

Samuel C Zeeman

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.

86
papers

7,451
citations

45
h-index

86
g-index

97
ext. papers

8,847
ext. citations

8.6
avg, IF

6.04
L-index

#	Paper	IF	Citations
86	Natural Wood-Based Catalytic Membrane Microreactors for Continuous Hydrogen Generation.. <i>ACS Applied Materials & Interfaces</i> , 2022 ,	9.5	2
85	ACA pumps maintain leaf excitability during herbivore onslaught.. <i>Current Biology</i> , 2022 ,	6.3	1
84	Rising rates of starch degradation during daytime and trehalose 6-phosphate optimize carbon availability.. <i>Plant Physiology</i> , 2022 ,	6.6	1
83	Coalescence and directed anisotropic growth of starch granule initials in subdomains of <i>Arabidopsis thaliana</i> chloroplasts. <i>Nature Communications</i> , 2021 , 12, 6944	17.4	2
82	Distinct plastid fructose biphosphate aldolases function in photosynthetic and non-photosynthetic metabolism in <i>Arabidopsis</i> . <i>Journal of Experimental Botany</i> , 2021 , 72, 3739-3755	7	2
81	A multifaceted analysis reveals two distinct phases of chloroplast biogenesis during de-etiolation in. <i>ELife</i> , 2021 , 10,	8.9	12
80	Morphological bases of phytoplankton energy management and physiological responses unveiled by 3D subcellular imaging. <i>Nature Communications</i> , 2021 , 12, 1049	17.4	10
79	Ectopic maltase alleviates dwarf phenotype and improves plant frost tolerance of maltose transporter mutants. <i>Plant Physiology</i> , 2021 , 186, 315-329	6.6	2
78	STARCH SYNTHASE5, a Noncanonical Starch Synthase-Like Protein, Promotes Starch Granule Initiation in <i>Arabidopsis</i> . <i>Plant Cell</i> , 2020 , 32, 2543-2565	11.6	21
77	Starch: A Flexible, Adaptable Carbon Store Coupled to Plant Growth. <i>Annual Review of Plant Biology</i> , 2020 , 71, 217-245	30.7	33
76	Metabolic profiles of six African cultivars of cassava (<i>Manihot esculenta</i> Crantz) highlight bottlenecks of root yield. <i>Plant Journal</i> , 2020 , 102, 1202-1219	6.9	17
75	Theoretical and experimental approaches to understand the biosynthesis of starch granules in a physiological context. <i>Photosynthesis Research</i> , 2020 , 145, 55-70	3.7	8
74	Evolutionary innovations in starch metabolism. <i>Current Opinion in Plant Biology</i> , 2020 , 55, 109-117	9.9	13
73	The evolution of functional complexity within the ßAmylase gene family in land plants. <i>BMC Evolutionary Biology</i> , 2019 , 19, 66	3	18
72	Amylopectin Chain Length Dynamics and Activity Signatures of Key Carbon Metabolic Enzymes Highlight Early Maturation as Culprit for Yield Reduction of Barley Endosperm Starch after Heat Stress. <i>Plant and Cell Physiology</i> , 2019 , 60, 2692-2706	4.9	3
71	LIKE SEX4 1 Acts as a ßAmylase-Binding Scaffold on Starch Granules during Starch Degradation. <i>Plant Cell</i> , 2019 , 31, 2169-2186	11.6	17
70	Technology generation to dissemination: lessons learned from the tef improvement project. <i>Euphytica</i> , 2018 , 214, 1	2.1	11

