyanobacterium. Limnology and Oceanography, 2018, 63, 2229-2249.	3.1	23
45	Transcriptomic and proteomic responses of the oceanic diatom Pseudoâ€nitzschia granii to iron limitation. Environmental Microbiology, 2018, 20, 3109-3126.	3.8	39
46	Harnessing the Power of Scientific Python to Investigate Biogeochemistry and Metaproteomes of the Central Pacific Ocean. , 2018, , .		2
47	The integral role of iron in ocean biogeochemistry. Nature, 2017, 543, 51-59.	27.8	482
48	Thaumarchaeal ecotype distributions across the equatorial Pacific Ocean and their potential roles in nitrification and sinking flux attenuation. Limnology and Oceanography, 2017, 62, 1984-2003.	3.1	83
49	Î±-Synuclein Enhances Cadmium Uptake and Neurotoxicity via Oxidative Stress and Caspase Activated Cell Death Mechanisms in a Dopaminergic Cell Model of Parkinsonâ€™s Disease. Neurotoxicity Research, 2017, 32, 231-246.	2.7	11
50	Physiological and proteomic characterization of light adaptations in marine Synechococcus. Environmental Microbiology, 2017, 19, 2348-2365.	3.8	20
51	Comment on â€œThe complex effects of ocean acidification on the prominent N ₂ -fixing cyanobacterium Trichodesmium â€. Science, 2017, 357, .	12.6	12
52	The acceleration of dissolved cobalt's ecological stoichiometry due to biological uptake, remineralization, and scavenging in the Atlantic Ocean. Biogeosciences, 2017, 14, 4637-4662.	3.3	30
53	Coastal sources, sinks and strong organic complexation of dissolved cobalt within the US North Atlantic GEOTRACES transect GA03. Biogeosciences, 2017, 14, 2715-2739.	3.3	53
54	A dissolved cobalt plume in the oxygen minimum zone of the eastern tropical South Pacific. Biogeosciences, 2016, 13, 5697-5717.	3.3	52

#	Article	IF	Citations
55	Influence of vitamin B12 availability on oceanic dimethylsulfide and dimethylsulfoniopropionate. Environmental Chemistry, 2016, 13, 293.	1.5	2
56	Siderophore-based microbial adaptations to iron scarcity across the eastern Pacific Ocean. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 14237-14242.	7.1	179
57	Mechanisms of increased Trichodesmium fitness under iron and phosphorus co-limitation in the present and future ocean. Nature Communications, 2016, 7, 12081.	12.8	74
58	Trace elements at the intersection of marine biological and geochemical evolution. Earth-Science Reviews, 2016, 163, 323-348.	9.1	135
59	Co-occurring Synechococcus ecotypes occupy four major oceanic regimes defined by temperature, macronutrients and iron. ISME Journal, 2016, 10, 333-345.	9.8	169
60	Needles in the blue sea: Subâ€species specificity in targeted protein biomarker analyses within the vast oceanic microbial metaproteome. Proteomics, 2015, 15, 3521-3531.	2.2	49
61	Physiology, Fe(II) oxidation, and Fe mineral formation by a marine planktonic cyanobacterium grown under ferruginous conditions. Frontiers in Earth Science, 2015, 3, .	1.8	27
62	Persistence of deeply sourced iron in the Pacific Ocean. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1292-1297.	7.1	49
63	Genomic and proteomic characterization of â€œ Candidatus Nitrosopelagicus brevisâ€: An ammonia-oxidizing archaeon from the open ocean. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1173-1178.	7.1	278
64	Introduction to the U.S. GEOTRACES North Atlantic Transect (GA-03): USGT10 and USGT11 cruises. Deep-Sea Research Part II: Topical Studies in Oceanography, 2015, 116, 1-5.	1.4	17
65	Mercury species concentrations and fluxes in the Central Tropical Pacific Ocean. Global Biogeochemical Cycles, 2015, 29, 656-676.	4.9	81
