Murray R Badger

List of Publications by Citations

60 papers	6,148 citations	37 h-index	60 g-index
60 ext. papers	6,720 ext. citations	5.4 avg, IF	5.65 L-index

#	Paper	IF	Citations
60	CO2 concentrating mechanisms in cyanobacteria: molecular components, their diversity and evolution. *Journal of Experimental Botany*, **2003**, 54, 609-22	7	580
59	Internal Inorganic Carbon Pool of Chlamydomonas reinhardtii: EVIDENCE FOR A CARBON DIOXIDE-CONCENTRATING MECHANISM. *Plant Physiology*, **1980**, 66, 407-13	6.6	436
58	The diversity and coevolution of Rubisco, plastids, pyrenoids, and chloroplast-based CO2-concentrating mechanisms in algae. *Canadian Journal of Botany*, **1998**, 76, 1052-1071		426
57	Electron flow to oxygen in higher plants and algae: rates and control of direct photoreduction (Mehler reaction) and rubisco oxygenase. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2000**, 355, 1433-46	5.8	297
56	The environmental plasticity and ecological genomics of the cyanobacterial CO2 concentrating mechanism. *Journal of Experimental Botany*, **2006**, 57, 249-65	7	241
55	Functions, compositions, and evolution of the two types of carboxysomes: polyhedral microcompartments that facilitate CO2 fixation in cyanobacteria and some proteobacteria. *Microbiology and Molecular Biology Reviews*, **2013**, 77, 357-79	13.2	233
54	Evolution and diversity of CO2 concentrating mechanisms in cyanobacteria. *Functional Plant Biology* , **2002**, 29, 161-173	2.7	230
53	The CO2concentrating mechanism in cyanobactiria and microalgae. *Physiologia Plantarum*, **1992**, 84, 606-615	4.6	217
52	The relationship between steady-state gas exchange of bean leaves and the levels of carbon-reduction-cycle intermediates. *Planta*, **1984**, 160, 305-13	4.7	182
51	The functioning of the CO2 concentrating mechanism in several cyanobacterial strains: a review of general physiological characteristics, genes, proteins, and recent advances. *Canadian Journal of Botany*, **1998**, 76, 973-1002		163
50	Novel gene products associated with NdhD3/D4-containing NDH-1 complexes are involved in photosynthetic CO2 hydration in the cyanobacterium, Synechococcus sp. PCC7942. *Molecular Microbiology*, **2002**, 43, 425-35	4.1	161
49	Oxygen exchange in leaves in the light. *Plant Physiology*, **1980**, 66, 302-7	6.6	158
48	Photosynthetic electron sinks in transgenic tobacco with reduced amounts of Rubisco: little evidence for significant Mehler reaction. *Journal of Experimental Botany*, **2000**, 51 Spec No, 357-68	7	150
47	Impairment of the photorespiratory pathway accelerates photoinhibition of photosystem II by suppression of repair but not acceleration of damage processes in Arabidopsis. *Plant Physiology*, **2007**, 144, 487-94	6.6	148
46	Analysis of carboxysomes from Synechococcus PCC7942 reveals multiple Rubisco complexes with carboxysomal proteins CcmM and CcaA. *Journal of Biological Chemistry*, **2007**, 282, 29323-35	5.4	146
45	Artificial remodelling of alternative electron flow by flavodiiron proteins in Arabidopsis. *Nature Plants*, **2016**, 2, 16012	11.5	133
44	Modes of active inorganic carbon uptake in the cyanobacterium, Synechococcus sp. PCC7942. *Functional Plant Biology*, **2002**, 29, 131-149	2.7	128

