

James Bryan Cotner

List of Publications by Year in descending order

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Version: 2024-02-01

115
papers

10,843
citations

53660

45
h-index

31759

101
g-index

117
all docs

117
docs citations

117
times ranked

11827
citing authors

#	ARTICLE	IF	CITATIONS
1	Lakes and reservoirs as regulators of carbon cycling and climate. <i>Limnology and Oceanography</i> , 2009, 54, 2298-2314.	1.6	1,977
2	Biological stoichiometry from genes to ecosystems. <i>Ecology Letters</i> , 2000, 3, 540-550.	3.0	867
3	Growth rate-stoichiometry couplings in diverse biota. <i>Ecology Letters</i> , 2003, 6, 936-943.	3.0	758
4	Small Players, Large Role: Microbial Influence on Biogeochemical Processes in Pelagic Aquatic Ecosystems. <i>Ecosystems</i> , 2002, 5, 105-121.	1.6	529
5	Dominance of bacterial metabolism in oligotrophic relative to eutrophic waters. <i>Limnology and Oceanography</i> , 2001, 46, 730-739.	1.6	311
6	Are bacteria more like plants or animals? Growth rate and resource dependence of bacterial stoichiometry. <i>Functional Ecology</i> , 2003, 17, 121-130.	1.7	308
7	Uptake of dissolved inorganic and organic phosphorus compounds by phytoplankton and bacterioplankton. <i>Limnology and Oceanography</i> , 1992, 37, 232-243.	1.6	296
8	Phosphorus-limited bacterioplankton growth in the Sargasso Sea. <i>Aquatic Microbial Ecology</i> , 1997, 13, 141-149.	0.9	295
9	Relationships between protein-encoding gene abundance and corresponding process are commonly assumed yet rarely observed. <i>ISME Journal</i> , 2015, 9, 1693-1699.	4.4	276
10	Biochars induced modification of dissolved organic matter (DOM) in soil and its impact on mobility and bioaccumulation of arsenic and cadmium. <i>Journal of Hazardous Materials</i> , 2018, 348, 100-108.	6.5	233
11	Temperature and the chemical composition of poikilothermic organisms. <i>Functional Ecology</i> , 2003, 17, 237-245.	1.7	221
12	Application of Illumina next-generation sequencing to characterize the bacterial community of the Upper Mississippi River. <i>Journal of Applied Microbiology</i> , 2013, 115, 1147-1158.	1.4	209
13	Indirect Photodegradation of Dissolved Free Amino Acids: The Contribution of Singlet Oxygen and the Differential Reactivity of DOM from Various Sources. <i>Environmental Science & Technology</i> , 2008, 42, 5492-5498.	4.6	201
14	Understanding how microbiomes influence the systems they inhabit. <i>Nature Microbiology</i> , 2018, 3, 977-982.	5.9	169
15	Organic phosphorus in the terrestrial environment: a perspective on the state of the art and future priorities. <i>Plant and Soil</i> , 2018, 427, 191-208.	1.8	145
16	Love Handles in Aquatic Ecosystems: The Role of Dissolved Organic Carbon Drawdown, Resuspended Sediments, and Terrestrial Inputs in the Carbon Balance of Lake Michigan. <i>Ecosystems</i> , 2002, 5, 431-445.	1.6	141
17	The Functional Significance of Ribosomal (r)DNA Variation: Impacts on the Evolutionary Ecology of Organisms. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 2005, 36, 219-242.	3.8	137
18	Singlet Oxygen in the Coupled Photochemical and Biochemical Oxidation of Dissolved Organic Matter. <i>Environmental Science & Technology</i> , 2010, 44, 3683-3689.	4.6	134

