Robert W Sterner

List of Publications by Year
in descending order

86 papers	9,169 citations	53660 45 h-index	56606 83 g-index
137 all docs	137 docs citations	137 times ranked	7624 citing authors

#	Article	IF	Citations
1	Nutritional constraints in terrestrial and freshwater food webs. Nature, 2000, 408, 578-580.	13.7	1,264
2	Ecological Stoichiometry. , 2003, , .		687
3	Algal Nutrient Limitation and the Nutrition of Aquatic Herbivores. Annual Review of Ecology, Evolution, and Systematics, 1994, 25, 1-29.	6.7	563
4	The Ratio of Nitrogen to Phosphorus Resupplied by Herbivores: Zooplankton and the Algal Competitive Arena. American Naturalist, 1990, 136, 209-229.	1.0	372
5	The effect of dietary nitrogen content on trophic level ¹⁵N enrichment. Limnology and Oceanography, 2000, 45, 601-607.	1.6	365
6	Ecology under lake ice. Ecology Letters, 2017, 20, 98-111.	3.0	320
7	Human Influences on Nitrogen Removal in Lakes. Science, 2013, 342, 247-250.	6.0	280
8	Ecological stoichiometry: An elementary approach using basic principles. Limnology and Oceanography, 2013, 58, 2219-2236.	1.6	251
9	On the Phosphorus Limitation Paradigm for Lakes. International Review of Hydrobiology, 2008, 93, 433-445.	0.5	248
10	Phytoplankton nutrient limitation and food quality for <i>Daphnia</i>. Limnology and Oceanography, 1993, 38, 857-871.	1.6	243
11	Scaleâ€dependent carbon:nitrogen:phosphorus seston stoichiometry in marine and freshwaters. Limnology and Oceanography, 2008, 53, 1169-1180.	1.6	238
12	The Role of Grazers in Phytoplankton Succession. Brock/Springer Series in Contemporary Bioscience, 1989, , 107-170.	0.3	237
13	Zooplankton nutrition: recent progress and a reality check. , 1998, 32, 261-279.		234
14	Daphnia Growth on Varying Quality of Scenedesmus: Mineral Limitation of Zooplankton. Ecology, 1993, 74, 2351-2360.	1.5	203
15	Phosphorus limitation of Daphnia growth: Is it real?. Limnology and Oceanography, 1997, 42, 1436-1443.	1.6	195
16	Testing for Life Historical Changes in Spatial Patterns of Four Tropical Tree Species. Journal of Ecology, 1986, 74, 621.	1.9	186
17	Modelling interactions of food quality and quantity in homeostatic consumers. Freshwater Biology, 1997, 38, 473-481.	1.2	175
18	Frontiers of Ecology. BioScience, 2001, 51, 15.	2.2	145

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19	Pelagic C:N:P Stoichiometry in a Eutrophied Lake: Responses to a Whole-Lake Food-Web Manipulation. Ecosystems, 2000, 3, 293-307.	1.6	143
20	CARBON, NITROGEN, AND PHOSPHORUS STOICHIOMETRY OF CYPRINID FISHES. Ecology, 2000, 81, 127-140.	1.5	138
21	Phosphorus and trace metal limitation of algae and bacteria in Lake Superior. Limnology and Oceanography, 2004, 49, 495-507.	1.6	132
22	Stoichiometric Constraints on Food-Web Dynamics: A Whole-Lake Experiment on the Canadian Shield. Ecosystems, 1998, 1, 120-136.	1.6	125
23	Elemental stoichiometry of freshwater fishes in relation to phylogeny, allometry and ecology. Journal of Fish Biology, 2007, 70, 121-140.	0.7	110
24	Ecosystem services of Earthâ€™s largest freshwater lakes. Ecosystem Services, 2020, 41, 101046.	2.3	109
25	Extreme cyclomorphosis in Daphnia lumholtzi. Freshwater Biology, 1992, 28, 257-262.	1.2	90
26	THE ENIGMA OF FOOD CHAIN LENGTH: ABSENCE OF THEORETICAL EVIDENCE FOR DYNAMIC CONSTRAINTS. Ecology, 1997, 78, 2258-2262.	1.5	83
27	In situ-measured primary production in Lake Superior. Journal of Great Lakes Research, 2010, 36, 139-149.	0.8	77
28	Contrasting influences of stormflow and baseflow pathways on nitrogen and phosphorus export from an urban watershed. Biogeochemistry, 2014, 121, 209-228.	1.7	77
29	Increasing stoichiometric imbalance in North America's largest lake: Nitrification in Lake Superior. Geophysical Research Letters, 2007, 34, .	1.5	76
30	hresholds for growth in Daphnia magna with high and low phosphorus diets. Limnology and Oceanography, 1994, 39, 1228-1232.	1.6	73
31	ISOTOPIC EVIDENCE FOR INâ€LAKE PRODUCTION OF ACCUMULATING NITRATE IN LAKE SUPERIOR. Ecological Applications, 2007, 17, 2323-2332.	1.8	73
32	Geneticallyâ€based tradeâ€offs in response to stoichiometric food quality influence competition in a keystone aquatic herbivore. Ecology Letters, 2009, 12, 1229-1237.	3.0	71
33	Algal growth in warm temperate reservoirs: kinetic examination of nitrogen, temperature, light, and other nutrients. Water Research, 1998, 32, 3539-3548.	5.3	70
34	Resource Competition During Seasonal Succession Toward Dominance by Cyanobacteria. Ecology, 1989, 70, 229-245.	1.5	68
35	Rates and controls of nitrification in a large oligotrophic lake. Limnology and Oceanography, 2013, 58, 276-286.	1.6	64
36	Nitrogen transformations at the sedimentâ€"water interface across redox gradients in the Laurentian Great Lakes. Hydrobiologia, 2014, 731, 95-108.	1.0	63

