Brian Keith Sorrell

List of Publications by Year
in descending order

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107 papers	4,155 citations	109321 35 h-index	123424 61 g-index
107 all docs	107 docs citations	107 times ranked	4715 citing authors

#	Article	IF	Citations
1	Internal pressurization and convective gas flow in some emergent freshwater macrophytes. Limnology and Oceanography, 1992, 37, 1420-1433.	3.1	312
2	Are Phragmites-dominated wetlands a net source or net sink of greenhouse gases?. Aquatic Botany, 2001, 69, 313-324.	1.6	252
3	Gas fluxes achieved by in situ convective flow in Phragmites australis. Aquatic Botany, 1996, 54, 151-163.	1.6	164
4	Community recommendations on terminology and procedures used in flooding and low oxygen stress research. New Phytologist, 2017, 214, 1403-1407.	7.3	146
5	Testing the Growth Rate vs. Geochemical Hypothesis for latitudinal variation in plant nutrients. Ecology Letters, 2007, 10, 1154-1163.	6.4	135
6	Mangrove growth in New Zealand estuaries: the role of nutrient enrichment at sites with contrasting rates of sedimentation. Oecologia, 2007, 153, 633-641.	2.0	125
7	Mangrove Forest and Soil Development on a Rapidly Accreting Shore in New Zealand. Ecosystems, 2010, 13, 437-451.	3.4	124
8	Cosmopolitan Species As Models for Ecophysiological Responses to Global Change: The Common Reed Phragmites australis. Frontiers in Plant Science, 2017, 8, 1833.	3.6	123
9	Growth and root oxygen release by Typha latifolia and its effects on sediment methanogenesis. Aquatic Botany, 1998, 61, 165-180.	1.6	114
10	Controls on soil cellulose decomposition along a salinity gradient in a Phragmites australis wetland in Denmark. Aquatic Botany, 1999, 64, 381-398.	1.6	113
11	Tracing the origin of Gulf Coast <i>Phragmites</i> (Poaceae): A story of longâ€distance dispersal and hybridization. American Journal of Botany, 2012, 99, 538-551.	1.7	113
12	On the Difficulties of Measuring Oxygen Release by Root Systems of Wetland Plants. Journal of Ecology, 1994, 82, 177.	4.0	110
13	Growth and morphology in relation to temperature and light availability during the establishment of three invasive aquatic plant species. Aquatic Botany, 2012, 102, 56-64.	1.6	106
14	Convective gas flow in Eleocharis sphacelata R. Br.: methane transport and release from wetlands. Aquatic Botany, 1994, 47, 197-212.	1.6	100
15	Ecophysiology of Wetland Plant Roots: A Modelling Comparison of Aeration in Relation to Species Distribution. Annals of Botany, 2000, 86, 675-685.	2.9	100
16	Biogeochemistry of billabong sediments. II. Seasonal variations in methane production. Freshwater Biology, 1992, 27, 435-445.	2.4	78
17	Invasion strategies in clonal aquatic plants: are phenotypic differences caused by phenotypic plasticity or local adaptation?. Annals of Botany, 2010, 106, 813-822.	2.9	74
18	Effect of external oxygen demand on radial oxygen loss by Juncus roots in titanium citrate solutions. Plant, Cell and Environment, 1999, 22, 1587-1593.	5.7	73

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19	Oxygen transport in the submerged freshwater macrophyte Egeria densa planch. I. Oxygen production, storage and release. Aquatic Botany, 1987, 28, 63-80.	1.6	68
20	Extreme Low Light Requirement for Algae Growth Underneath Sea Ice: A Case Study From Station Nord, NE Greenland. Journal of Geophysical Research: Oceans, 2018, 123, 985-1000.	2.6	63
21	Emissions of Greenhouse Gases CH4 and N2O from Low-gradient Streams in Agriculturally Developed Catchments. Water, Air, and Soil Pollution, 2008, 188, 155-170.	2.4	62
