Graeme Price

List of Publications by Year
in descending order

114 papers	11,989 citations	23567 58 h-index	27406 106 g-index
119 all docs	119 docs citations	119 times ranked	7103 citing authors

#	Article	IF	Citations
1	Incorporation of Functional Rubisco Activases into Engineered Carboxysomes to Enhance Carbon Fixation. ACS Synthetic Biology, 2022, 11, 154-161.	3.8	33
2	Modeling and mutagenesis of amino acid residues critical for CO2 hydration by specialized NDH-1 complexes in cyanobacteria. Biochimica Et Biophysica Acta - Bioenergetics, 2022, 1863, 148503.	1.0	8
3	Rubisco proton production can drive the elevation of CO ₂ within condensates and carboxysomes. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	38
4	Engineered Accumulation of Bicarbonate in Plant Chloroplasts: Known Knowns and Known Unknowns. Frontiers in Plant Science, 2021, 12, 727118.	3.6	13
5	DABs accumulate bicarbonate. Nature Microbiology, 2019, 4, 2029-2030.	13.3	4
6	Structural Basis for the Allosteric Regulation of the SbtA Bicarbonate Transporter by the P_{II}-like Protein, SbtB, from <i>Cyanobium</i> sp. PCC7001. Biochemistry, 2019, 58, 5030-5039.	2.5	27
7	Carboxysome encapsulation of the CO2-fixing enzyme Rubisco in tobacco chloroplasts. Nature Communications, 2018, 9, 3570.	12.8	196
8	Effects of iron limitation on silicon uptake kinetics and elemental stoichiometry in two Southern Ocean diatoms, Eucampia antarctica and Proboscia inermis , and the temperate diatom Thalassiosira pseudonana. Limnology and Oceanography, 2017, 62, 2445-2462.	3.1	15
9	Progress and challenges of engineering a biophysical CO2-concentrating mechanism into higher plants. Journal of Experimental Botany, 2017, 68, 3717-3737.	4.8	101
10	Identification and characterization of a solute carrier, CIA8, involved in inorganic carbon acclimation in Chlamydomonas reinhardtii. Journal of Experimental Botany, 2017, 68, 3879-3890.	4.8	26
11	Measuring CO2 and HCO3â˜ permeabilities of isolated chloroplasts using a MIMS-18O approach. Journal of Experimental Botany, 2017, 68, 3915-3924.	4.8	28
12	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.	3.6	54
13	Cyanobacterial CO2-concentrating mechanism components: function and prospects for plant metabolic engineering. Current Opinion in Plant Biology, 2016, 31, 1-8.	7.1	90
14	Comparing the in Vivo Function of Î±-Carboxysomes and Î²-Carboxysomes in Two Model Cyanobacteria. Plant Physiology, 2014, 165, 398-411.	4.8	81
15	Transplastomic integration of a cyanobacterial bicarbonate transporter into tobacco chloroplasts. Journal of Experimental Botany, 2014, 65, 3071-3080.	4.8	44
16	Identification and characterization of a carboxysomal Î³-carbonic anhydrase from the cyanobacterium Nostoc sp. PCC 7120. Photosynthesis Research, 2014, 121, 135-150.	2.9	33
17	Towards turbocharged photosynthesis. Nature, 2014, 513, 497-498.	27.8	23
18	Topology mapping to characterize cyanobacterial bicarbonate transporters: BicA (SulP/SLC26 family) and SbtA. Molecular Membrane Biology, 2014, 31, 177-182.	2.0	10

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19	Characterisation of Cyanobacterial Bicarbonate Transporters in E. coli Shows that SbtA Homologs Are Functional in This Heterologous Expression System. PLoS ONE, 2014, 9, e115905.	2.5	68