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37	Phytoplankton phosphorus limitation and food quality for Bosmina. Limnology and Oceanography, 1999, 44, 1549-1556.	1.6	62
38	C:N:P stoichiometry in Lake Superior: freshwater sea as end member. Inland Waters, 2011, 1, 29-46.	1.1	56
39	On the â€œstrict homeostasisâ€•assumption in ecological stoichiometry. Ecological Modelling, 2012, 243, 81-88.	1.2	56
40	Invasions of equilibria: tests of resource competition using two species of algae. Oecologia, 1984, 61, 197-200.	0.9	55
41	Life history bottlenecks in <i>Diaptomus clavipes</i> induced by phosphorusâ€limited algae. Limnology and Oceanography, 2002, 47, 1229-1233.	1.6	55
42	Diet Mixing: Do Animals Integrate Growth or Resources across Temporal Heterogeneity?. American Naturalist, 2010, 176, 651-663.	1.0	55
43	Grand challenges for research in the Laurentian Great Lakes. Limnology and Oceanography, 2017, 62, 2510-2523.	1.6	55
44	Distributional (In)Congruence of Biodiversityâ€“Ecosystem Functioning. Advances in Ecological Research, 2012, 46, 1-88.	1.4	52
45	How do consumers deal with stoichiometric constraints? Lessons from functional genomics using Daphnia pulex. Molecular Ecology, 2011, 20, 2341-2352.	2.0	51
46	Diel integration of food quality by <i>Daphnia:</i> Luxury consumption by a freshwater planktonic herbivore. Limnology and Oceanography, 2001, 46, 410-416.	1.6	50
47	Seasonal and spatial patterns in macro- and micronutrient limitation in Joe Pool Lake, Texas. Limnology and Oceanography, 1994, 39, 535-550.	1.6	46
48	Lake Morphometry and Light in the Surface Layer. Canadian Journal of Fisheries and Aquatic Sciences, 1990, 47, 687-692.	0.7	44
49	A first assessment of cyanobacterial blooms in oligotrophic Lake Superior. Limnology and Oceanography, 2020, 65, 2984-2998.	1.6	43
50	Sources of nitrogen and phosphorus supporting the growth of bacteria and phytoplankton in an oligotrophic Canadian shield lake. Limnology and Oceanography, 1995, 40, 242-249.	1.6	39
51	Editorial: Progress in Ecological Stoichiometry. Frontiers in Microbiology, 2018, 9, 1957.	1.5	36
52	Large differences in potential denitrification and sediment microbial communities across the Laurentian great lakes. Biogeochemistry, 2016, 128, 353-368.	1.7	34
53	Selective feeding determines patterns of nutrient release by stream invertebrates. Freshwater Science, 2014, 33, 1093-1107.	0.9	33
54	NITRATE UTILIZATION BY PHYTOPLANKTON IN LAKE SUPERIOR IS IMPAIRED BY LOW NUTRIENT (P, Fe) AVAILABILITY AND SEASONAL LIGHT LIMITATION - A CYANOBACTERIAL BIOREPORTER STUDY. Journal of Phycology, 2007, 43, 475-484.	1.0	29