43	Kinetic properties of ribulose 1,5-bisphosphate carboxylase/oxygenase from Anabaena variabilis. *Archives of Biochemistry and Biophysics*, **1980**, 201, 247-54	4.1	123
42	Carboxysome encapsulation of the CO-fixing enzyme Rubisco in tobacco chloroplasts. *Nature Communications*, **2018**, 9, 3570	17.4	122
41	The roles of carbonic anhydrases in photosynthetic CO(2) concentrating mechanisms. *Photosynthesis Research*, **2003**, 77, 83-94	3.7	121
40	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. *Plant Physiology*, **1999**, 121, 675-84	6.6	115
39	Specific reduction of chloroplast glyceraldehyde-3-phosphate dehydrogenase activity by antisense RNA reduces CO2 assimilation via a reduction in ribulose bisphosphate regeneration in transgenic tobacco plants. *Planta*, **1995**, 195, 369-78	4.7	113
38	Evidence for an inorganic carbon-concentrating mechanism in the symbiotic dinoflagellate Symbiodinium sp. *Plant Physiology*, **1999**, 121, 1247-56	6.6	103
37	Variations in K(m)(CO(2)) of Ribulose-1,5-bisphosphate Carboxylase among Grasses. *Plant Physiology*, **1980**, 66, 1110-2	6.6	103
36	The involvement of NAD(P)H dehydrogenase subunits, NdhD3 and NdhF3, in high-affinity CO2 uptake in Synechococcus sp. PCC7002 gives evidence for multiple NDH-1 complexes with specific roles in cyanobacteria. *Molecular Microbiology*, **1999**, 32, 1305-15	4.1	96
35	Effects of water stress on photosynthetic electron transport, photophosphorylation, and metabolite levels of Xanthium strumarium mesophyll cells. *Planta*, **1982**, 156, 199-206	4.7	96
34	A COMPARISON OF PHOTOSYNTHETIC ELECTRON TRANSPORT RATES IN MACROALGAE MEASURED BY PULSE AMPLITUDE MODULATED CHLOROPHYLL FLUOROMETRY AND MASS SPECTROMETRY. *Journal of Phycology*, **2001**, 37, 756-767	3	84
33	TraitCapture: genomic and environment modelling of plant phenomic data. *Current Opinion in Plant Biology*, **2014**, 18, 73-9	9.9	82
32	Increased heat sensitivity of photosynthesis in tobacco plants with reduced Rubisco activase. *Photosynthesis Research*, **2001**, 67, 147-56	3.7	75
31	Dinoflagellate symbioses: strategies and adaptations for the acquisition and fixation of inorganic carbon. *Functional Plant Biology*, **2002**, 29, 309-322	2.7	62
30	Gymnosperms have increased capacity for electron leakage to oxygen (Mehler and PTOX reactions) in photosynthesis compared with angiosperms. *Plant and Cell Physiology*, **2013**, 54, 1152-63	4.9	58
29	Comparing the in vivo function of □carboxysomes and □carboxysomes in two model cyanobacteria. *Plant Physiology*, **2014**, 165, 398-411	6.6	58
28	Expression of tobacco carbonic anhydrase in the C4 dicot flaveria bidentis leads to increased leakiness of the bundle sheath and a defective CO2-concentrating mechanism. *Plant Physiology*, **1998**, 117, 1071-81	6.6	47
27	Characterisation of inorganic carbon fluxes, carbonic anhydrase(s) and ribulose-1,5-biphosphate carboxylase-oxygenase in the green unicellular alga Coccomyxa. *Planta*, **1995**, 197, 352	4.7	44
26	Photoreduction of oxygen in mesophyll chloroplasts of c(4) plants: a model system for studying an in vivo mehler reaction. *Plant Physiology*, **1983**, 73, 1038-41	6.6	40

