

Murray R Badger

List of Publications by Year in descending order

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59
papers

7,308
citations

87888

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docs citations

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times ranked

5263
citing authors

#	ARTICLE	IF	CITATIONS
1	Mehler reaction plays a role in C3 and C4 photosynthesis under shade and low CO ₂ . <i>Photosynthesis Research</i> , 2021, 149, 171-185.	2.9	8
2	Rubisco proton production can drive the elevation of CO ₂ within condensates and carboxysomes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	38
3	Partially Dissecting Electron Fluxes in Both Photosystems in Spinach Leaf Disks during Photosynthetic Induction. <i>Plant and Cell Physiology</i> , 2019, 60, 2206-2219.	3.1	18
4	Cyclic electron flow and light partitioning between the two photosystems in leaves of plants with different functional types. <i>Photosynthesis Research</i> , 2019, 142, 321-334.	2.9	20
5	Carboxysome encapsulation of the CO ₂ -fixing enzyme Rubisco in tobacco chloroplasts. <i>Nature Communications</i> , 2018, 9, 3570.	12.8	196
6	Bile Acid Sodium Symporter BASS6 Can Transport Glycolate and Is Involved in Photorespiratory Metabolism in <i>Arabidopsis thaliana</i> . <i>Plant Cell</i> , 2017, 29, 808-823.	6.6	56
7	Measuring CO ₂ and HCO ₃ ^{âˆ’} permeabilities of isolated chloroplasts using a MIMS-18O approach. <i>Journal of Experimental Botany</i> , 2017, 68, 3915-3924.	4.8	28
8	Redirecting the Cyanobacterial Bicarbonate Transporters BicA and SbtA to the Chloroplast Envelope: Soluble and Membrane Cargos Need Different Chloroplast Targeting Signals in Plants. <i>Frontiers in Plant Science</i> , 2016, 7, 185.	3.6	54
9	Artificial remodelling of alternative electron flow by flavodiiron proteins in <i>Arabidopsis</i> . <i>Nature Plants</i> , 2016, 2, 16012.	9.3	182
10	PhenoMeter: A Metabolome Database Search Tool Using Statistical Similarity Matching of Metabolic Phenotypes for High-Confidence Detection of Functional Links. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 106.	4.1	22
11	Partially dissecting the steady-state electron fluxes in Photosystem I in wild-type and <i>pgr5</i> and <i>ndh</i> mutants of <i>Arabidopsis</i> . <i>Frontiers in Plant Science</i> , 2015, 6, 758.	3.6	34
12	Comparing the in Vivo Function of ¹³ C-Carboxysomes and ¹² C-Carboxysomes in Two Model Cyanobacteria. <i>Plant Physiology</i> , 2014, 165, 398-411.	4.8	81
13	TraitCapture: genomic and environment modelling of plant phenomic data. <i>Current Opinion in Plant Biology</i> , 2014, 18, 73-79.	7.1	101
14	Gymnosperms Have Increased Capacity for Electron Leakage to Oxygen (Mehler and PTOX reactions) in Photosynthesis Compared with Angiosperms. <i>Plant and Cell Physiology</i> , 2013, 54, 1152-1163.	3.1	69
15	Functions, Compositions, and Evolution of the Two Types of Carboxysomes: Polyhedral Microcompartments That Facilitate CO ₂ Fixation in Cyanobacteria and Some Proteobacteria. <i>Microbiology and Molecular Biology Reviews</i> , 2013, 77, 357-379.	6.6	346
16	D ₂ O Solvent Isotope Effects Suggest Uniform Energy Barriers in Ribulose-1,5-bisphosphate Carboxylase/Oxygenase Catalysis. <i>Biochemistry</i> , 2013, 52, 869-877.	2.5	25
17	Estimation of the steady-state cyclic electron flux around PSI in spinach leaf discs in white light, CO ₂ -enriched air and other varied conditions. <i>Functional Plant Biology</i> , 2013, 40, 1018.	2.1	40
18	A mutation in the purine biosynthetic enzyme ATASE2 impacts high light signalling and acclimation responses in green and chlorotic sectors of <i>Arabidopsis</i> leaves. <i>Functional Plant Biology</i> , 2011, 38, 401.	2.1	26