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55	Carbon and phosphorus linkages in <i><scp>D</scp>aphnia</i> growth are determined by growth rate, not species or diet. Functional Ecology, 2014, 28, 1156-1165.	1.7	29
56	Lipid-ovary indices in food-limited Daphnia. Journal of Plankton Research, 1992, 14, 1449-1460.	0.8	28
57	Demography of a natural population of Daphnia retrocurva in a lake with low food quality. Journal of Plankton Research, 1998, 20, 471-489.	0.8	28
58	Nitrogen cycling in a freshwater estuary. Biogeochemistry, 2016, 127, 199-216.	1.7	27
59	An Ecological Network Analysis of nitrogen cycling in the Laurentian Great Lakes. Ecological Modelling, 2014, 293, 150-160.	1.2	25
60	Consideration of the bioavailability of iron in the North American Great Lakes: Development of novel approaches toward understanding iron biogeochemistry. Aquatic Ecosystem Health and Management, 2004, 7, 475-490.	0.3	23
61	Bioavailable iron in oligotrophic Lake Superior assessed using biological reporters. Journal of Plankton Research, 2005, 27, 1033-1044.	0.8	21
62	Trade-offs limiting the evolution of coloniality: ecological displacement rates used to measure small costs. Proceedings of the Royal Society B: Biological Sciences, 2011, 278, 458-463.	1.2	21
63	Tale of Two Storms: Impact of Extreme Rain Events on the Biogeochemistry of Lake Superior. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 1719-1731.	1.3	20
64	Spatial and Temporal Variation of Ammonium in Lake Superior. Journal of Great Lakes Research, 2007, 33, 581.	0.8	19
65	Nitrogen and carbon uptake dynamics in Lake Superior. Journal of Geophysical Research, 2008, 113, .	3.3	19
66	Fluvial seeding of cyanobacterial blooms in oligotrophic Lake Superior. Harmful Algae, 2020, 100, 101941.	2.2	18
67	Leaf flavonoids of primitive dicotyledonous angiosperms: Degeneria vitiensis and Idiospermum australiense. Biochemical Systematics and Ecology, 1981, 9, 185-187.	0.6	17
68	A ONE-RESOURCE â€œSTOICHIOMETRYâ€?. Ecology, 2004, 85, 1813-1816.	1.5	17
69	Geochemistry and mineralogy of southwestern Lake Superior sediments with an emphasis on phosphorus lability. Journal of Soils and Sediments, 2020, 20, 1060-1073.	1.5	16
70	Need for harmonized long-term multi-lake monitoring of African Great Lakes. Journal of Great Lakes Research, 2023, 49, 101988.	0.8	16
71	Isotopic composition of nitrogen in suspended particulate matter of Lake Superior: implications for nutrient cycling and organic matter transformation. Biogeochemistry, 2011, 103, 1-14.	1.7	14
72	Flavonoid Chemistry and the Phylogenetic Relationships of the Idiospermaceae. Systematic Botany, 1980, 5, 432.	0.2	13

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73	The Laurentian Great Lakes: A Biogeochemical Test Bed. Annual Review of Earth and Planetary Sciences, 2021, 49, 201-229.	4.6	13
74	Seasonality and physical drivers of deep chlorophyll layers in Lake Superior, with implications for a rapidly warming lake. Journal of Great Lakes Research, 2020, 46, 1615-1624.	0.8	12
75	Acylated kaempferol glycosides from Aconitum (ranunculaceae). Phytochemistry, 1981, 20, 2055-2056.	1.4	11
76	Near-infrared spectrometry (NIRS) for the analysis of seston carbon, nitrogen, and phosphorus from diverse sources. Limnology and Oceanography: Methods, 2006, 4, 96-104.	1.0	11
77	Energy storage and C:N:P variation in a holometabolous insect (Curculio davidi Fairmaire) larva across a climate gradient. Journal of Insect Physiology, 2013, 59, 408-415.	0.9	11
78	Transitions in microbial communities along a 1600â€‐km freshwater trophic gradient. Journal of Great Lakes Research, 2019, 45, 263-276.	0.8	10
79	Ocean stoichiometry, global carbon, and climate. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 8162-8163.	3.3	8
80	Changes in the cladoceran community of Lake Superior and the role of Bythotrephes longimanus. Journal of Great Lakes Research, 2017, 43, 1101-1110.	0.8	7
81	Resource competition and the autecology of pennate diatoms. Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology, 1990, 24, 518-523.	0.1	6
82	Couples that have chemistry: when ecological theories meet. Oikos, 2015, 124, 917-919.	1.2	3
83	Identification of factors constraining nitrate assimilation in Lake Superior, Laurentian Great Lakes. Hydrobiologia, 2014, 731, 81-94.	1.0	2
84	Building a research network to better understand climate governance in the Great Lakes. Journal of Great Lakes Research, 2022, 48, 1329-1336.	0.8	2
85	Zooplankton food quality in large lakes â€" growth of Daphnia on high P content seston from Lake Superior. Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology, 2000, 27, 1855-1860.	0.1	0
86	2010 SUMMER MEETING: GLOBAL CHANGES FROM THE CENTER TO THE EDGE. Limnology and Oceanography Bulletin, 2010, 19, 68-69.	0.2	0