Steven G Ball

List of Publications by Year
in descending order

106 papers	13,232 citations	43973 48 h-index	38300 95 g-index
111 all docs	111 docs citations	111 times ranked	10660 citing authors

#	Article	IF	Citations
1	The <i>Chlamydomonas</i> Genome Reveals the Evolution of Key Animal and Plant Functions. Science, 2007, 318, 245-250.	6.0	2,354
2	Starch granules: structure and biosynthesis. International Journal of Biological Macromolecules, 1998, 23, 85-112.	3.6	1,615
3	Genome analysis of the smallest free-living eukaryote Ostreococcus tauri unveils many unique features. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 11647-11652.	3.3	809
4	FROMBACTERIALGLYCOGEN TOSTARCH: Understanding the Biogenesis of the Plant Starch Granule. Annual Review of Plant Biology, 2003, 54, 207-233.	8.6	636
5	Recent Progress toward Understanding Biosynthesis of the Amylopectin Crystal. Plant Physiology, 2000, 122, 989-998.	2.3	472
6	From Glycogen to Amylopectin: A Model for the Biogenesis of the Plant Starch Granule. Cell, 1996, 86, 349-352.	13.5	445
7	Algal genomes reveal evolutionary mosaicism and the fate of nucleomorphs. Nature, 2012, 492, 59-65.	13.7	377
8	<i>Cyanophora paradoxa</i> Genome Elucidates Origin of Photosynthesis in Algae and Plants. Science, 2012, 335, 843-847.	6.0	371
9	Chlamydomonas starchless mutant defective in ADP-glucose pyrophosphorylase hyper-accumulates triacylglycerol. Metabolic Engineering, 2010, 12, 387-391.	3.6	338
10	Genome structure and metabolic features in the red seaweed <i>Chondrus crispus</i> shed light on evolution of the Archaeplastida. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5247-5252.	3.3	307
11	The phenotype of soluble starch synthase IV defective mutants of Arabidopsis thaliana suggests a novel function of elongation enzymes in the control of starch granule formation. Plant Journal, 2007, 49, 492-504.	2.8	255
12	The evolution of glycogen and starch metabolism in eukaryotes gives molecular clues to understand the establishment of plastid endosymbiosis. Journal of Experimental Botany, 2011, 62, 1775-1801.	2.4	219
13	Genome of the red alga Porphyridium purpureum. Nature Communications, 2013, 4, 1941.	5.8	204
14	Progress in understanding the biosynthesis of amylose. Trends in Plant Science, 1998, 3, 462-467.	4.3	193
15	Mutants of Arabidopsis Lacking a Chloroplastic Isoamylase Accumulate Phytoglycogen and an Abnormal Form of Amylopectin. Plant Physiology, 2005, 138, 184-195.	2.3	169
16	Starchless Mutants of Chlamydomonas reinhardtii Lack the Small Subunit of a Heterotetrameric ADP-Glucose Pyrophosphorylase. Journal of Bacteriology, 2001, 183, 1069-1077.	1.0	165
17	Soluble starch synthase I: a major determinant for the synthesis of amylopectin in Arabidopsis thaliana leaves. Plant Journal, 2005, 43, 398-412.	2.8	163
18	Hydrogen Production in <i>Chlamydomonas</i>: Photosystem II-Dependent and -Independent Pathways Differ in Their Requirement for Starch Metabolism Â. Plant Physiology, 2009, 151, 631-640.	2.3	154

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19	Metabolic Symbiosis and the Birth of the Plant Kingdom. Molecular Biology and Evolution, 2008, 25, 536-548.	3.5	153
20	Physiology of starch storage in the monocellular alga Chlamydomonas reinhardtii. Plant Science, 1990, 66, 1-9.	1.7	149
