James Bryan Cotner

List of Publications by Year
in descending order

115 papers	10,843 citations	50276 46 h-index	31849 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. Limnology and Oceanography, 2009, 54, 2298-2314.	3.1	1,977
2	Biological stoichiometry from genes to ecosystems. Ecology Letters, 2000, 3, 540-550.	6.4	867
3	Growth rate-stoichiometry couplings in diverse biota. Ecology Letters, 2003, 6, 936-943.	6.4	758
4	Small Players, Large Role: Microbial Influence on Biogeochemical Processes in Pelagic Aquatic Ecosystems. Ecosystems, 2002, 5, 105-121.	3.4	529
5	Dominance of bacterial metabolism in oligotrophic relative to eutrophic waters. Limnology and Oceanography, 2001, 46, 730-739.	3.1	311
6	Are bacteria more like plants or animals? Growth rate and resource dependence of bacterial CÂ:ÂNÂ:ÂP stoichiometry. Functional Ecology, 2003, 17, 121-130.	3.6	308
7	Uptake of dissolved inorganic and organic bphosphorus compounds by phytoplankton and bacterioplankton. Limnology and Oceanography, 1992, 37, 232-243.	3.1	296
8	Phosphorus-limited bacterioplankton growth in the Sargasso Sea. Aquatic Microbial Ecology, 1997, 13, 141-149.	1.8	295
9	Relationships between protein-encoding gene abundance and corresponding process are commonly assumed yet rarely observed. ISME Journal, 2015, 9, 1693-1699.	9.8	276
10	Biochars induced modification of dissolved organic matter (DOM) in soil and its impact on mobility and bioaccumulation of arsenic and cadmium. Journal of Hazardous Materials, 2018, 348, 100-108.	12.4	233
11	Temperature and the chemical composition of poikilothermic organisms. Functional Ecology, 2003, 17, 237-245.	3.6	221
12	Application of Illumina next-generation sequencing to characterize the bacterial community of the Upper Mississippi River. Journal of Applied Microbiology, 2013, 115, 1147-1158.	3.1	209
13	Indirect Photodegradation of Dissolved Free Amino Acids: The Contribution of Singlet Oxygen and the Differential Reactivity of DOM from Various Sources. Environmental Science & Technology, 2008, 42, 5492-5498.	10.0	201
14	Understanding how microbiomes influence the systems they inhabit. Nature Microbiology, 2018, 3, 977-982.	13.3	169
15	Organic phosphorus in the terrestrial environment: a perspective on the state of the art and future priorities. Plant and Soil, 2018, 427, 191-208.	3.7	145
16	Love Handles in Aquatic Ecosystems: The Role of Dissolved Organic Carbon Drawdown, Resuspended Sediments, and Terrigenous Inputs in the Carbon Balance of Lake Michigan. Ecosystems, 2002, 5, 431-445.	3.4	141
17	The Functional Significance of Ribosomal (r)DNA Variation: Impacts on the Evolutionary Ecology of Organisms. Annual Review of Ecology, Evolution, and Systematics, 2005, 36, 219-242.	8.3	137
18	Singlet Oxygen in the Coupled Photochemical and Biochemical Oxidation of Dissolved Organic Matter. Environmental Science & Technology, 2010, 44, 3683-3689.	10.0	134