20	Functions, Compositions, and Evolution of the Two Types of Carboxysomes: Polyhedral Microcompartments That Facilitate CO ₂ Fixation in Cyanobacteria and Some Proteobacteria. Microbiology and Molecular Biology Reviews, 2013, 77, 357-379.	6.6	346
21	The cyanobacterial CCM as a source of genes for improving photosynthetic CO2 fixation in crop species. Journal of Experimental Botany, 2013, 64, 753-768.	4.8	178
22	Temperature modulation of fatty acid profiles for biofuel production in nitrogen deprived Chlamydomonas reinhardtii. Bioresource Technology, 2013, 127, 441-447.	9.6	60
23	The Effects of Antisense Suppression of Î´ Subunit of Chloroplast ATP Synthase on the Rates of Chloroplast Electron Transport and CO2 Assimilation in Transgenic Tobacco. Advanced Topics in Science and Technology in China, 2013, , 773-776.	0.1	0
24	Cyanobacterial Carboxysomes: Microcompartments that Facilitate CO2 Fixation. Journal of Molecular Microbiology and Biotechnology, 2013, 23, 300-307.	1.0	78
25	Structural Determinants of the Outer Shell of Î²-Carboxysomes in Synechococcus elongatus PCC 7942: Roles for CcmK2, K3-K4, CcmO, and CcmL. PLoS ONE, 2012, 7, e43871.	2.5	78
26	The cyanobacterial bicarbonate transporter BicA: its physiological role and the implications of structural similarities with human SLC26 transportersThis paper is one of a selection of papers published in a Special Issue entitled CSBMCB 53rd Annual Meeting â€" Membrane Proteins in Health and Disease, and has undergone the Journalâ€™s usual peer review process.. Biochemistry and Cell Biology, 2011, 89, 178-188.	2.0	36
27	Raising yield potential of wheat. II. Increasing photosynthetic capacity and efficiency. Journal of Experimental Botany, 2011, 62, 453-467.	4.8	511
28	Inorganic carbon transporters of the cyanobacterial CO2 concentrating mechanism. Photosynthesis Research, 2011, 109, 47-57.	2.9	219
29	The CO2-concentrating mechanism of Synechococcus WH5701 is composed of native and horizontally-acquired components. Photosynthesis Research, 2011, 109, 59-72.	2.9	38
30	Over-expression of the Î²-carboxysomal CcmM protein in Synechococcus PCC7942 reveals a tight co-regulation of carboxysomal carbonic anhydrase (CcaA) and M58 content. Photosynthesis Research, 2011, 109, 33-45.	2.9	60
31	Fatty acid profiling of Chlamydomonas reinhardtii under nitrogen deprivation. Bioresource Technology, 2011, 102, 3343-3351.	9.6	184
32	The Prospect of Using Cyanobacterial Bicarbonate Transporters to Improve Leaf Photosynthesis in C3 Crop Plants. Plant Physiology, 2011, 155, 20-26.	4.8	117
33	Membrane topology of the cyanobacterial bicarbonate transporter, SbtA, and identification of potential regulatory loops. Molecular Membrane Biology, 2011, 28, 265-275.	2.0	26
34	The Roles of ATP Synthase and the Cytochrome <i>b</i> Â6/<i>f</i> Complexes in Limiting Chloroplast Electron Transport and Determining Photosynthetic Capacity Â Â. Plant Physiology, 2011, 155, 956-962.	4.8	144
35	Membrane topology of the cyanobacterial bicarbonate transporter, BicA, a member of the SulP (SLC26A) family. Molecular Membrane Biology, 2010, 27, 12-22.	2.0	52
36	Functional Cyanobacterial<i>Î²</i>-Carboxysomes Have an Absolute Requirement for Both Long and Short Forms of the CcmM Protein Â Â. Plant Physiology, 2010, 153, 285-293.	4.8	103

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37	Bicarbonateâ€mediated transcriptional activation of divergent operons by the virulence regulatory protein, RegA, from <i>Citrobacter rodentium</i>. Molecular Microbiology, 2008, 68, 314-327.	2.5	48