21	Circadian Clock Regulation of Starch Metabolism Establishes GBSSI as a Major Contributor to Amylopectin Synthesis in Chlamydomonas reinhardtii Â. Plant Physiology, 2006, 142, 305-317.	2.3	133
22	Amylose Is Synthesized in Vitro by Extension of and Cleavage from Amylopectin. Journal of Biological Chemistry, 1998, 273, 22232-22240.	1.6	125
23	Role of the Escherichia coli glgX Gene in Glycogen Metabolism. Journal of Bacteriology, 2005, 187, 1465-1473.	1.0	120
24	Evolution of Plant-Like Crystalline Storage Polysaccharide in the Protozoan Parasite Toxoplasma gondii Argues for a Red Alga Ancestry. Journal of Molecular Evolution, 2005, 60, 257-267.	0.8	120
25	Metabolic Effectors Secreted by Bacterial Pathogens: Essential Facilitators of Plastid Endosymbiosis? Â. Plant Cell, 2013, 25, 7-21.	3.1	112
26	A Chlamydomonas reinhardtii low-starch mutant is defective for 3-phosphoglycerate activation and orthophosphate inhibition of ADP-glucose pyrophosphorylase. Planta, 1991, 185, 17-26.	1.6	111
27	Plastidial phosphorylase is required for normal starch synthesis inChlamydomonas reinhardtii. Plant Journal, 2006, 48, 274-285.	2.8	105
28	Glycogen Phosphorylase, the Product of the glgP Gene, Catalyzes Glycogen Breakdown by Removing Glucose Units from the Nonreducing Ends in Escherichia coli. Journal of Bacteriology, 2006, 188, 5266-5272.	1.0	103
29	Preamylopectin Processing: A Mandatory Step for Starch Biosynthesis in Plants. Plant Cell, 1996, 8, 1353.	3.1	100
30	Mutants of Arabidopsis Lacking Starch Branching Enzyme II Substitute Plastidial Starch Synthesis by Cytoplasmic Maltose Accumulation. Plant Cell, 2006, 18, 2694-2709.	3.1	100
31	Extreme genome diversity in the hyper-prevalent parasitic eukaryote Blastocystis. PLoS Biology, 2017, 15, e2003769.	2.6	99
32	Genetic and Biochemical Evidence for the Involvement of Î±-1,4 Glucanotransferases in Amylopectin Synthesis1. Plant Physiology, 1999, 120, 993-1004.	2.3	97
33	The relocation of starch metabolism to chloroplasts: when, why and how. Trends in Plant Science, 2008, 13, 574-582.	4.3	92
34	Control of Starch Composition and Structure through Substrate Supply in the Monocellular Alga. Journal of Biological Chemistry, 1996, 271, 16281-16287.	1.6	91
35	Early Gene Duplication Within Chloroplastida and Its Correspondence With Relocation of Starch Metabolism to Chloroplasts. Genetics, 2008, 178, 2373-2387.	1.2	84
36	Functions of Heteromeric and Homomeric Isoamylase-Type Starch-Debranching Enzymes in Developing Maize Endosperm Â Â. Plant Physiology, 2010, 153, 956-969.	2.3	84

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37	Biochemical Characterization of the Chlamydomonas reinhardtii Î±-1,4 Glucanotransferase Supports a Direct Function in Amylopectin Biosynthesis1. Plant Physiology, 1999, 120, 1005-1014.	2.3	80
38	Starch Division and Partitioning. A Mechanism for Granule Propagation and Maintenance in the Picophytoplanktonic Green Alga Ostreococcus tauri. Plant Physiology, 2004, 136, 3333-3340.	2.3	80
39	Further Evidence for the Mandatory Nature of Polysaccharide Debranching for the Aggregation of Semicrystalline Starch and for Overlapping Functions of Debranching Enzymes in Arabidopsis Leaves. Plant Physiology, 2008, 148, 1309-1323.	2.3	80
40	Sequestration of host metabolism by an intracellular pathogen. ELife, 2016, 5, e12552.	2.8	75