22	Regime shifts between clear and turbid water in New Zealand lakes: Environmental correlates and implications for management and restoration. New Zealand Journal of Marine and Freshwater Research, 2009, 43, 701-712.	2.0	61
23	Exploring the borders of European Phragmites within a cosmopolitan genus. AoB PLANTS, 2012, 2012, pls020.	2.3	61
24	Biogeochemistry of billabong sediments. I. The effect of macrophytes. Freshwater Biology, 1991, 26, 209-226.	2.4	59
25	Algal Hot Spots in a Changing Arctic Ocean: Sea-Ice Ridges and the Snow-Ice Interface. Frontiers in Marine Science, 2018, 5, .	2.5	58
26	Methanotrophic bacteria and their activity on submerged aquatic macrophytes. Aquatic Botany, 2002, 72, 107-119.	1.6	52
27	Oxygen Stress in Wetland Plants: Comparison of De-Oxygenated and Reducing Root Environments. Functional Ecology, 1996, 10, 521.	3.6	49
28	Genetic diversity in three invasive clonal aquatic species in New Zealand. BMC Genetics, 2010, 11, 52.	2.7	47
29	Eleocharis sphacelata: internal gas transport pathways and modelling of aeration by pressurized flow and diffusion. New Phytologist, 1997, 136, 433-442.	7.3	44
30	SEPARATING THE EFFECTS OF PARTIAL SUBMERGENCE AND SOIL OXYGEN DEMAND ON PLANT PHYSIOLOGY. Ecology, 2008, 89, 193-204.	3.2	44
31	Die-back of Phragmites australis: influence on the distribution and rate of sediment methanogenesis. Biogeochemistry, 1997, 36, 173-188.	3.5	43
32	Effects of water depth and substrate on growth and morphology of Eleocharis sphacelata: implications for culm support and internal gas transport. Aquatic Botany, 2002, 73, 93-106.	1.6	43
33	Internal methane transport through <i><scp>J</scp>uncus effusus</i>: experimental manipulation of morphological barriers to test aboveâ€•and belowâ€ground diffusion limitation. New Phytologist, 2012, 196, 799-806.	7.3	42
34	Removal of snow cover inhibits spring growth of Arctic ice algae through physiological and behavioral effects. Polar Biology, 2014, 37, 471-481.	1.2	37
35	Airspace structure and mathematical modelling of oxygen diffusion, aeration and anoxia in Eleocharis sphacelata R. Br. Roots. Marine and Freshwater Research, 1994, 45, 1529.	1.3	36
36	Oxygen transport in the submerged freshwater macrophyte Egeria densa planch. II. Role of lacunar gas pressures. Aquatic Botany, 1988, 31, 93-106.	1.6	34

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37	Do tropical wetland plants possess convective gas flow mechanisms?. New Phytologist, 2011, 190, 379-386.	7.3	34
38	Convective gas flow and internal aeration in Eleocharis sphacelata in relation to water depth. Journal of Ecology, 2000, 88, 778-789.	4.0	33
39	Methane Fluxes from an Australian Floodplain Wetland: The Importance of Emergent Macrophytes. Journal of the North American Benthological Society, 1995, 14, 582-598.	3.1	32
40	Convective gas flow development and the maximum depths achieved by helophyte vegetation in lakes. Annals of Botany, 2010, 105, 165-174.	2.9	32
41	A low-cost remotely operated vehicle (ROV) with an optical positioning system for under-ice measurements and sampling. Cold Regions Science and Technology, 2018, 151, 148-155.	3.5	30
42	Photobiology of sea ice algae during initial spring growth in Kangerlussuaq, West Greenland: insights from imaging variable chlorophyll fluorescence of ice cores. Photosynthesis Research, 2012, 112, 103-115.	2.9	29
43	Nutrient removal potential and biomass production by Phragmites australis and Typha latifolia on European rewetted peat and mineral soils. Science of the Total Environment, 2020, 747, 141102.	8.0	28