38	Advances in understanding the cyanobacterial CO2-concentrating-mechanism (CCM): functional components, Ci transporters, diversity, genetic regulation and prospects for engineering into plants. Journal of Experimental Botany, 2008, 59, 1441-1461.	4.8	545
39	The Contribution of Photosynthesis to the Red Light Response of Stomatal Conductance. Plant Physiology, 2008, 146, 323-324.	4.8	114
40	Analysis of Carboxysomes from Synechococcus PCC7942 Reveals Multiple Rubisco Complexes with Carboxysomal Proteins CcmM and CcaA. Journal of Biological Chemistry, 2007, 282, 29323-29335.	3.4	173
41	Transcriptional Regulation of the CO 2 -Concentrating Mechanism in a Euryhaline, Coastal Marine Cyanobacterium, Synechococcus sp. Strain PCC 7002: Role of NdhR/CcmR. Journal of Bacteriology, 2007, 189, 3335-3347.	2.2	85
42	ASYNECHOCOCCUSPCC7942 Î”CCMM(CYANOPHYCEAE) MUTANT PSEUDOREVERTS TO AIR GROWTH WITHOUT REGAINING CARBOXYSOMES. Journal of Phycology, 2006, 42, 769-777.	2.3	14
43	RbcX Can Function as a Rubisco Chaperonin, But is Non-Essential in Synechococcus PCC7942. Plant and Cell Physiology, 2006, 47, 1630-1640.	3.1	62
44	The environmental plasticity and ecological genomics of the cyanobacterial CO2 concentrating mechanism. Journal of Experimental Botany, 2006, 57, 249-265.	4.8	276
45	Sensing of Inorganic Carbon Limitation in Synechococcus PCC7942 Is Correlated with the Size of the Internal Inorganic Carbon Pool and Involves Oxygen. Plant Physiology, 2005, 139, 1959-1969.	4.8	77
46	Proteomic assessment of an established technique for carboxysome enrichment from Synechococcus PCC7942. Canadian Journal of Botany, 2005, 83, 746-757.	1.1	39
47	Regulation of cyanobacterial CO2-concentrating mechanisms through transcriptional induction of high-affinity Ci-transport systems. Canadian Journal of Botany, 2005, 83, 698-710.	1.1	14
48	Identification of a SulP-type bicarbonate transporter in marine cyanobacteria. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 18228-18233.	7.1	273
49	High light enhances the expression of low-CO2-inducible transcripts involved in the CO2-concentrating mechanism in Synechocystis sp. PCC6803. Plant, Cell and Environment, 2004, 27, 615-626.	5.7	35
50	Carbonic anhydrase and C4 photosynthesis: a transgenic analysis. Plant, Cell and Environment, 2004, 27, 697-703.	5.7	79
51	Characterisation of CO(2) and HCO(3) (-) uptake in the cyanobacterium Synechocystis sp. PCC6803. Photosynthesis Research, 2003, 77, 117-126.	2.9	30
52	CO2 concentrating mechanisms in cyanobacteria: molecular components, their diversity and evolution. Journal of Experimental Botany, 2003, 54, 609-622.	4.8	679
53	Nitrogen-Regulated Hypermutator Strain of Synechococcus sp. for Use in In Vivo Artificial Evolution. Applied and Environmental Microbiology, 2003, 69, 6427-6433.	3.1	8
54	Inorganic Carbon Limitation and Light Control the Expression of Transcripts Related to the CO2-Concentrating Mechanism in the Cyanobacterium <i>Synechocystis</i> sp. Strain PCC6803. Plant Physiology, 2003, 132, 218-229.	4.8	125

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55	Inorganic Carbon Limitation Induces Transcripts Encoding Components of the CO2-Concentrating Mechanism in Synechococcus sp. PCC7942 through a Redox-Independent Pathway. Plant Physiology, 2003, 133, 2069-2080.	4.8	104