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19	Species sorting and seasonal dynamics primarily shape bacterial communities in the Upper Mississippi River. <i>Science of the Total Environment</i> , 2015, 505, 435-445.	3.9	133
20	Fish Assemblage Structure in Relation to Environmental Variation among Brazos River Oxbow Lakes. <i>Transactions of the American Fisheries Society</i> , 2000, 129, 451-468.	0.6	114
21	Toward a mechanistic understanding of how natural bacterial communities respond to changes in temperature in aquatic ecosystems. <i>ISME Journal</i> , 2008, 2, 471-481.	4.4	108
22	Spatial and Temporal Distribution of Singlet Oxygen in Lake Superior. <i>Environmental Science & Technology</i> , 2012, 46, 7222-7229.	4.6	103
23	Quantifying Interactions between Singlet Oxygen and Aquatic Fulvic Acids. <i>Environmental Science & Technology</i> , 2009, 43, 718-723.	4.6	102
24	Stoichiometry of carbon, nitrogen, and phosphorus through the freshwater pipe. <i>Limnology and Oceanography Letters</i> , 2018, 3, 89-101.	1.6	98
25	Core functional traits of bacterial communities in the Upper Mississippi River show limited variation in response to land cover. <i>Frontiers in Microbiology</i> , 2014, 5, 414.	1.5	95
26	A model study of the coupled biological and physical dynamics in Lake Michigan. <i>Ecological Modelling</i> , 2002, 152, 145-168.	1.2	90
27	Variable Stoichiometry and Homeostatic Regulation of Bacterial Biomass Elemental Composition. <i>Frontiers in Microbiology</i> , 2012, 3, 42.	1.5	88
28	Freshwater Bacteria are Stoichiometrically Flexible with a Nutrient Composition Similar to Seston. <i>Frontiers in Microbiology</i> , 2010, 1, 132.	1.5	86
29	Intense winter heterotrophic production stimulated by benthic resuspension. <i>Limnology and Oceanography</i> , 2000, 45, 1672-1676.	1.6	83
30	Aquatic heterotrophic bacteria have highly flexible phosphorus content and biomass stoichiometry. <i>ISME Journal</i> , 2015, 9, 2324-2327.	4.4	83
31	Elemental stoichiometry of a heterotrophic bacterial community in a freshwater lake: implications for growth- and resource-dependent variations. <i>Aquatic Microbial Ecology</i> , 2004, 34, 33-41.	0.9	77
32	Gene expression patterns of sulfur starvation in <i>Synechocystis</i> sp. PCC 6803. <i>BMC Genomics</i> , 2008, 9, 344.	1.2	74
33	Effects of the Zebra Mussel, <i>Dreissena polymorpha</i> , on Community Nitrogen Dynamics in Saginaw Bay, Lake Huron. <i>Journal of Great Lakes Research</i> , 1995, 21, 529-544.	0.8	70
34	Bacterial community structure is indicative of chemical inputs in the Upper Mississippi River. <i>Frontiers in Microbiology</i> , 2014, 5, 524.	1.5	70
35	Effects of Zebra Mussels (<i>Dreissena polymorpha</i>) on Bacterioplankton: Evidence for Both Size-Selective Consumption and Growth Stimulation. <i>Journal of Great Lakes Research</i> , 1995, 21, 517-528.	0.8	68
36	Nutrient Limitation of Heterotrophic Bacteria in Florida Bay. <i>Estuaries and Coasts</i> , 2000, 23, 611.	1.7	65