41	Novel, Starch-Like Polysaccharides Are Synthesized by an Unbound Form of Granule-Bound Starch Synthase in Glycogen-Accumulating Mutants ofChlamydomonas reinhardtii. Plant Physiology, 1999, 119, 321-330.	2.3	73
42	Engineering the Chloroplast Targeted Malarial Vaccine Antigens in Chlamydomonas Starch Granules. PLoS ONE, 2010, 5, e15424.	1.1	72
43	Diversity of reaction characteristics of glucan branching enzymes and the fine structure of Î±-glucan from various sources. Archives of Biochemistry and Biophysics, 2014, 562, 9-21.	1.4	60
44	Amylopectin biogenesis and characterization in the protozoan parasite Toxoplasma gondii, the intracellular development of which is restricted in the HepG2 cell line. Microbes and Infection, 2005, 7, 41-48.	1.0	57
45	Nature of the Periplastidial Pathway of Starch Synthesis in the Cryptophyte Guillardia theta. Eukaryotic Cell, 2006, 5, 954-963.	3.4	56
46	Variation in Storage Î±-Glucans of the Porphyridiales (Rhodophyta). Plant and Cell Physiology, 2008, 49, 103-116.	1.5	55
47	Biochemical Characterization of Wild-Type and Mutant Isoamylases of Chlamydomonas reinhardtii Supports a Function of the Multimeric Enzyme Organization in Amylopectin Maturation. Plant Physiology, 2001, 125, 1723-1731.	2.3	54
48	Crystal Structure of the Chlamydomonas Starch Debranching Enzyme Isoamylase ISA1 Reveals Insights into the Mechanism of Branch Trimming and Complex Assembly. Journal of Biological Chemistry, 2014, 289, 22991-23003.	1.6	51
49	Granule-bound starch synthaseâ€ƒI. FEBS Journal, 2002, 269, 3810-3820.	0.2	50
50	Pathway of Cytosolic Starch Synthesis in the Model Glaucophyte <i>Cyanophora paradoxa</i>. Eukaryotic Cell, 2008, 7, 247-257.	3.4	49
51	Transition from glycogen to starch metabolism in Archaeplastida. Trends in Plant Science, 2014, 19, 18-28.	4.3	48
52	Bound Substrate in the Structure of Cyanobacterial Branching Enzyme Supports a New Mechanistic Model. Journal of Biological Chemistry, 2017, 292, 5465-5475.	1.6	48
53	STA11, a Chlamydomonas reinhardtii Locus Required for Normal Starch Granule Biogenesis, Encodes Disproportionating Enzyme. Further Evidence for a Function of Î±-1,4 Glucanotransferases during Starch Granule Biosynthesis in Green Algae. Plant Physiology, 2003, 132, 137-145.	2.3	47
54	When Simpler Is Better. Unicellular Green Algae for Discovering New Genes and Functions in Carbohydrate Metabolism: Fig. 1.. Plant Physiology, 2001, 127, 1334-1338.	2.3	46

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55	Two Loci Control Phytoglycogen Production in the Monocellular Green Alga Chlamydomonas reinhardtii. Plant Physiology, 2001, 125, 1710-1722.	2.3	45
56	Genetic dissection of floridean starch synthesis in the cytosol of the model dinoflagellate <i>Crypthecodinium cohnii</i>. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 21126-21130.	3.3	40
57	Phylogenetic and Biochemical Evidence Supports the Recruitment of an ADP-Glucose Translocator for the Export of Photosynthate during Plastid Endosymbiosis. Molecular Biology and Evolution, 2010, 27, 2691-2701.	3.5	40
58	Biotic Hostâ€"Pathogen Interactions As Major Drivers of Plastid Endosymbiosis. Trends in Plant Science, 2017, 22, 316-328.	4.3	39
59	Storage, Photosynthesis, and Growth: The Conditional Nature of Mutations Affecting Starch Synthesis and Structure in Chlamydomonas. Plant Cell, 1995, 7, 1117.	3.1	38