56	Inorganic Carbon Limitation and Light Control the Expression of Transcripts Related to the CO2-Concentrating Mechanism in the Cyanobacterium Synechocystis sp. Strain PCC6803. Plant Physiology, 2003, 132, 218-229.	4.8	4
57	Modes of active inorganic carbon uptake in the cyanobacterium, Synechococcus sp. PCC7942. Functional Plant Biology, 2002, 29, 131.	2.1	145
58	Evolution and diversity of CO2 concentrating mechanisms in cyanobacteria. Functional Plant Biology, 2002, 29, 161.	2.1	288
59	Advances in understanding how aquatic photosynthetic organisms utilize sources of dissolved inorganic carbon for CO2 fixation. Functional Plant Biology, 2002, 29, 117.	2.1	27
60	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, 425-435.	2.5	175
61	Thermoprotective properties of small heat shock proteins from rice, tomato and Synechocystis sp. PCC6803 overexpressed in, and isolated from, Escherichia coli. Functional Plant Biology, 2001, 28, 1219.	2.1	1
62	ISOLATION OFccmKLMNGENES FROM THE MARINE CYANOBACTERIUM,SYNECHOCOCCUSSP. PCC7002 (CYANOPHYCEAE), AND EVIDENCE THAT CcmM IS ESSENTIAL FOR CARBOXYSOME ASSEMBLY. Journal of Phycology, 2000, 36, 1109-1119.	2.3	83
63	Bicarbonate Binding Activity of the CmpA Protein of the Cyanobacterium Synechococcus sp. strain PCC 7942 Involved in Active Transport of Bicarbonate. Journal of Biological Chemistry, 2000, 275, 20551-20555.	3.4	61
64	The Role of Chloroplast Electron Transport and Metabolites in Modulating Rubisco Activity in Tobacco. Insights from Transgenic Plants with Reduced Amounts of Cytochrome b/fComplex or Glyceraldehyde 3-Phosphate Dehydrogenase. Plant Physiology, 2000, 122, 491-504.	4.8	101
65	Mutation of <i>ndh</i> Genes Leads to Inhibition of CO ₂ Uptake Rather than HCO ₃ ^{âˆ’} Uptake in <i>Synechocystis</i> sp. Strain PCC 6803. Journal of Bacteriology, 2000, 182, 2591-2596.	2.2	104
66	Xanthophyll cycle, light energy dissipation and electron transport in transgenic tobacco with reduced carbon assimilation capacity. Functional Plant Biology, 2000, 27, 289.	2.1	8
67	Identification of an ATP-binding cassette transporter involved in bicarbonate uptake in the cyanobacterium <i>Synechococcus</i> sp. strain PCC 7942. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 13571-13576.	7.1	217
68	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, 1305-1315.	2.5	102
69	Cloning and expression of a prokaryotic sucrose-phosphate synthase gene from the cyanobacterium Synechocystis sp. PCC 6803. Plant Molecular Biology, 1999, 40, 297-305.	3.9	46
70	Protein phosphorylation and its possible involvement in the induction of the high-affinity CO2 concentrating mechanism in cyanobacteria. Canadian Journal of Botany, 1998, 76, 954-961.	1.1	7
71	The diversity and coevolution of Rubisco, plastids, pyrenoids, and chloroplast-based CO₂-concentrating mechanisms in algae. Canadian Journal of Botany, 1998, 76, 1052-1071.	1.1	245
72	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.	1.1	58

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73	Fast Induction of High-Affinity HCO3â^’ Transport in Cyanobacteria1. Plant Physiology, 1998, 116, 183-192.	4.8	62
74	The interplay between limiting processes in C3 photosynthesis studied by rapid-response gas exchange using transgenic tobacco impaired in photosynthesis. Functional Plant Biology, 1998, 25, 859.	2.1	68