69	Design and Use of a Digitally Controlled Device for Accurate, Multiplexed Gas Exchange Measurements of the Complete Foliar Parts of Plants. <i>Methods in Molecular Biology</i> , 2018 , 1770, 45-68	1.4	3
68	Two Plastidial Coiled-Coil Proteins Are Essential for Normal Starch Granule Initiation in Arabidopsis. <i>Plant Cell</i> , 2018 , 30, 1523-1542	11.6	37
67	Distinct Functions of STARCH SYNTHASE 4 Domains in Starch Granule Formation. <i>Plant Physiology</i> , 2018 , 176, 566-581	6.6	23
66	Modification of Cassava Root Starch Phosphorylation Enhances Starch Functional Properties. <i>Frontiers in Plant Science</i> , 2018 , 9, 1562	6.2	14
65	Changes in resource partitioning between and within organs support growth adjustment to neighbor proximity in seedlings. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E9953-E9961	11.5	17
64	Repression of and Orthologs in Potato Increases Tuber Starch Bound Phosphate With Concomitant Alterations in Starch Physical Properties. <i>Frontiers in Plant Science</i> , 2018 , 9, 1044	6.2	8
63	Accelerated ex situ breeding of - and -edited cassava for modified starch. <i>Science Advances</i> , 2018 , 4, eaat6086	6.9	71
62	Plastidial NAD-Dependent Malate Dehydrogenase: A Moonlighting Protein Involved in Early Chloroplast Development through Its Interaction with an FtsH12-FtsHi Protease Complex. <i>Plant Cell</i> , 2018 , 30, 1745-1769	11.6	31
61	Plastid thylakoid architecture optimizes photosynthesis in diatoms. <i>Nature Communications</i> , 2017 , 8, 15885	17.4	65
60	Alpha-Glucan, Water Dikinase 1 Affects Starch Metabolism and Storage Root Growth in Cassava (<i>Manihot esculenta</i> Crantz). <i>Scientific Reports</i> , 2017 , 7, 9863	4.9	12
59	OCTOPUS-LIKE 2, a novel player in Arabidopsis root and vascular development, reveals a key role for OCTOPUS family genes in root metaphloem sieve tube differentiation. <i>New Phytologist</i> , 2017 , 216, 1191-1204	9.8	18
58	Homologs of PROTEIN TARGETING TO STARCH Control Starch Granule Initiation in Arabidopsis Leaves. <i>Plant Cell</i> , 2017 , 29, 1657-1677	11.6	66
57	Leaf Starch Turnover Occurs in Long Days and in Falling Light at the End of the Day. <i>Plant Physiology</i> , 2017 , 174, 2199-2212	6.6	44
56	Simultaneous silencing of isoamylases ISA1, ISA2 and ISA3 by multi-target RNAi in potato tubers leads to decreased starch content and an early sprouting phenotype. <i>PLoS ONE</i> , 2017 , 12, e0181444	3.7	13
55	Regulation of Leaf Starch Degradation by Abscisic Acid Is Important for Osmotic Stress Tolerance in Plants. <i>Plant Cell</i> , 2016 , 28, 1860-78	11.6	157
54	The Starch Granule-Associated Protein EARLY STARVATION1 Is Required for the Control of Starch Degradation in Arabidopsis thaliana Leaves. <i>Plant Cell</i> , 2016 , 28, 1472-89	11.6	41
53	Formation of starch in plant cells. <i>Cellular and Molecular Life Sciences</i> , 2016 , 73, 2781-807	10.3	168
52	Recreating the synthesis of starch granules in yeast. <i>ELife</i> , 2016 , 5,	8.9	19