25	Bile Acid Sodium Symporter BASS6 Can Transport Glycolate and Is Involved in Photorespiratory Metabolism in. *Plant Cell*, **2017**, 29, 808-823	11.6	39
24	Redirecting the Cyanobacterial Bicarbonate Transporters BicA and SbtA to the Chloroplast Envelope: Soluble and Membrane Cargos Need Different Chloroplast Targeting Signals in Plants. *Frontiers in Plant Science*, **2016**, 7, 185	6.2	39
23	Mitochondrial protein expression in tomato fruit during on-vine ripening and cold storage. *Functional Plant Biology*, **2002**, 29, 827-834	2.7	37
22	Characterisation of carbon dioxide and bicarbonate transport during steady-state photosynthesis in the marine cyanobacterium Synechococcus strain PCC7002. *Planta*, **1995**, 197, 597	4.7	35
21	Variability of the pyrenoid-based CO2 concentrating mechanism in hornworts (Anthocerotophyta). *Functional Plant Biology*, **2002**, 29, 407-416	2.7	34
20	Measurement of (carbon) kinetic isotope effect by Rayleigh fractionation using membrane inlet mass spectrometry for CO-consuming reactions. *Functional Plant Biology*, **2006**, 33, 1115-1128	2.7	32
19	Estimation of the steady-state cyclic electron flux around PSI in spinach leaf discs in white light, CO-enriched air and other varied conditions. *Functional Plant Biology*, **2013**, 40, 1018-1028	2.7	30
18	Chlorophyll fluorescence screening of Arabidopsis thaliana for CO sensitive photorespiration and photoinhibition mutants. *Functional Plant Biology*, **2009**, 36, 867-873	2.7	28
17	Molecular weight and quaternary structure of ribulose bisphosphate carboxylase from the cyanobacterium, Synechococcus sp.. *Archives of Microbiology*, **1981**, 130, 344-348	3	28
16	Partially dissecting the steady-state electron fluxes in Photosystem I in wild-type and pgr5 and ndh mutants of Arabidopsis. *Frontiers in Plant Science*, **2015**, 6, 758	6.2	24
15	EFFECTS OF MODERATE HEAT STRESS AND DISSOLVED INORGANIC CARBON CONCENTRATION ON PHOTOSYNTHESIS AND RESPIRATION OF SYMBIODINIUM SP. (DINOPHYCEAE) IN CULTURE AND IN SYMBIOSIS(1). *Journal of Phycology*, **2009**, 45, 357-65	3	24
14	Photobiont-related differences in carbon acquisition among green-algal lichens. *Planta*, **1994**, 195, 70	4.7	24
13	PsaE- and NdhF-mediated electron transport affect bicarbonate transport rather than carbon dioxide uptake in the cyanobacteriumSynechococcus sp. PCC7002. *Planta*, **1997**, 201, 36-42	4.7	23
12	PhenoMeter: A Metabolome Database Search Tool Using Statistical Similarity Matching of Metabolic Phenotypes for High-Confidence Detection of Functional Links. *Frontiers in Bioengineering and Biotechnology*, **2015**, 3, 106	5.8	22
11	Selection and analysis of mutants of the CO2-concentrating mechanism in cyanobacteria. *Canadian Journal of Botany*, **1991**, 69, 974-983		22
10	D2O solvent isotope effects suggest uniform energy barriers in ribulose-1,5-bisphosphate carboxylase/oxygenase catalysis. *Biochemistry*, **2013**, 52, 869-77	3.2	21
9	Measuring CO2 and HCO3- permeabilities of isolated chloroplasts using a MIMS-18O approach. *Journal of Experimental Botany*, **2017**, 68, 3915-3924	7	20
8	Advances in understanding how aquatic photosynthetic organisms utilize sources of dissolved inorganic carbon for CO2 fixation. *Functional Plant Biology*, **2002**, 29, 117-121	2.7	20

List of Publications

7	A mutation in the purine biosynthetic enzyme ATASE2 impacts high light signalling and acclimation responses in green and chlorotic sectors of Arabidopsis leaves. *Functional Plant Biology*, **2011**, 38, 401-419	2.7	16
6	Rubisco proton production can drive the elevation of CO within condensates and carboxysomes. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	16
5	Carbonic anhydrase(s) associated with lichens: in vivo activities, possible locations and putative roles. *New Phytologist*, **1996**, 132, 627-639	9.8	15
4	Partially Dissecting Electron Fluxes in Both Photosystems in Spinach Leaf Disks during Photosynthetic Induction. *Plant and Cell Physiology*, **2019**, 60, 2206-2219	4.9	13
3	Cyclic electron flow and light partitioning between the two photosystems in leaves of plants with different functional types. *Photosynthesis Research*, **2019**, 142, 321-334	3.7	10
2	Rubisco proton production can drive the elevation of CO2 within condensates and carboxysomes		4
1	Mehler reaction plays a role in C and C photosynthesis under shade and low CO. *Photosynthesis Research*, **2021**, 149, 171-185	3.7	1