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19	Species sorting and seasonal dynamics primarily shape bacterial communities in the Upper Mississippi River. Science of the Total Environment, 2015, 505, 435-445.	8.0	133
20	Fish Assemblage Structure in Relation to Environmental Variation among Brazos River Oxbow Lakes. Transactions of the American Fisheries Society, 2000, 129, 451-468.	1.4	114
21	Toward a mechanistic understanding of how natural bacterial communities respond to changes in temperature in aquatic ecosystems. ISME Journal, 2008, 2, 471-481.	9.8	108
22	Spatial and Temporal Distribution of Singlet Oxygen in Lake Superior. Environmental Science & Technology, 2012, 46, 7222-7229.	10.0	103
23	Quantifying Interactions between Singlet Oxygen and Aquatic Fulvic Acids. Environmental Science & Technology, 2009, 43, 718-723.	10.0	102
24	Stoichiometry of carbon, nitrogen, and phosphorus through the freshwater pipe. Limnology and Oceanography Letters, 2018, 3, 89-101.	3.9	98
25	Core functional traits of bacterial communities in the Upper Mississippi River show limited variation in response to land cover. Frontiers in Microbiology, 2014, 5, 414.	3.5	95
26	A model study of the coupled biological and physical dynamics in Lake Michigan. Ecological Modelling, 2002, 152, 145-168.	2.5	90
27	Variable Stoichiometry and Homeostatic Regulation of Bacterial Biomass Elemental Composition. Frontiers in Microbiology, 2012, 3, 42.	3.5	88
28	Freshwater Bacteria are Stoichiometrically Flexible with a Nutrient Composition Similar to Seston. Frontiers in Microbiology, 2010, 1, 132.	3.5	86
29	Intense winter heterotrophic production stimulated by benthic resuspension. Limnology and Oceanography, 2000, 45, 1672-1676.	3.1	83
30	Aquatic heterotrophic bacteria have highly flexible phosphorus content and biomass stoichiometry. ISME Journal, 2015, 9, 2324-2327.	9.8	83
31	Elemental stoichiometry of a heterotrophic bacterial community in a freshwater lake: implications for growth- and resource-dependent variations. Aquatic Microbial Ecology, 2004, 34, 33-41.	1.8	77
32	Gene expression patterns of sulfur starvation in Synechocystis sp. PCC 6803. BMC Genomics, 2008, 9, 344.	2.8	74
33	Effects of the Zebra Mussel, Dreissena polymorpha , on Community Nitrogen Dynamics in Saginaw Bay, Lake Huron. Journal of Great Lakes Research, 1995, 21, 529-544.	1.9	70
34	Bacterial community structure is indicative of chemical inputs in the Upper Mississippi River. Frontiers in Microbiology, 2014, 5, 524.	3.5	70
35	Effects of Zebra Mussels (Dreissena polymorpha) on Bacterioplankton: Evidence for Both Size-Selective Consumption and Growth Stimulation. Journal of Great Lakes Research, 1995, 21, 517-528.	1.9	68
36	Nutrient Limitation of Heterotrophic Bacteria in Florida Bay. Estuaries and Coasts, 2000, 23, 611.	1.7	65

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37	Nitrogen transformations at the sedimentâ€"water interface across redox gradients in the Laurentian Great Lakes. Hydrobiologia, 2014, 731, 95-108.	2.0	63
38	Organic carbon biogeochemistry of Lake Superior. Aquatic Ecosystem Health and Management, 2004, 7, 451-464.	0.6	62
39	Interactive effect of temperature and resources on carbon cycling by freshwater bacterioplankton communities. Aquatic Microbial Ecology, 2007, 49, 35-45.	1.8	61
40	Temperature Affects Stoichiometry and Biochemical Composition of Escherichia coli. Microbial Ecology, 2006, 52, 26-33.	2.8	58
41	The influence of dissolved organic carbon on bacterial phosphorus uptake and bacteriaâ€phytoplankton dynamics in two Minnesota lakes. Limnology and Oceanography, 2008, 53, 137-147.	3.1	55
42	Seasonally varying impact of detritivorous fishes on the benthic ecology of a tropical floodplain river. Journal of the North American Benthological Society, 2006, 25, 250-262.	3.1	52
43	Tropical freshwater ecosystems have lower bacterial growth efficiency than temperate ones. Frontiers in Microbiology, 2013, 4, 167.	3.5	52
44	Ecological Stoichiometry beyond Redfield: An Ionomic Perspective on Elemental Homeostasis. Frontiers in Microbiology, 2017, 8, 722.	3.5	51
45	Seasonally variable riverine production in the Venezuelan llanos. Journal of the North American Benthological Society, 2006, 25, 171-184.	3.1	50
46	Pulsing hydrology determines topâ€down control of basal resources in a tropical riverâ€"floodplain ecosystem. Ecological Monographs, 2014, 84, 621-635.	5.4	47
47	Iron redox effects on photosensitive phosphorus release from dissolved humic materials. Limnology and Oceanography, 1990, 35, 1175-1181.	3.1	45
48	Enhancement of Dissolved Organic Matter Bioavailability by Sunlight and Its Role in the Carbon Cycle of Lakes Superior and Michigan. Journal of Great Lakes Research, 2003, 29, 228-241.	1.9	44
49	Redfield Ratios in Inland Waters: Higher Biological Control of C:N:P Ratios in Tropical Semi-arid High Water Residence Time Lakes. Frontiers in Microbiology, 2017, 8, 1505.	3.5	44
50	Effects of high-molecular-weight dissolved organic matter on nitrogen dynamics in the Mississippi River plume. Marine Ecology - Progress Series, 1996, 133, 287-297.	1.9	44
51	Stimulation of Lake Michigan Plankton Metabolism by Sediment Resuspension and River Runoff. Journal of Great Lakes Research, 2008, 34, 213-227.	1.9	43
52	Evaluation of water sampling methodologies for amplicon-based characterization of bacterial community structure. Journal of Microbiological Methods, 2015, 114, 43-50.	1.6	42
53	Nitrogen Dynamics in Sandy Freshwater Sediments (Saginaw Bay, Lake Huron). Journal of Great Lakes Research, 2001, 27, 84-97.	1.9	41
54	Hydrological seasonality and benthic algal biomass in a Neotropical floodplain river. Journal of the North American Benthological Society, 2006, 25, 157-170.	3.1	39