75	Photosynthesis is strongly reduced by antisense suppression of chloroplastic cytochrome bf complex in transgenic tobacco. Functional Plant Biology, 1998, 25, 445.	2.1	60
76	Expression of Tobacco Carbonic Anhydrase in the C4Dicot Flaveria bidentis Leads to Increased Leakiness of the Bundle Sheath and a Defective CO2-Concentrating Mechanism. Plant Physiology, 1998, 117, 1071-1081.	4.8	49
77	The diversity and coevolution of Rubisco, plastids, pyrenoids, and chloroplast-based CO₂-concentrating mechanisms in algae. Canadian Journal of Botany, 1998, 76, 1052-1071.	1.1	449
78	Protein phosphorylation and its possible involvement in the induction of the high-affinity CO₂ concentrating mechanism in cyanobacteria. Canadian Journal of Botany, 1998, 76, 954-961.	1.1	18
79	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.	1.1	171
80	Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase Activase Deficiency Delays Senescence of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase but Progressively Impairs Its Catalysis during Tobacco Leaf Development. Plant Physiology, 1997, 115, 1569-1580.	4.8	78
81	Title is missing!. Photosynthesis Research, 1997, 53, 215-227.	2.9	46
82	PsaE- and NdhF-mediated electron transport affect bicarbonate transport rather than carbon dioxide uptake in the cyanobacteriumSynechococcus sp. PCC7002. Planta, 1997, 201, 36-42.	3.2	25
83	Random Insertional Mutagenesis Used in the Generation of Mutants of the Marine Cyanobacterium Synechococcus sp. Strain PCC7002 With an Impaired CO2 Concentrating Mechanism. Functional Plant Biology, 1997, 24, 317.	2.1	17
84	Cloning, Analysis and Inactivation of thendhKGene Encoding a Subunit of NADH Quinone Oxidoreductase fromAnabaenaPCC 7120. FEBS Journal, 1996, 240, 173-180.	0.2	6
85	Reduced levels of cytochrome b 6/f in transgenic tobacco increases the excitation pressure on Photosystem II without increasing sensitivity to photoinhibition in vivo. Photosynthesis Research, 1996, 50, 159-169.	2.9	32
86	Chloroplast Cytochrome b6/f and ATP Synthase Complexes in Tobacco: Transformation With Antisense RNA Against Nuclear-Encoded Transcripts for the Rieske FeS and ATPÎ´ Polypeptides. Functional Plant Biology, 1995, 22, 285.	2.1	47
87	Characterisation of carbon dioxide and bicarbonate transport during steady-state photosynthesis in the marine cyanobacterium Synechococcus strain PCC7002. Planta, 1995, 197, 597.	3.2	47
88	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, 369-378.	3.2	135
89	Cloning of an Additional cDNA for the Alternative Oxidase in Tobacco. Plant Physiology, 1995, 107, 1469-1470.	4.8	50
90	Specific reduction of chloroplast carbonic anhydrase activity by antisense RNA in transgenic tobacco plants has a minor effect on photosynthetic CO2 assimilation. Planta, 1994, 193, 331-340.	3.2	197

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91	The Role of Carbonic Anhydrase in Photosynthesis. Annual Review of Plant Biology, 1994, 45, 369-392.	14.3	653
92	Characterisation of CO2 and HCO3- Uptake during Steady-state Photosynthesis in the Cyanobacterium Synechococcus PCC7942 Steady-state Photosynthesis in the Cyanobacterium Synechococcus PCC7942. Functional Plant Biology, 1994, 21, 185.	2.1	24
93	Analysis of a genomic DNA region from the cyanobacterium Synechococcus sp. strain PCC7942 involved in carboxysome assembly and function. Journal of Bacteriology, 1993, 175, 2871-2879.	2.2	175