44	H + exchange and nutrient uptake by roots of the emergent hydrophytes, Cyperus involucratus Rottb., Eleocharis sphacelata R. Br. and Juncus ingens N. A. Wakef.. New Phytologist, 1993, 125, 85-92.	7.3	26
45	Effects of water vapour pressure deficit and stomatal conductance on photosynthesis, internal pressurization and convective flow in three emergent wetland plants. Plant and Soil, 2003, 253, 71-79.	3.7	26
46	Regulation of root anaerobiosis and carbon translocation by light and root aeration in Isoetes alpinus. Plant, Cell and Environment, 2004, 27, 1102-1111.	5.7	26
47	Errors in measurements of aquatic macrophyte gas exchange due to oxygen storage in internal airspaces. Aquatic Botany, 1986, 24, 103-114.	1.6	24
48	The interactive effect of Juncus effusus and water table position on mesocosm methanogenesis and methane emissions. Plant and Soil, 2016, 400, 45-54.	3.7	24
49	Ammonium and nitrate are both suitable inorganic nitrogen forms for the highly productive wetland grass Arundo donax , a candidate species for wetland paludiculture. Ecological Engineering, 2017, 105, 379-386.	3.6	24
50	Effects of sea-ice light attenuation and CDOM absorption in the water below the Eurasian sector of central Arctic Ocean (>88Â°N). Polar Research, 2015, 34, 23978.	1.6	23
51	Summerâ€"winter transitions in Antarctic ponds I: The physical environment. Antarctic Science, 2011, 23, 235-242.	0.9	20
52	Summer meltwater and spring sea ice primary production, light climate and nutrients in an Arctic estuary, Kangerlussuaq, west Greenland. Arctic, Antarctic, and Alpine Research, 2018, 50, .	1.1	20
53	Assessing nutrient responses and biomass quality for selection of appropriate paludiculture crops. Science of the Total Environment, 2019, 664, 1150-1161.	8.0	20
54	Invasive submerged freshwater macrophytes are more plastic in their response to light intensity than to the availability of free CO₂ in airâ€equilibrated water. Freshwater Biology, 2015, 60, 929-943.	2.4	19

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55	Is colonization of sea ice by diatoms facilitated by increased surface roughness in growing ice crystals?. Polar Biology, 2017, 40, 593-602.	1.2	17
56	Phragmites australis: How do genotypes of different phylogeographic origins differ from their invasive genotypes in growth, nitrogen allocation and gas exchange?. Biological Invasions, 2016, 18, 2563-2576.	2.4	16
57	An under-ice bloom of mixotrophic haptophytes in low nutrient and freshwater-influenced Arctic waters. Scientific Reports, 2021, 11, 2915.	3.3	16
58	Inter-specific differences in photosynthetic carbon uptake, photosynthate partitioning and extracellular organic carbon release by deep-water characean algae. Freshwater Biology, 2001, 46, 453-464.	2.4	15
59	Variation in wetland invertebrate communities in lowland acidic fens and swamps. Freshwater Biology, 2008, 53, 727-744.	2.4	14
60	N:P ratios, Î´15N fractionation and nutrient resorption along a nitrogen to phosphorus limitation gradient in an oligotrophic wetland complex. Aquatic Botany, 2011, 94, 93-101.	1.6	14
61	Photosynthesis of co-existing Phragmites haplotypes in their non-native range: are characteristics determined by adaptations derived from their native origin?. AoB PLANTS, 2013, 5, .	2.3	14
62	Decadal timescale variability in ecosystem properties in the ponds of the McMurdo Ice Shelf, southern Victoria Land, Antarctica. Antarctic Science, 2014, 26, 219-230.	0.9	14