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19	EFFECTS OF MODERATE HEAT STRESS AND DISSOLVED INORGANIC CARBON CONCENTRATION ON PHOTOSYNTHESIS AND RESPIRATION OF <i>SYMBIODINIUM</i> SP. (DINOPHYCEAE) IN CULTURE AND IN SYMBIOSIS ¹ . <i>Journal of Phycology</i> , 2009, 45, 357-365.	2.3	30
20	Chlorophyll fluorescence screening of <i>Arabidopsis thaliana</i> for CO ₂ sensitive photorespiration and photoinhibition mutants. <i>Functional Plant Biology</i> , 2009, 36, 867.	2.1	31
21	Analysis of Carboxysomes from <i>Synechococcus</i> PCC7942 Reveals Multiple Rubisco Complexes with Carboxysomal Proteins CcmM and CcaA. <i>Journal of Biological Chemistry</i> , 2007, 282, 29323-29335.	3.4	173
22	Impairment of the Photorespiratory Pathway Accelerates Photoinhibition of Photosystem II by Suppression of Repair But Not Acceleration of Damage Processes in <i>Arabidopsis</i> . <i>Plant Physiology</i> , 2007, 144, 487-494.	4.8	187
23	Measurement of (carbon) kinetic isotope effect by Rayleigh fractionation using membrane inlet mass spectrometry for CO ₂ -consuming reactions. <i>Functional Plant Biology</i> , 2006, 33, 1115.	2.1	40
24	The environmental plasticity and ecological genomics of the cyanobacterial CO ₂ concentrating mechanism. <i>Journal of Experimental Botany</i> , 2006, 57, 249-265.	4.8	276
25	The roles of carbonic anhydrases in photosynthetic CO ₂ concentrating mechanisms. <i>Photosynthesis Research</i> , 2003, 77, 83-94.	2.9	150
26	CO ₂ concentrating mechanisms in cyanobacteria: molecular components, their diversity and evolution. <i>Journal of Experimental Botany</i> , 2003, 54, 609-622.	4.8	679
27	Modes of active inorganic carbon uptake in the cyanobacterium, <i>Synechococcus</i> sp. PCC7942. <i>Functional Plant Biology</i> , 2002, 29, 131.	2.1	145
28	Variability of the pyrenoid-based CO ₂ concentrating mechanism in hornworts (Anthocerotophyta). <i>Functional Plant Biology</i> , 2002, 29, 407.	2.1	38
29	Mitochondrial protein expression in tomato fruit during on-vine ripening and cold storage. <i>Functional Plant Biology</i> , 2002, 29, 827.	2.1	43
30	Dinoflagellate symbioses: strategies and adaptations for the acquisition and fixation of inorganic carbon. <i>Functional Plant Biology</i> , 2002, 29, 309.	2.1	70
31	Evolution and diversity of CO ₂ concentrating mechanisms in cyanobacteria. <i>Functional Plant Biology</i> , 2002, 29, 161.	2.1	288
32	Advances in understanding how aquatic photosynthetic organisms utilize sources of dissolved inorganic carbon for CO ₂ fixation. <i>Functional Plant Biology</i> , 2002, 29, 117.	2.1	27
33	Novel gene products associated with NdhD3/D4-containing NDH-1 complexes are involved in photosynthetic CO ₂ hydration in the cyanobacterium, <i>Synechococcus</i> sp. PCC7942. <i>Molecular Microbiology</i> , 2002, 43, 425-435.	2.5	175
34	A COMPARISON OF PHOTOSYNTHETIC ELECTRON TRANSPORT RATES IN MACROALGAE MEASURED BY PULSE AMPLITUDE MODULATED CHLOROPHYLL FLUOROMETRY AND MASS SPECTROMETRY. <i>Journal of Phycology</i> , 2001, 37, 756-767.	2.3	102
35	Increased heat sensitivity of photosynthesis in tobacco plants with reduced Rubisco activase. <i>Photosynthesis Research</i> , 2001, 67, 147-156.	2.9	92
36	Photosynthetic electron sinks in transgenic tobacco with reduced amounts of Rubisco: little evidence for significant Mehler reaction. <i>Journal of Experimental Botany</i> , 2000, 51, 357-368.	4.8	161