60	Relationships between PSII-independent hydrogen bioproduction and starch metabolism as evidenced from isolation of starch catabolism mutants in the green alga Chlamydomonas reinhardtii. International Journal of Hydrogen Energy, 2010, 35, 10731-10740.	3.8	37
61	Microarray data can predict diurnal changes of starch content in the picoalga Ostreococcus. BMC Systems Biology, 2011, 5, 36.	3.0	37
62	Molecular evolution accompanying functional divergence of duplicated genes along the plant starch biosynthesis pathway. BMC Evolutionary Biology, 2014, 14, 103.	3.2	37
63	The Heterotrophic Dinoflagellate <i>Crypthecodinium cohnii</i> Defines a Model Genetic System To Investigate Cytoplasmic Starch Synthesis. Eukaryotic Cell, 2008, 7, 872-880.	3.4	35
64	Analysis of an improved Cyanophora paradoxa genome assembly. DNA Research, 2019, 26, 287-299.	1.5	35
65	Molecular cloning and characterization of ARO7-OSM2, a single yeast gene necessary for chorismate mutase activity and growth in hypertonic medium. Molecular Genetics and Genomics, 1986, 205, 326-330.	2.4	34
66	Chlamydia, cyanobiont, or host: who was on top in the mÃ©nage Ã trois?. Trends in Plant Science, 2013, 18, 673-679.	4.3	34
67	Pathogen to powerhouse. Science, 2016, 351, 659-660.	6.0	33
68	A Forward Genetic Approach in Chlamydomonas reinhardtii as a Strategy for Exploring Starch Catabolism. PLoS ONE, 2013, 8, e74763.	1.1	28
69	The Transition from Glycogen to Starch Metabolism in Cyanobacteria and Eukaryotes. , 2015, , 93-158.		28
70	The debranching enzyme complex missing in glycogen accumulating mutants of Chlamydomonas reinhardtii displays an isoamylase-type specificity. Plant Science, 2000, 157, 145-156.	1.7	27
71	Biotic interactions as drivers of algal origin and evolution. New Phytologist, 2017, 216, 670-681.	3.5	25
72	Physicochemical Variation of Cyanobacterial Starch, the Insoluble Î±-Glucans in Cyanobacteria. Plant and Cell Physiology, 2013, 54, 465-473.	1.5	24

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73	Effects of granule-bound starch synthase I-defective mutation on the morphology and structure of pyrenoidal starch in Chlamydomonas. Plant Science, 2011, 180, 238-245.	1.7	23
74	Convergent Evolution of Polysaccharide Debranching Defines a Common Mechanism for Starch Accumulation in Cyanobacteria and Plants. Plant Cell, 2013, 25, 3961-3975.	3.1	21
75	Reconstruction of the sialylation pathway in the ancestor of eukaryotes. Scientific Reports, 2018, 8, 2946.	1.6	20
76	The Endopolysaccharide Metabolism of the Hyperthermophilic Archeon Thermococcus hydrothermalis : Polymer Structure and Biosynthesis. Current Microbiology, 2002, 44, 206-211.	1.0	18
77	Molecular and Biochemical Analysis of Periplastidial Starch Metabolism in the Cryptophyte Guillardia theta. Eukaryotic Cell, 2006, 5, 964-971.	3.4	15
78	Crystallization and crystallographic analysis of branching enzymes from<i>Cyanothece</i>sp. ATCC 51142. Acta Crystallographica Section F, Structural Biology Communications, 2015, 71, 1109-1113.	0.4	15
79	Characterization of Function of the GlgA2 Glycogen/Starch Synthase in <i>Cyanobacterium</i> sp. Clg1 Highlights Convergent Evolution of Glycogen Metabolism into Starch Granule Aggregation. Plant Physiology, 2016, 171, 1879-1892.	2.3	15
80	Host-pathogen biotic interactions shaped vitamin K metabolism in Archaeplastida. Scientific Reports, 2018, 8, 15243.	1.6	14