63	Phylogenetic diversity shapes salt tolerance in Phragmites australis estuarine populations in East China. Scientific Reports, 2020, 10, 17645.	3.3	14
64	Summer-winter transitions in Antarctic ponds II: Biological responses. Antarctic Science, 2011, 23, 243-254.	0.9	13
65	Nitrogen and carbon limitation of planktonic primary production and phytoplanktonâ€"bacterioplankton coupling in ponds on the McMurdo Ice Shelf, Antarctica. Environmental Research Letters, 2013, 8, 035043.	5.2	13
66	Submerged freshwater plant communities do not show species complementarity effect in wetland mesocosms. Biology Letters, 2018, 14, 20180635.	2.3	13
67	Transient pressure gradients in the lacunar system of the submerged macrophyte Egeria densa Planch.. Aquatic Botany, 1991, 39, 99-108.	1.6	12
68	Water velocity and irradiance effects on internal transport and metabolism of methane in submerged Isoetes alpinus and Potamogeton crispus. Aquatic Botany, 2004, 79, 189-202.	1.6	12
69	Regression analysis of growth responses to water depth in three wetland plant species. AoB PLANTS, 2012, 2012, pls043-pls043.	2.3	12
70	Oxygen diffusion and dark respiration in aquatic macrophytes. Plant, Cell and Environment, 1989, 12, 293-299.	5.7	11
71	Soil and vegetation responses to hydrological manipulation in a partially drained polje fen in New Zealand. Wetlands Ecology and Management, 2007, 15, 361-383.	1.5	11
72	Microbial population responses in three stratified Antarctic meltwater ponds during the autumn freeze. Antarctic Science, 2012, 24, 571-588.	0.9	11

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73	Minimum Fe requirement and toxic tissue concentration of Fe in Phragmites australis: A tool for alleviating Fe-deficiency in constructed wetlands. Ecological Engineering, 2018, 118, 152-160.	3.6	11
74	Exploring Spatial Heterogeneity of Antarctic Sea Ice Algae Using an Autonomous Underwater Vehicle Mounted Irradiance Sensor. Frontiers in Earth Science, 2019, 7, .	1.8	10
75	Ecological Aspects of Microbes and Microbial Communities Inhabiting the Rhizosphere of Wetland Plants. , 2006, , 205-238.		10
76	The Impact of Hydrological Restoration on Benthic Aquatic Invertebrate Communities in a New Zealand Wetland. Restoration Ecology, 2011, 19, 747-757.	2.9	9
77	Nutrient kinetics in submerged plant beds: A mesocosm study simulating constructed drainage wetlands. Ecological Engineering, 2018, 122, 263-270.	3.6	9
78	Biomethane Yield from Different European Phragmites australis Genotypes, Compared with Other Herbaceous Wetland Species Grown at Different Fertilization Regimes. Resources, 2020, 9, 57.	3.5	9
79	Are landscape-based wetland condition indices reflected by invertebrate and diatom communities?. Wetlands Ecology and Management, 2011, 19, 73-88.	1.5	8
80	Arctic Sea Ice Ecology. Springer Polar Sciences, 2020, , .	0.1	8
81	Will low primary production rates in the Amundsen Basin (Arctic Ocean) remain low in a future ice-free setting, and what governs this production?. Journal of Marine Systems, 2020, 205, 103287.	2.1	8
82	Geographically distinct Ceratophyllum demersum populations differ in growth, photosynthetic responses and phenotypic plasticity to nitrogen availability. Functional Plant Biology, 2012, 39, 774.	2.1	8
83	Plant traits in response to raising groundwater levels in wetland restoration: evidence from three case studies. Applied Vegetation Science, 2006, 9, 251.	1.9	8
84	Gas exchange and growth responses to nutrient enrichment in invasive Glyceria maxima and native New Zealand Carex species. Aquatic Botany, 2012, 103, 37-47.	1.6	7