66	Divergent responses of Atlantic coastal and oceanic Synechococcus to iron limitation. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9944-9949.	7.1	61
67	Irreversibly increased nitrogen fixation in Trichodesmium experimentally adapted to elevated carbon dioxide. Nature Communications, 2015, 6, 8155.	12.8	131
68	Cobalt and marine redox evolution. Earth and Planetary Science Letters, 2014, 390, 253-263.	4.4	95
69	Cadmium enriched stable isotope uptake and addition experiments with natural phytoplankton assemblages in the Costa Rica Upwelling Dome. Marine Chemistry, 2014, 166, 70-81.	2.3	8
70	Multiple nutrient stresses at intersecting Pacific Ocean biomes detected by protein biomarkers. Science, 2014, 345, 1173-1177.	12.6	174
71	A global ocean inventory of anthropogenic mercury based on water column measurements. Nature, 2014, 512, 65-68.	27.8	404
72	The unique trace metal and mixed layer conditions of the Costa Rica upwelling dome support a distinct and dense community of Synechococcus. Limnology and Oceanography, 2014, 59, 2166-2184.	3.1	51

#	Article	IF	Citations
73	Rapid and gradual modes of aerosol trace metal dissolution in seawater. Frontiers in Microbiology, 2014, 5, 794.	3.5	37
74	Slow-spreading submarine ridges in the South Atlantic as a significant oceanic iron source. Nature Geoscience, 2013, 6, 775-779.	12.9	140
75	A Manganese-rich Environment Supports Superoxide Dismutase Activity in a Lyme Disease Pathogen, Borrelia burgdorferi. Journal of Biological Chemistry, 2013, 288, 8468-8478.	3.4	65
76	Methionine synthase interreplacement in diatom cultures and communities: Implications for the persistence of B₁₂ use by eukaryotic phytoplankton. Limnology and Oceanography, 2013, 58, 1431-1450.	3.1	63
77	Proteomic responses of oceanic Synechococcus WH8102 to phosphate and zinc scarcity and cadmium additions. Frontiers in Microbiology, 2013, 4, 387.	3.5	42
78	Dissolved and particulate trace metal micronutrients under the McMurdo Sound seasonal sea ice: basal sea ice communities as a capacitor for iron. Frontiers in Chemistry, 2013, 1, 25.	3.6	33
79	Basinâ€scale inputs of cobalt, iron, and manganese from the Benguelaâ€Angola front to the South Atlantic Ocean. Limnology and Oceanography, 2012, 57, 989-1010.	3.1	134
80	Identifying reference genes with stable expression from high throughput sequence data. Frontiers in Microbiology, 2012, 3, 385.	3.5	40
81	Dissolved zinc in the subarctic North Pacific and Bering Sea: Its distribution, speciation, and importance to primary producers. Global Biogeochemical Cycles, 2012, 26, .	4.9	44
82	The Transcriptome and Proteome of the Diatom Thalassiosira pseudonana Reveal a Diverse Phosphorus Stress Response. PLoS ONE, 2012, 7, e33768.	2.5	296
83	Influence of cobalamin scarcity on diatom molecular physiology and identification of a cobalamin acquisition protein. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E1762-71.	7.1	104
84	The Rise of Oxygen and Aerobic Biochemistry. Structure, 2012, 20, 1-2.	3.3	29
85	Nitrogen fixation in the South Atlantic Gyre and the Benguela Upwelling System. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	71
86	Iron Limitation of a Springtime Bacterial and Phytoplankton Community in the Ross Sea: Implications for Vitamin B12 Nutrition. Frontiers in Microbiology, 2011, 2, 160.	3.5	48
87	Examination of Microbial Proteome Preservation Techniques Applicable to Autonomous Environmental Sample Collection. Frontiers in Microbiology, 2011, 2, 215.	3.5	46
88	Proteome Changes Driven by Phosphorus Deficiency and Recovery in the Brown Tide-Forming Alga Aureococcus anophagefferens. PLoS ONE, 2011, 6, e28949.	2.5	65