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37	Nitrogen transformations at the sediment-water interface across redox gradients in the Laurentian Great Lakes. <i>Hydrobiologia</i> , 2014, 731, 95-108.	1.0	63
38	Organic carbon biogeochemistry of Lake Superior. <i>Aquatic Ecosystem Health and Management</i> , 2004, 7, 451-464.	0.3	62
39	Interactive effect of temperature and resources on carbon cycling by freshwater bacterioplankton communities. <i>Aquatic Microbial Ecology</i> , 2007, 49, 35-45.	0.9	61
40	Temperature Affects Stoichiometry and Biochemical Composition of <i>Escherichia coli</i> . <i>Microbial Ecology</i> , 2006, 52, 26-33.	1.4	58
41	The influence of dissolved organic carbon on bacterial phosphorus uptake and bacterial phytoplankton dynamics in two Minnesota lakes. <i>Limnology and Oceanography</i> , 2008, 53, 137-147.	1.6	55
42	Seasonally varying impact of detritivorous fishes on the benthic ecology of a tropical floodplain river. <i>Journal of the North American Benthological Society</i> , 2006, 25, 250-262.	3.0	52
43	Tropical freshwater ecosystems have lower bacterial growth efficiency than temperate ones. <i>Frontiers in Microbiology</i> , 2013, 4, 167.	1.5	52
44	Ecological Stoichiometry beyond Redfield: An Ionic Perspective on Elemental Homeostasis. <i>Frontiers in Microbiology</i> , 2017, 8, 722.	1.5	51
45	Seasonally variable riverine production in the Venezuelan llanos. <i>Journal of the North American Benthological Society</i> , 2006, 25, 171-184.	3.0	50
46	Pulsing hydrology determines top-down control of basal resources in a tropical river-floodplain ecosystem. <i>Ecological Monographs</i> , 2014, 84, 621-635.	2.4	47
47	Iron redox effects on photosensitive phosphorus release from dissolved humic materials. <i>Limnology and Oceanography</i> , 1990, 35, 1175-1181.	1.6	45
48	Enhancement of Dissolved Organic Matter Bioavailability by Sunlight and Its Role in the Carbon Cycle of Lakes Superior and Michigan. <i>Journal of Great Lakes Research</i> , 2003, 29, 228-241.	0.8	44
49	Redfield Ratios in Inland Waters: Higher Biological Control of C:N:P Ratios in Tropical Semi-arid High Water Residence Time Lakes. <i>Frontiers in Microbiology</i> , 2017, 8, 1505.	1.5	44
50	Effects of high-molecular-weight dissolved organic matter on nitrogen dynamics in the Mississippi River plume. <i>Marine Ecology - Progress Series</i> , 1996, 133, 287-297.	0.9	44
51	Stimulation of Lake Michigan Plankton Metabolism by Sediment Resuspension and River Runoff. <i>Journal of Great Lakes Research</i> , 2008, 34, 213-227.	0.8	43
52	Evaluation of water sampling methodologies for amplicon-based characterization of bacterial community structure. <i>Journal of Microbiological Methods</i> , 2015, 114, 43-50.	0.7	42
53	Nitrogen Dynamics in Sandy Freshwater Sediments (Saginaw Bay, Lake Huron). <i>Journal of Great Lakes Research</i> , 2001, 27, 84-97.	0.8	41
54	Hydrological seasonality and benthic algal biomass in a Neotropical floodplain river. <i>Journal of the North American Benthological Society</i> , 2006, 25, 157-170.	3.0	39

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55	Doughnut in the desert: Late-winter production pulse in southern Lake Michigan. <i>Limnology and Oceanography</i> , 2008, 53, 589-604.	1.6	39
56	Mineralization of Organic Material and Bacterial Dynamics in Mississippi River Plume Water. <i>Estuaries and Coasts</i> , 1994, 17, 816.	1.7	38
57	Contrasting interactions mediate dissolved organic matter decomposition in tropical aquatic ecosystems. <i>Aquatic Microbial Ecology</i> , 2007, 49, 25-34.	0.9	38
58	Influences of suspended sediments on the ecosystem in Lake Michigan: a 3-D coupled bio-physical modeling experiment. <i>Ecological Modelling</i> , 2002, 152, 169-190.	1.2	37
59	Distribution and dynamics of nitrogen and microbial plankton in southern Lake Michigan during spring transition 1999-2000. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	37
60	Disentangling the Interactions Between Photochemical and Bacterial Degradation of Dissolved Organic Matter: Amino Acids Play a Central Role. <i>Microbial Ecology</i> , 2015, 69, 554-566.	1.4	37
61	Editorial: Progress in Ecological Stoichiometry. <i>Frontiers in Microbiology</i> , 2018, 9, 1957.	1.5	36
62	Stoichiometric flexibility in diverse aquatic heterotrophic bacteria is coupled to differences in cellular phosphorus quotas. <i>Frontiers in Microbiology</i> , 2015, 6, 159.	1.5	35
63	Impacts of suspended sediment on the ecosystem in Lake Michigan: A comparison between the 1998 and 1999 plume events. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	32
64	5'-Nucleotidase Activity in a Eutrophic Lake and an Oligotrophic Lake. <i>Applied and Environmental Microbiology</i> , 1991, 57, 1306-1312.	1.4	32
65	Effects of natural light on nitrogen cycling rates in the Mississippi River plume. <i>Limnology and Oceanography</i> , 1997, 42, 273-281.	1.6	31
66	Growth rate and resource imbalance interactively control biomass stoichiometry and elemental quotas of aquatic bacteria. <i>Ecology</i> , 2017, 98, 820-829.	1.5	31
67	The effect of temperature on the coupling between phosphorus and growth in lacustrine bacterioplankton communities. <i>Limnology and Oceanography</i> , 2009, 54, 880-889.	1.6	30
68	Bacterial Phosphatases from Different Habitats in a Small, Hardwater Lake. <i>Brock/Springer Series in Contemporary Bioscience</i> , 1991, , 187-205.	0.3	30
69	Sediments and Soils Act as Reservoirs for Taxonomic and Functional Bacterial Diversity in the Upper Mississippi River. <i>Microbial Ecology</i> , 2016, 71, 814-824.	1.4	29
70	Temporal changes in oxygen demand and bacterial sulfate reduction in inland shrimp ponds. <i>Aquaculture</i> , 1996, 145, 141-158.	1.7	28
71	Littoral zones as sources of biodegradable dissolved organic carbon in lakes. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 2008, 65, 2454-2460.	0.7	28
72	Chromatographic measurement of nitrogen mineralization rates in marine coastal waters with I5N. <i>Marine Ecology - Progress Series</i> , 1993, 93, 65-73.	0.9	28