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55	Doughnut in the desert: Lateâ€winter production pulse in southern Lake Michigan. Limnology and Oceanography, 2008, 53, 589-604.	3.1	39
56	Mineralization of Organic Material and Bacterial Dynamics in Mississippi River Plume Water. Estuaries and Coasts, 1994, 17, 816.	1.7	38
57	Contrasting interactions mediate dissolved organic matter decomposition in tropical aquatic ecosystems. Aquatic Microbial Ecology, 2007, 49, 25-34.	1.8	38
58	Influences of suspended sediments on the ecosystem in Lake Michigan: a 3-D coupled bio-physical modeling experiment. Ecological Modelling, 2002, 152, 169-190.	2.5	37
59	Distribution and dynamics of nitrogen and microbial plankton in southern Lake Michigan during spring transition 1999-2000. Journal of Geophysical Research, 2004, 109, .	3.3	37
60	Disentangling the Interactions Between Photochemical and Bacterial Degradation of Dissolved Organic Matter: Amino Acids Play a Central Role. Microbial Ecology, 2015, 69, 554-566.	2.8	37
61	Editorial: Progress in Ecological Stoichiometry. Frontiers in Microbiology, 2018, 9, 1957.	3.5	36
62	Stoichiometric flexibility in diverse aquatic heterotrophic bacteria is coupled to differences in cellular phosphorus quotas. Frontiers in Microbiology, 2015, 6, 159.	3.5	35
63	Impacts of suspended sediment on the ecosystem in Lake Michigan: A comparison between the 1998 and 1999 plume events. Journal of Geophysical Research, 2004, 109, .	3.3	32
64	5â€²-Nucleotidase Activity in a Eutrophic Lake and an Oligotrophic Lake. Applied and Environmental Microbiology, 1991, 57, 1306-1312.	3.1	32
65	Effects of natural light on nitrogen cycling rates in the Mississippi River plume. Limnology and Oceanography, 1997, 42, 273-281.	3.1	31
66	Growth rate and resource imbalance interactively control biomass stoichiometry and elemental quotas of aquatic bacteria. Ecology, 2017, 98, 820-829.	3.2	31
67	The effect of temperature on the coupling between phosphorus and growth in lacustrine bacterioplankton communities. Limnology and Oceanography, 2009, 54, 880-889.	3.1	30
68	Bacterial Phosphatases from Different Habitats in a Small, Hardwater Lake. Brock/Springer Series in Contemporary Bioscience, 1991, , 187-205.	0.3	30
69	Sediments and Soils Act as Reservoirs for Taxonomic and Functional Bacterial Diversity in the Upper Mississippi River. Microbial Ecology, 2016, 71, 814-824.	2.8	29
70	Temporal changes in oxygen demand and bacterial sulfate reduction in inland shrimp ponds. Aquaculture, 1996, 145, 141-158.	3.5	28
71	Littoral zones as sources of biodegradable dissolved organic carbon in lakes. Canadian Journal of Fisheries and Aquatic Sciences, 2008, 65, 2454-2460.	1.4	28
72	Chromatographic measurement of nitrogen mineralization rates in marine coastal waters with l5N. Marine Ecology - Progress Series, 1993, 93, 65-73.	1.9	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.	7.1	27
74	Carbon:phosphorus homeostasis of aquatic bacterial assemblages is mediated by shifts in assemblage composition. Aquatic Microbial Ecology, 2014, 73, 245-258.	1.8	26
75	Bioavailability of Dissolved Organic Phosphorus in Temperate Lakes. Frontiers in Environmental Science, 2018, 6, .	3.3	26
76	Nutrient, sulfur and carbon dynamics in a hypersaline lagoon. Estuarine, Coastal and Shelf Science, 2004, 59, 639-652.	2.1	25
77	What intrinsic and extrinsic factors explain the stoichiometric diversity of aquatic heterotrophic bacteria?. ISME Journal, 2018, 12, 598-609.	9.8	25
78	The Effects of Benthivorous Smallmouth Buffalo (Ictiobus bubalus) on Water Quality and Nutrient Cycling in a Shallow Floodplain Lake. Lake and Reservoir Management, 1997, 13, 270-278.	1.3	24
79	Effects of small scale fluid motion on bacterial growth and respiration. Freshwater Biology, 2004, 49, 28-40.	2.4	24
80	Comment on â€œA Bacterium That Can Grow by Using Arsenic Instead of Phosphorusâ€. Science, 2011, 332, 1149-1149.	12.6	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.	8.0	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.	2.6	20
83	Title is missing!. Biogeochemistry, 2002, 61, 199-228.	3.5	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.	3.1	19
85	Estimating modern carbon burial rates in lakes using a single sediment sample. Limnology and Oceanography: Methods, 2013, 11, 316-326.	2.0	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.	8.0	19
87	The legacy of large regime shifts in shallow lakes. Ecological Applications, 2016, 26, 2662-2676.	3.8	19
88	Physiological modifications of seston in response to physicochemical gradients within Lake Superior. Limnology and Oceanography, 2014, 59, 1011-1026.	3.1	17
89	Uniform carbon fluxes in shallow lakes in alternative stable states. Limnology and Oceanography, 2016, 61, 330-340.	3.1	17
90	Watershed vs. withinâ€lake drivers of nitrogen: phosphorus dynamics in shallow lakes. Ecological Applications, 2017, 27, 2155-2169.	3.8	16