89	Vitamin B₁₂ biosynthesis gene diversity in the Ross Sea: the identification of a new group of putative polar B₁₂ biosynthesizers. Environmental Microbiology, 2011, 13, 1285-1298.	3.8	47
90	Iron conservation by reduction of metalloenzyme inventories in the marine diazotroph Crocosphaera watsonii. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 2184-2189.	7.1	208

#	Article	IF	Citations
91	Empirical bayes analysis of sequencing-based transcriptional profiling without replicates. BMC Bioinformatics, 2010, 11, 564.	2.6	46
92	Use of a modified, high-sensitivity, anodic stripping voltammetry method for determination of zinc speciation in the North Atlantic Ocean. Analytica Chimica Acta, 2008, 614, 143-152.	5.4	29
93	Cobalt, manganese, and iron near the Hawaiian Islands: A potential concentrating mechanism for cobalt within a cyclonic eddy and implications for the hybrid-type trace metals. Deep-Sea Research Part II: Topical Studies in Oceanography, 2008, 55, 1473-1490.	1.4	67
94	Some thoughts on the concept of colimitation: Three definitions and the importance of bioavailability. Limnology and Oceanography, 2008, 53, 276-290.	3.1	331
95	Regional distributions of nitrogenâ€fixing bacteria in the Pacific Ocean. Limnology and Oceanography, 2008, 53, 63-77.	3.1	154
96	Zincâ€cobalt colimitation of Phaeocystis antarctica. Limnology and Oceanography, 2008, 53, 266-275.	3.1	85
97	Culturing the marine cyanobacterium Prochlorococcus. Limnology and Oceanography: Methods, 2007, 5, 353-362.	2.0	241
98	Vitamin B₁₂ and iron colimitation of phytoplankton growth in the Ross Sea. Limnology and Oceanography, 2007, 52, 1079-1093.	3.1	187
99	IDENTIFICATION AND COMPARATIVE GENOMIC ANALYSIS OF SIGNALING AND REGULATORY COMPONENTS IN THE DIATOMTHALASSIOSIRA PSEUDONANA. Journal of Phycology, 2007, 43, 585-604.	2.3	87
100	Examination of precipitation chemistry and improvements in precision using the Mg(OH)2 preconcentration inductively coupled plasma mass spectrometry (ICP-MS) method for high-throughput analysis of open-ocean Fe and Mn in seawater. Analytica Chimica Acta, 2006, 565, 222-233.	5.4	67
101	Production of cobalt binding ligands in a Synechococcus feature at the Costa Rica upwelling dome. Limnology and Oceanography, 2005, 50, 279-290.	3.1	208
102	A cadmium enzyme from a marine diatom. Nature, 2005, 435, 42-42.	27.8	518
103	Sulfide Ameliorates Metal Toxicity for Deep-Sea Hydrothermal Vent Archaea. Applied and Environmental Microbiology, 2004, 70, 2551-2555.	3.1	56
104	The Genome of the Diatom Thalassiosira Pseudonana: Ecology, Evolution, and Metabolism. Science, 2004, 306, 79-86.	12.6	1,862
105	Cobalt and nickel in the Peru upwelling region: A major flux of labile cobalt utilized as a micronutrient. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	4.9	119
106	The bioinorganic chemistry of the ancient ocean: the co-evolution of cyanobacterial metal requirements and biogeochemical cycles at the Archeanâ€“Proterozoic boundary?. Inorganica Chimica Acta, 2003, 356, 308-318.	2.4	372
107	Cobalt limitation and uptake in Prochlorococcus. Limnology and Oceanography, 2002, 47, 1629-1636.	3.1	220
108	Temporal and spatial variability of cobalt in the Atlantic Ocean. Geochimica Et Cosmochimica Acta, 2002, 66, 1943-1953.	3.9	120

#	Article	IF	Citations
109	Complexation of cobalt by natural organic ligands in the Sargasso Sea as determined by a new high-sensitivity electrochemical cobalt speciation method suitable for open ocean work. Marine Chemistry, 2001, 75, 49-68.	2.3	175