

Murray R Badger

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Rubisco proton production can drive the elevation of CO within condensates and carboxysomes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	16
59	Mehler reaction plays a role in C and C photosynthesis under shade and low CO. <i>Photosynthesis Research</i> , 2021 , 149, 171-185	3.7	1
58	Partially Dissecting Electron Fluxes in Both Photosystems in Spinach Leaf Disks during Photosynthetic Induction. <i>Plant and Cell Physiology</i> , 2019 , 60, 2206-2219	4.9	13
57	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	3.7	10
56	Carboxysome encapsulation of the CO-fixing enzyme Rubisco in tobacco chloroplasts. <i>Nature Communications</i> , 2018 , 9, 3570	17.4	122
55	Bile Acid Sodium Symporter BASS6 Can Transport Glycolate and Is Involved in Photorespiratory Metabolism in. <i>Plant Cell</i> , 2017 , 29, 808-823	11.6	39
54	Measuring CO ₂ and HCO ₃ ⁻ permeabilities of isolated chloroplasts using a MIMS-180 approach. <i>Journal of Experimental Botany</i> , 2017 , 68, 3915-3924	7	20
53	Artificial remodelling of alternative electron flow by flavodiiron proteins in Arabidopsis. <i>Nature Plants</i> , 2016 , 2, 16012	11.5	133
52	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	6.2	39
51	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	5.8	22
50	Partially dissecting the steady-state electron fluxes in Photosystem I in wild-type and pgr5 and ndh mutants of Arabidopsis. <i>Frontiers in Plant Science</i> , 2015 , 6, 758	6.2	24
49	TraitCapture: genomic and environment modelling of plant phenomic data. <i>Current Opinion in Plant Biology</i> , 2014 , 18, 73-9	9.9	82
48	Comparing the in vivo function of β carboxysomes and β carboxysomes in two model cyanobacteria. <i>Plant Physiology</i> , 2014 , 165, 398-411	6.6	58
47	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, 1152-63	4.9	58
46	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, 357-79	13.2	233
45	D ₂ O solvent isotope effects suggest uniform energy barriers in ribulose-1,5-bisphosphate carboxylase/oxygenase catalysis. <i>Biochemistry</i> , 2013 , 52, 869-77	3.2	21
44	Estimation of the steady-state cyclic electron flux around PSI in spinach leaf discs in white light, CO-enriched air and other varied conditions. <i>Functional Plant Biology</i> , 2013 , 40, 1018-1028	2.7	30

43	A mutation in the purine biosynthetic enzyme ATASE2 impacts high light signalling and acclimation responses in green and chlorotic sectors of Arabidopsis leaves. <i>Functional Plant Biology</i> , 2011 , 38, 401-419	2.7	16
42	EFFECTS OF MODERATE HEAT STRESS AND DISSOLVED INORGANIC CARBON CONCENTRATION ON PHOTOSYNTHESIS AND RESPIRATION OF SYMBIODINIUM SP. (DINOPHYCEAE) IN CULTURE AND IN SYMBIOSIS(1). <i>Journal of Phycology</i> , 2009 , 45, 357-65	3	24
41	Chlorophyll fluorescence screening of Arabidopsis thaliana for CO sensitive photorespiration and photoinhibition mutants. <i>Functional Plant Biology</i> , 2009 , 36, 867-873	2.7	28
40	Analysis of carboxysomes from Synechococcus PCC7942 reveals multiple Rubisco complexes with carboxysomal proteins CcmM and CcaA. <i>Journal of Biological Chemistry</i> , 2007 , 282, 29323-35	5.4	146
39	Impairment of the photorespiratory pathway accelerates photoinhibition of photosystem II by suppression of repair but not acceleration of damage processes in Arabidopsis. <i>Plant Physiology</i> , 2007 , 144, 487-94	6.6	148
38	The environmental plasticity and ecological genomics of the cyanobacterial CO ₂ concentrating mechanism. <i>Journal of Experimental Botany</i> , 2006 , 57, 249-65	7	241
37	Measurement of (carbon) kinetic isotope effect by Rayleigh fractionation using membrane inlet mass spectrometry for CO-consuming reactions. <i>Functional Plant Biology</i> , 2006 , 33, 1115-1128	2.7	32
36	The roles of carbonic anhydrases in photosynthetic CO ₂ concentrating mechanisms. <i>Photosynthesis Research</i> , 2003 , 77, 83-94	3.7	121
35	CO ₂ concentrating mechanisms in cyanobacteria: molecular components, their diversity and evolution. <i>Journal of Experimental Botany</i> , 2003 , 54, 609-22	7	580
34	Novel gene products associated with NdhD3/D4-containing NDH-1 complexes are involved in photosynthetic CO ₂ hydration in the cyanobacterium, Synechococcus sp. PCC7942. <i>Molecular Microbiology</i> , 2002 , 43, 425-35	4.1	161
33	Modes of active inorganic carbon uptake in the cyanobacterium, Synechococcus sp. PCC7942. <i>Functional Plant Biology</i> , 2002 , 29, 131-149	2.7	128
32	Variability of the pyrenoid-based CO ₂ concentrating mechanism in hornworts (Anthocerotophyta). <i>Functional Plant Biology</i> , 2002 , 29, 407-416	2.7	34
31	Mitochondrial protein expression in tomato fruit during on-vine ripening and cold storage. <i>Functional Plant Biology</i> , 2002 , 29, 827-834	2.7	37
30	Dinoflagellate symbioses: strategies and adaptations for the acquisition and fixation of inorganic carbon. <i>Functional Plant Biology</i> , 2002 , 29, 309-322	2.7	62
29	Evolution and diversity of CO ₂ concentrating mechanisms in cyanobacteria. <i>Functional Plant Biology</i> , 2002 , 29, 161-173	2.7	230
28	Advances in understanding how aquatic photosynthetic organisms utilize sources of dissolved inorganic carbon for CO ₂ fixation. <i>Functional Plant Biology</i> , 2002 , 29, 117-121	2.7	20
27	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	3	84
26	Increased heat sensitivity of photosynthesis in tobacco plants with reduced Rubisco activase. <i>Photosynthesis Research</i> , 2001 , 67, 147-56	3.7	75