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73	Upper Midwest lakes are supersaturated with N ₂ . Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17063-17067.	3.3	27
74	Carbon:phosphorus homeostasis of aquatic bacterial assemblages is mediated by shifts in assemblage composition. Aquatic Microbial Ecology, 2014, 73, 245-258.	0.9	26
75	Bioavailability of Dissolved Organic Phosphorus in Temperate Lakes. Frontiers in Environmental Science, 2018, 6, .	1.5	26
76	Nutrient, sulfur and carbon dynamics in a hypersaline lagoon. Estuarine, Coastal and Shelf Science, 2004, 59, 639-652.	0.9	25
77	What intrinsic and extrinsic factors explain the stoichiometric diversity of aquatic heterotrophic bacteria?. ISME Journal, 2018, 12, 598-609.	4.4	25
78	The Effects of Benthivorous Smallmouth Buffalo (<i>Ictiobus bubalus</i>) on Water Quality and Nutrient Cycling in a Shallow Floodplain Lake. Lake and Reservoir Management, 1997, 13, 270-278.	0.4	24
79	Effects of small scale fluid motion on bacterial growth and respiration. Freshwater Biology, 2004, 49, 28-40.	1.2	24
80	Comment on "A Bacterium That Can Grow by Using Arsenic Instead of Phosphorus" Science, 2011, 332, 1149-1149.	6.0	21
81	The altered ecology of Lake Christina: A record of regime shifts, land-use change, and management from a temperate shallow lake. Science of the Total Environment, 2012, 433, 336-346.	3.9	20
82	High-throughput functional screening reveals low frequency of antibiotic resistance genes in DNA recovered from the Upper Mississippi River. Journal of Water and Health, 2015, 13, 693-703.	1.1	20
83	Title is missing!. Biogeochemistry, 2002, 61, 199-228.	1.7	19
84	Optically determined sources of allochthonous organic matter and metabolic characterizations in a tropical oligotrophic river and associated lagoon. Journal of the North American Benthological Society, 2006, 25, 185-197.	3.0	19
85	Estimating modern carbon burial rates in lakes using a single sediment sample. Limnology and Oceanography: Methods, 2013, 11, 316-326.	1.0	19
86	Frequencies of heavy metal resistance are associated with land cover type in the Upper Mississippi River. Science of the Total Environment, 2015, 511, 461-468.	3.9	19
87	The legacy of large regime shifts in shallow lakes. Ecological Applications, 2016, 26, 2662-2676.	1.8	19
88	Physiological modifications of seston in response to physicochemical gradients within Lake Superior. Limnology and Oceanography, 2014, 59, 1011-1026.	1.6	17
89	Uniform carbon fluxes in shallow lakes in alternative stable states. Limnology and Oceanography, 2016, 61, 330-340.	1.6	17
90	Watershed vs. within-lake drivers of nitrogen: phosphorus dynamics in shallow lakes. Ecological Applications, 2017, 27, 2155-2169.	1.8	16