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37	Electron flow to oxygen in higher plants and algae: rates and control of direct photoreduction (Mehler reaction) and rubisco oxygenase. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2000, 355, 1433-1446.	4.0	344
38	Analysis of the Relative Increase in Photosynthetic O ₂ Uptake When Photosynthesis in Grapevine Leaves Is Inhibited following Low Night Temperatures and/or Water Stress. <i>Plant Physiology</i> , 1999, 121, 675-684.	4.8	130
39	Evidence for an Inorganic Carbon-Concentrating Mechanism in the Symbiotic Dinoflagellate <i>Symbiodinium</i> sp.. <i>Plant Physiology</i> , 1999, 121, 1247-1255.	4.8	119
40	The involvement of NAD(P)H dehydrogenase subunits, NdhD3 and NdhF3, in high-affinity CO ₂ uptake in <i>Synechococcus</i> sp. PCC7002 gives evidence for multiple NDH-1 complexes with specific roles in cyanobacteria. <i>Molecular Microbiology</i> , 1999, 32, 1305-1315.	2.5	102
41	Expression of Tobacco Carbonic Anhydrase in the C ₄ Dicot <i>Flaveria bidentis</i> Leads to Increased Leakiness of the Bundle Sheath and a Defective CO ₂ -Concentrating Mechanism. <i>Plant Physiology</i> , 1998, 117, 1071-1081.	4.8	49
42	The diversity and coevolution of Rubisco, plastids, pyrenoids, and chloroplast-based CO ₂ -concentrating mechanisms in algae. <i>Canadian Journal of Botany</i> , 1998, 76, 1052-1071.	1.1	449
43	The functioning of the CO ₂ -concentrating mechanism in several cyanobacterial strains: a review of general physiological characteristics, genes, proteins, and recent advances. <i>Canadian Journal of Botany</i> , 1998, 76, 973-1002.	1.1	171
44	PsaE- and NdhF-mediated electron transport affect bicarbonate transport rather than carbon dioxide uptake in the cyanobacterium <i>Synechococcus</i> sp. PCC7002. <i>Planta</i> , 1997, 201, 36-42.	3.2	25
45	Carbonic anhydrase(s) associated with lichens: in vivo activities, possible locations and putative roles. <i>New Phytologist</i> , 1996, 132, 627-639.	7.3	17
46	Characterisation of carbon dioxide and bicarbonate transport during steady-state photosynthesis in the marine cyanobacterium <i>Synechococcus</i> strain PCC7002. <i>Planta</i> , 1995, 197, 597.	3.2	47
47	Specific reduction of chloroplast glyceraldehyde-3-phosphate dehydrogenase activity by antisense RNA reduces CO ₂ assimilation via a reduction in ribulose biphosphate regeneration in transgenic tobacco plants. <i>Planta</i> , 1995, 195, 369-378.	3.2	135
48	Characterisation of inorganic carbon fluxes, carbonic anhydrase(s) and ribulose-1,5-biphosphate carboxylase-oxygenase in the green unicellular alga <i>Coccomyxa</i> . <i>Planta</i> , 1995, 197, 352.	3.2	59
49	Photobiont-related differences in carbon acquisition among green-algal lichens. <i>Planta</i> , 1994, 195, 70.	3.2	38
50	The CO ₂ concentrating mechanism in cyanobacteria and microalgae. <i>Physiologia Plantarum</i> , 1992, 84, 606-615.	5.2	243
51	Selection and analysis of mutants of the CO ₂ -concentrating mechanism in cyanobacteria. <i>Canadian Journal of Botany</i> , 1991, 69, 974-983.	1.1	26
52	The relationship between steady-state gas exchange of bean leaves and the levels of carbon-reduction-cycle intermediates. <i>Planta</i> , 1984, 160, 305-313.	3.2	200
53	Photoreduction of Oxygen in Mesophyll Chloroplasts of C ₄ Plants. <i>Plant Physiology</i> , 1983, 73, 1038-1041.	4.8	43
54	Effects of water stress on photosynthetic electron transport, photophosphorylation, and metabolite levels of <i>Xanthium strumarium</i> mesophyll cells. <i>Planta</i> , 1982, 156, 199-206.	3.2	106

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55	Molecular weight and quaternary structure of ribulose bisphosphate carboxylase from the cyanobacterium, <i>Synechococcus</i> sp.. Archives of Microbiology, 1981, 130, 344-348.	2.2	28
56	Variations in Km(CO ₂) of Ribulose-1,5-bisphosphate Carboxylase among Grasses. Plant Physiology, 1980, 66, 1110-1112.	4.8	115
57	Internal Inorganic Carbon Pool of <i>Chlamydomonas reinhardtii</i> . Plant Physiology, 1980, 66, 407-413.	4.8	498
58	Oxygen Exchange in Leaves in the Light. Plant Physiology, 1980, 66, 302-307.	4.8	173
59	Kinetic properties of ribulose 1,5-bisphosphate carboxylase/oxygenase from <i>Anabaena variabilis</i> . Archives of Biochemistry and Biophysics, 1980, 201, 247-254.	3.0	136