94	Association of Carbonic Anhydrase Activity with Carboxysomes Isolated from the Cyanobacterium <i>Synechococcus</i> PCC7942. Plant Physiology, 1992, 100, 784-793.	4.8	210
95	Isolation of a Putative Carboxysomal Carbonic Anhydrase Gene from the Cyanobacterium <i>Synechococcus</i> PCC7942. Plant Physiology, 1992, 100, 794-800.	4.8	87
96	The CO2concentrating mechanism in cyanobactiria and microalgae. Physiologia Plantarum, 1992, 84, 606-615.	5.2	243
97	The CO2 concentrating mechanism in cyanobacteria and microalgae. Physiologia Plantarum, 1992, 84, 606-615.	5.2	84
98	Selection and analysis of mutants of the CO₂-concentrating mechanism in cyanobacteria. Canadian Journal of Botany, 1991, 69, 974-983.	1.1	26
99	Evidence for the role of carboxysomes in the cyanobacterial CO₂-concentrating mechanism. Canadian Journal of Botany, 1991, 69, 963-973.	1.1	104
100	Carbon Oxysulfide Is an Inhibitor of Both CO₂ and HCO₃^{âˆ’} Uptake in the Cyanobacterium <i>Synechococcus</i> PCC7942. Plant Physiology, 1990, 94, 35-39.	4.8	26
101	Ethoxyzolamide Inhibition of CO2-Dependent Photosynthesis in the Cyanobacterium Synechococcus PCC7942. Plant Physiology, 1989, 89, 44-50.	4.8	50
102	Isolation and Characterization of High CO₂-Requiring-Mutants of the Cyanobacterium <i>Synechococcus</i> PCC7942. Plant Physiology, 1989, 91, 514-525.	4.8	178
103	Carbonic Anhydrase Activity Associated with the Cyanobacterium <i>Synechococcus</i> PCC7942. Plant Physiology, 1989, 89, 51-60.	4.8	143
104	Ethoxyzolamide Inhibition of CO2 Uptake in the Cyanobacterium Synechococcus PCC7942 without Apparent Inhibition of Internal Carbonic Anhydrase Activity. Plant Physiology, 1989, 89, 37-43.	4.8	99
105	Expression of Human Carbonic Anhydrase in the Cyanobacterium <i>Synechococcus</i> PCC7942 Creates a High CO₂-Requiring Phenotype. Plant Physiology, 1989, 91, 505-513.	4.8	255
106	Membrane Interface of the Bradyrhizobium japonicum - Glycine max Symbiosis: Peribacteroid Units From Soyabean Nodules. Functional Plant Biology, 1989, 16, 69.	2.1	57
107	A dicarboxylate transporter on the peribacteroid membrane of soybean nodules. FEBS Letters, 1988, 231, 36-40.	2.8	141
108	Rapid Isolation of Intact Peribacteroid Envelopes from Soybean Nodules and Demonstration of Selective Permeability to Metabolites. Journal of Plant Physiology, 1987, 130, 157-164.	3.5	61

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109	Isolation and oxidative properties of mitochondria and bacteroids from soybean root nodules. Protoplasma, 1986, 134, 121-129.	2.1	33
110	Involvement of Plasmalemmasomes and Carbonic Anhydrase in Photosynthetic Utilization of Bicarbonate in Chara corallina. Functional Plant Biology, 1985, 12, 241.	2.1	65
111	Inhibition by Proton Buffers of Photosynthetic Utilization of Bicarbonate in Chara corallina. Functional Plant Biology, 1985, 12, 257.	2.1	44
112	Retinal mosaics of the principal eyes of some jumping spiders (Salticidae: Araneae): Adaptations for high visual acuity. Protoplasma, 1984, 120, 172-184.	2.1	24
113	Structure of Nodules Formed by Rhizobium Strain ANU289 in the Nonlegume Parasponia and the Legume Siratro (Macroptilium atropurpureum). Botanical Gazette, 1984, 145, 444-451.	0.6	32
114	Cytochemical localisation of ATPase activity on the plasmalemma ofChara corallina. Protoplasma, 1983, 116, 65-74.	2.1	37