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91	The Lake Ice Continuum Concept: Influence of Winter Conditions on Energy and Ecosystem Dynamics. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2020JG006165.	1.3	15
92	Double-stranded DNA measurement in lakes with the fluorescent stain PicoGreen and the application to bacterial bioassays. <i>Aquatic Microbial Ecology</i> , 2001, 25, 65-74.	0.9	14
93	The Effects of Nutrient Imbalances and Temperature on the Biomass Stoichiometry of Freshwater Bacteria. <i>Frontiers in Microbiology</i> , 2017, 8, 1692.	1.5	14
94	Long-term organic fertilization changes soil active bacterial composition and multifunctionality: RNA-based bacterial community and qPCR-based SmartChip analysis. <i>Journal of Soils and Sediments</i> , 2021, 21, 799-809.	1.5	12
95	Nitrogen is Not a "House of Cards"™. <i>Environmental Science & Technology</i> , 2017, 51, 3-3.	4.6	10
96	Global development of the studies focused on antibiotics in aquatic systems from 1945 to 2017. <i>Environmental Science and Pollution Research</i> , 2018, 25, 22023-22034.	2.7	10
97	Sources and biodegradability of dissolved organic matter in two headwater peatland catchments at the Marcell Experimental Forest, northern Minnesota, <sc>USA</sc>. <i>Hydrological Processes</i> , 2021, 35, e14049.	1.1	9
98	Effect of Microbes on Contaminant Transfer in the Lake Superior Food Web. <i>Environmental Science & Technology</i> , 2005, 39, 9500-9508.	4.6	7
99	Contemporary Mobilization of Legacy Pb Stores by DOM in a Boreal Peatland. <i>Environmental Science & Technology</i> , 2018, 52, 3375-3383.	4.6	7
100	Great Lakes: Science can keep them great. <i>Journal of Great Lakes Research</i> , 2017, 43, 916-919.	0.8	6
101	Winter Oxygen Regimes in Clear and Turbid Shallow Lakes. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2020JG006065.	1.3	5
102	Heterotrophic bacterial growth and nutrient limitation in large oligotrophic lakes and oceans. <i>Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology</i> , 2000, 27, 1831-1835.	0.1	4
103	A modeling study of benthic detritus flux's impacts on heterotrophic processes in Lake Michigan. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	4
104	Stable isotope patterns in lake food webs reflect productivity gradients. <i>Ecosphere</i> , 2020, 11, e03244.	1.0	4
105	How increased atmospheric carbon dioxide and "The Law of the Minimum"™ are contributing to environmental obesity. <i>Acta Limnologica Brasiliensia</i> , 0, 31, .	0.4	4
106	Zooplankton Community Structure of Lake Livingston, Texas, as Related to Paddlefish Food Resources. <i>Journal of Freshwater Ecology</i> , 1998, 13, 115-128.	0.5	3
107	Bold, Sedentary Fathead Minnows Have More Parasites. <i>Zebrafish</i> , 2016, 13, 248-255.	0.5	3
108	Further Development of a Specific Conductivity Approach to Measure Groundwater Discharge Area within Lakes. <i>Journal of the American Water Resources Association</i> , 2019, 55, 485-496.	1.0	3

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109	Scaling relationships among drivers of aquatic respiration in temperate lakes: from the smallest to the largest freshwater ecosystems. <i>Inland Waters</i> , 2016, 6, 1-10.	1.1	2
110	Effects of natural light on nitrogen dynamics in diverse aquatic environments. <i>Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology</i> , 2000, 27, 64-73.	0.1	1
111	The microbial role in littoral zone biogeochemical processes: Why Wetzel was right. <i>Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology</i> , 2009, 30, 981-984.	0.1	1
112	University Of Minnesota Itasca Biological Station and Laboratories: Over 100 Years Of Field-Based Education and Research. <i>Limnology and Oceanography Bulletin</i> , 2018, 27, 42-44.	0.2	1
113	Exploring watershed effects on nutrient concentrations in shallow lakes through stable isotope analysis. <i>Science of the Total Environment</i> , 2022, 823, 153742.	3.9	1
114	Cultural Beliefs, Values, and the Biogeochemical Cycling of P. , 2013, , 142-166.		0
115	Whither winter: The altered role of winter for freshwaters as the climate changes. <i>Journal of Geophysical Research C: Biogeosciences</i> , 0, , .	1.3	0