85	Closely related freshwater macrophyte species, <i><scp>C</scp>eratophyllum demersum</i> and <i><scp>C</scp>.Âsubmersum</i>, differ in temperature response. Freshwater Biology, 2014, 59, 777-788.	2.4	7
86	Does <i>Juncus effusus</i> enhance methane emissions from grazed pastures on peat?. Biogeosciences, 2015, 12, 5667-5676.	3.3	7
87	Summerâ€“winter transitions in Antarctic ponds: III. Chemical changes. Antarctic Science, 2012, 24, 121-130.	0.9	6
88	The effects of ZnO nanoparticles on leaf litter decomposition under natural sunlight. Environmental Science: Nano, 2019, 6, 1180-1188.	4.3	6
89	Mechanical properties of the lacunar gas in Egeria densa Planch. shoots. Aquatic Botany, 1996, 53, 47-60.	1.6	4
90	Acclimation to light and avoidance of photoinhibition in Typha latifolia is associated with high photosynthetic capacity and xanthophyll pigment content. Functional Plant Biology, 2017, 44, 774.	2.1	4

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91	Carbon assimilation through a vertical light gradient in the canopy of invasive herbs grown under different temperature regimes is determined by leaf and whole-plant architecture. AoB PLANTS, 2020, 12, plaa031.	2.3	4
92	Acute and prolonged effects of variable salinity on growth, gas exchange and photobiology of eelgrass (Zostera marina L.). Aquatic Botany, 2020, 165, 103236.	1.6	4
93	Preface: Wetland ecosystemsâ€"functions and use in a changing climate. Hydrobiologia, 2021, 848, 3255-3258.	2.0	4
94	Upwelling Irradiance below Sea Iceâ€"PAR Intensities and Spectral Distributions. Journal of Marine Science and Engineering, 2021, 9, 830.	2.6	4
95	Photobiological Effects on Ice Algae of a Rapid Whole-Fjord Loss of Snow Cover during Spring Growth in Kangerlussuaq, a West Greenland Fjord. Journal of Marine Science and Engineering, 2021, 9, 814.	2.6	4
96	Lacunar gas discharge: a valid estimate of photosynthetic rates in submerged macrophytes?. Plant, Cell and Environment, 1987, 10, 515-518.	5.7	3
97	A Comparison of Decimeter Scale Variations of Physical and Photobiological Parameters in a Late Winter First-Year Sea Ice in Southwest Greenland. Journal of Marine Science and Engineering, 2021, 9, 60.	2.6	3
98	Shade and salinity responses of two dominant coastal wetland grasses: implications for light competition at the transition zone. Annals of Botany, 2021, 128, 469-480.	2.9	3
99	Gas Transport and Exchange through Wetland Plant Aerenchyma. Soil Science Society of America Book Series, 2015, , 177-196.	0.3	2
100	Concentrations of organic and inorganic bound nutrients and chlorophyll a in the Eurasian Basin, Arctic Ocean, early autumn 2012. Regional Studies in Marine Science, 2017, 9, 69-75.	0.7	2
101	Spring, Summer and Melting Sea Ice. Springer Polar Sciences, 2020, , 61-101.	0.1	2
102	Probing the Response of the Amphibious Plant Butomus umbellatus to Nutrient Enrichment and Shading by Integrating Eco-Physiological With Metabolomic Analyses. Frontiers in Plant Science, 2020, 11, 581787.	3.6	2
103	Plant adaptations and microbial processes in wetlands. Annals of Botany, 2010, 105, 127-127.	2.9	1
104	Methods and Techniques in Sea Ice Ecology. Springer Polar Sciences, 2020, , 131-169.	0.1	1
105	The Book, and Ecology of Sea Ice. Springer Polar Sciences, 2020, , 1-12.	0.1	0
106	Winter, Cold and Mature Sea Ice. Springer Polar Sciences, 2020, , 31-59.	0.1	0
107	Sea Ice in a Climate Change Context. Springer Polar Sciences, 2020, , 103-130.	0.1	0