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91	The Lake Ice Continuum Concept: Influence of Winter Conditions on Energy and Ecosystem Dynamics. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG006165.	3.0	15
92	Double-stranded DNA measurement in lakes with the fluorescent stain PicoGreen and the application to bacterial bioassays. Aquatic Microbial Ecology, 2001, 25, 65-74.	1.8	14
93	The Effects of Nutrient Imbalances and Temperature on the Biomass Stoichiometry of Freshwater Bacteria. Frontiers in Microbiology, 2017, 8, 1692.	3.5	14
94	Long-term organic fertilization changes soil active bacterial composition and multifunctionality: RNA-based bacterial community and qPCR-based SmartChip analysis. Journal of Soils and Sediments, 2021, 21, 799-809.	3.0	12
95	Nitrogen is Not a â€˜House of Cardsâ€™. Environmental Science & Technology, 2017, 51, 3-3.	10.0	10
96	Global development of the studies focused on antibiotics in aquatic systems from 1945 to 2017. Environmental Science and Pollution Research, 2018, 25, 22023-22034.	5.3	10
97	Sources and biodegradability of dissolved organic matter in two headwater peatland catchments at the Marcell Experimental Forest, northern Minnesota, <scp>USA</scp>. Hydrological Processes, 2021, 35, e14049.	2.6	9
98	Effect of Microbes on Contaminant Transfer in the Lake Superior Food Web. Environmental Science & Technology, 2005, 39, 9500-9508.	10.0	7
99	Contemporary Mobilization of Legacy Pb Stores by DOM in a Boreal Peatland. Environmental Science & Technology, 2018, 52, 3375-3383.	10.0	7
100	Great Lakes: Science can keep them great. Journal of Great Lakes Research, 2017, 43, 916-919.	1.9	6
101	Winter Oxygen Regimes in Clear and Turbid Shallow Lakes. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG006065.	3.0	5
102	Heterotrophic bacterial growth and nutrient limitation in large oligotrophic lakes and oceans. Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology, 2000, 27, 1831-1835.	0.1	4
103	A modeling study of benthic detritus flux's impacts on heterotrophic processes in Lake Michigan. Journal of Geophysical Research, 2004, 109, .	3.3	4
104	Stable isotope patterns in lake food webs reflect productivity gradients. Ecosphere, 2020, 11, e03244.	2.2	4
105	How increased atmospheric carbon dioxide and â€˜The Law of the Minimumâ€™ are contributing to environmental obesity. Acta Limnologica Brasiliensia, 0, 31, .	0.4	4
106	Zooplankton Community Structure of Lake Livingston, Texas, as Related to Paddlefish Food Resources. Journal of Freshwater Ecology, 1998, 13, 115-128.	1.2	3
107	Bold, Sedentary Fathead Minnows Have More Parasites. Zebrafish, 2016, 13, 248-255.	1.1	3
108	Further Development of a Specific Conductivity Approach to Measure Groundwater Discharge Area within Lakes. Journal of the American Water Resources Association, 2019, 55, 485-496.	2.4	3

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109	Scaling relationships among drivers of aquatic respiration in temperate lakes: from the smallest to the largest freshwater ecosystems. Inland Waters, 2016, 6, 1-10.	2.2	2
110	Effects of natural light on nitrogen dynamics in diverse aquatic environments. Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology, 2000, 27, 64-73.	0.1	1
111	The microbial role in littoral zone biogeochemical processes: Why Wetzel was right. Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology, 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. Limnology and Oceanography Bulletin, 2018, 27, 42-44.	0.4	1
113	Exploring watershed effects on nutrient concentrations in shallow lakes through stable isotope analysis. Science of the Total Environment, 2022, 823, 153742.	8.0	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. Journal of Geophysical Research G: Biogeosciences, 0, , .	3.0	0