81	Crystal Structures of the Catalytic Domain of Arabidopsis thaliana Starch Synthase IV, of Granule Bound Starch Synthase From CLg1 and of Granule Bound Starch Synthase I of Cyanophora paradoxa Illustrate Substrate Recognition in Starch Synthases. Frontiers in Plant Science, 2018, 9, 1138.	1.7	14
82	Toward an understanding of the function of Chlamydiales in plastid endosymbiosis. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 495-504.	0.5	13
83	Comparison of Chain-Length Preferences and Glucan Specificities of Isoamylase-Type Î±-Glucan Debranching Enzymes from Rice, Cyanobacteria, and Bacteria. PLoS ONE, 2016, 11, e0157020.	1.1	13
84	Eukaryotic Microalgae Genomics. The Essence of Being a Plant. Plant Physiology, 2005, 137, 397-398.	2.3	12
85	Starch Metabolism. , 2009, , 1-40.		12
86	Eukaryote to gut bacteria transfer of a glycoside hydrolase gene essential for starch breakdown in plants. Mobile Genetic Elements, 2012, 2, 81-87.	1.8	12
87	Blurred pictures from the crime scene: the growing case for a function of Chlamydiales in plastid endosymbiosis. Microbes and Infection, 2015, 17, 723-726.	1.0	11
88	Was the Chlamydial Adaptative Strategy to Tryptophan Starvation an Early Determinant of Plastid Endosymbiosis?. Frontiers in Cellular and Infection Microbiology, 2016, 6, 67.	1.8	11
89	Conservation of the glycogen metabolism pathway underlines a pivotal function of storage polysaccharides in Chlamydiae. Communications Biology, 2021, 4, 296.	2.0	10
90	Recent Views on the Biosynthesis of the Plant Starch Granule.. Trends in Glycoscience and Glycotechnology, 1995, 7, 405-415.	0.0	10

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91	Commentary: Plastid establishment did not require a chlamydial partner. Frontiers in Cellular and Infection Microbiology, 2016, 6, 43.	1.8	9
92	Retracing Storage Polysaccharide Evolution in Stramenopila. Frontiers in Plant Science, 2021, 12, 629045.	1.7	7
93	Regulation of Starch Biosynthesis. , 1998, , 549-567.		6
94	Acute Illness and Death in Children With Adrenal Insufficiency. Frontiers in Endocrinology, 2021, 12, 757566.	1.5	5
95	Infection and the first eukaryotesâ€"Response. Science, 2016, 352, 1065-1066.	6.0	4
96	Evolution of Storage Polysaccharide Metabolism in Archaeplastida Opens an Unexpected Window on the Molecular Mechanisms That Drove Plastid Endosymbiosis. , 2014, , 111-134.		3
97	Gasping for air. ELife, 2017, 6, .	2.8	3
98	Control of Starch Biosynthesis in Vascular Plants and Algae. , 0, , 258-289.		2
99	Metabolic Symbiosis and the Birth of the Plant Kingdom. Molecular Biology and Evolution, 2008, 25, 795-795.	3.5	2
100	L'amidon: saÂsynthÃ¨se, saÂmobilisation, sonÂhistoire Ã©volutive. Cahiers Agricultures, 2009, 18, 315-322.	0.4	2
101	Planning Needs Specific Credentials. Journal of the American Planning Association, 2004, 70, 97-97.	0.9	0
102	List of Contributors to Volume 2. , 2009, , xxi-xxiv.		0
103	Single stage hand assisted laparoscopic and trans thoracic excision of multifocal paraaortic and cardiac paragangliomas. Journal of Surgical Case Reports, 2019, 2019, rjz169.	0.2	0
104	Green factories: The shaping and use of metabolic pathways in algae. Biochemist, 2009, 31, 20-23.	0.2	0
105	Ba-7 æ¾±ç²‰ç"Ÿç"£æ€§ã,·ã,¢ãƒŽãƒã,¯ãƒ†ãƒªã,¢ç"±æ¥æžå ‡ã,Šé…µç´ã®æ©Ÿèƒ½è§£æž(æ¾±ç²‰é–¢é€£é…µç´ä¸€è¬èθ›æ¼",ä		
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