25	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 Spec No, 357-68	7	150
24	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, 1433-46	5.8	297
23	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, 675-84	6.6	115
22	Evidence for an inorganic carbon-concentrating mechanism in the symbiotic dinoflagellate <i>Symbiodinium</i> sp. <i>Plant Physiology</i> , 1999 , 121, 1247-56	6.6	103
21	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, 1305-15	4.1	96
20	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, 1071-81	6.6	47
19	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		426
18	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		163
17	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	4.7	23
16	Carbonic anhydrase(s) associated with lichens: in vivo activities, possible locations and putative roles. <i>New Phytologist</i> , 1996 , 132, 627-639	9.8	15
15	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	4.7	35
14	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, 369-78	4.7	113
13	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	4.7	44
12	Photobiont-related differences in carbon acquisition among green-algal lichens. <i>Planta</i> , 1994 , 195, 70	4.7	24
11	The CO ₂ concentrating mechanism in cyanobacteria and microalgae. <i>Physiologia Plantarum</i> , 1992 , 84, 606-615	4.6	217
10	Selection and analysis of mutants of the CO ₂ -concentrating mechanism in cyanobacteria. <i>Canadian Journal of Botany</i> , 1991 , 69, 974-983		22
9	The relationship between steady-state gas exchange of bean leaves and the levels of carbon-reduction-cycle intermediates. <i>Planta</i> , 1984 , 160, 305-13	4.7	182
8	Photoreduction of oxygen in mesophyll chloroplasts of C ₄ plants: a model system for studying an in vivo meher reaction. <i>Plant Physiology</i> , 1983 , 73, 1038-41	6.6	40

7	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	4.7	96
6	Molecular weight and quaternary structure of ribulose biphosphate carboxylase from the cyanobacterium, <i>Synechococcus</i> sp.. <i>Archives of Microbiology</i> , 1981 , 130, 344-348	3	28
5	Variations in $K(m)(CO_2)$ of Ribulose-1,5-bisphosphate Carboxylase among Grasses. <i>Plant Physiology</i> , 1980 , 66, 1110-2	6.6	103
4	Internal Inorganic Carbon Pool of <i>Chlamydomonas reinhardtii</i> : EVIDENCE FOR A CARBON DIOXIDE-CONCENTRATING MECHANISM. <i>Plant Physiology</i> , 1980 , 66, 407-13	6.6	436
3	Oxygen exchange in leaves in the light. <i>Plant Physiology</i> , 1980 , 66, 302-7	6.6	158
2	Kinetic properties of ribulose 1,5-bisphosphate carboxylase/oxygenase from <i>Anabaena variabilis</i> . <i>Archives of Biochemistry and Biophysics</i> , 1980 , 201, 247-54	4.1	123
1	Rubisco proton production can drive the elevation of CO_2 within condensates and carboxysomes		4