51	Trehalose 6-phosphate coordinates organic and amino acid metabolism with carbon availability. <i>Plant Journal</i> , 2016 , 85, 410-23	6.9	120
50	Degradation of Glucan Primers in the Absence of Starch Synthase 4 Disrupts Starch Granule Initiation in Arabidopsis. <i>Journal of Biological Chemistry</i> , 2016 , 291, 20718-28	5.4	24
49	PROTEIN TARGETING TO STARCH is required for localising GRANULE-BOUND STARCH SYNTHASE to starch granules and for normal amylose synthesis in Arabidopsis. <i>PLoS Biology</i> , 2015 , 13, e1002080	9.7	100
48	A whole-plant chamber system for parallel gas exchange measurements of Arabidopsis and other herbaceous species. <i>Plant Methods</i> , 2015 , 11, 48	5.8	19
47	Molecular Genetic Analysis of Glucan Branching Enzymes from Plants and Bacteria in Arabidopsis Reveals Marked Differences in Their Functions and Capacity to Mediate Starch Granule Formation. <i>Plant Physiology</i> , 2015 , 169, 1638-55	6.6	9
46	Carbon partitioning in Arabidopsis thaliana is a dynamic process controlled by the plants metabolic status and its circadian clock. <i>Plant, Cell and Environment</i> , 2015 , 38, 1965-79	8.4	57
45	Plastidial NAD-dependent malate dehydrogenase is critical for embryo development and heterotrophic metabolism in Arabidopsis. <i>Plant Physiology</i> , 2014 , 164, 1175-90	6.6	59
44	Genetic Evidence That Chain Length and Branch Point Distributions Are Linked Determinants of Starch Granule Formation in Arabidopsis. <i>Plant Physiology</i> , 2014 , 165, 1457-1474	6.6	39
43	The Enzyme-Like Domain of Arabidopsis Nuclear α -Amylases Is Critical for DNA Sequence Recognition and Transcriptional Activation. <i>Plant Cell</i> , 2014 , 26, 1746-1763	11.6	34
42	Replacement of the endogenous starch debranching enzymes ISA1 and ISA2 of Arabidopsis with the rice orthologs reveals a degree of functional conservation during starch synthesis. <i>PLoS ONE</i> , 2014 , 9, e92174	3.7	22
41	A device for single leaf labelling with CO ₂ isotopes to study carbon allocation and partitioning in Arabidopsis thaliana. <i>Plant Methods</i> , 2013 , 9, 45	5.8	29
40	Arabidopsis thaliana AMY3 is a unique redox-regulated chloroplastic α -amylase. <i>Journal of Biological Chemistry</i> , 2013 , 288, 33620-33633	5.4	67
39	Loss of starch granule initiation has a deleterious effect on the growth of arabidopsis plants due to an accumulation of ADP-glucose. <i>Plant Physiology</i> , 2013 , 163, 75-85	6.6	57
38	Starch synthase 4 is essential for coordination of starch granule formation with chloroplast division during Arabidopsis leaf expansion. <i>New Phytologist</i> , 2013 , 200, 1064-75	9.8	67
37	The heteromultimeric debranching enzyme involved in starch synthesis in Arabidopsis requires both isoamylase1 and isoamylase2 subunits for complex stability and activity. <i>PLoS ONE</i> , 2013 , 8, e75223	3.7	24
36	Starch turnover: pathways, regulation and role in growth. <i>Current Opinion in Plant Biology</i> , 2012 , 15, 282-93	9.3	452
35	Comprehensive survey of redox sensitive starch metabolising enzymes in Arabidopsis thaliana. <i>Plant Physiology and Biochemistry</i> , 2012 , 58, 89-97	5.4	56
34	Mutagenesis of cysteine 81 prevents dimerization of the APS1 subunit of ADP-glucose pyrophosphorylase and alters diurnal starch turnover in Arabidopsis thaliana leaves. <i>Plant Journal</i> , 2012 , 70, 231-42	6.9	72

33	Starch metabolism in Arabidopsis. <i>The Arabidopsis Book</i> , 2012 , 10, e0160	3	166
32	The simultaneous abolition of three starch hydrolases blocks transient starch breakdown in Arabidopsis. <i>Journal of Biological Chemistry</i> , 2012 , 287, 41745-56	5.4	47
31	Analysis of starch metabolism in chloroplasts. <i>Methods in Molecular Biology</i> , 2011 , 775, 387-410	1.4	41
30	Progress in Arabidopsis starch research and potential biotechnological applications. <i>Current Opinion in Biotechnology</i> , 2011 , 22, 271-80	11.4	52
29	α-Amylase-like proteins function as transcription factors in Arabidopsis, controlling shoot growth and development. <i>Plant Cell</i> , 2011 , 23, 1391-403	11.6	72
28	The phosphoglucan phosphatase like sex Four2 dephosphorylates starch at the C3-position in Arabidopsis. <i>Plant Cell</i> , 2011 , 23, 4096-111	11.6	95
27	The Laforin-like dual-specificity phosphatase SEX4 from Arabidopsis hydrolyzes both C6- and C3-phosphate esters introduced by starch-related dikinases and thereby affects phase transition of alpha-glucans. <i>Plant Physiology</i> , 2010 , 152, 711-22	6.6	65
26	A putative phosphatase, LSF1, is required for normal starch turnover in Arabidopsis leaves. <i>Plant Physiology</i> , 2010 , 152, 685-97	6.6	84
25	Loss of cytosolic phosphoglucomutase compromises gametophyte development in Arabidopsis. <i>Plant Physiology</i> , 2010 , 154, 1659-71	6.6	47
24	Starch: its metabolism, evolution, and biotechnological modification in plants. <i>Annual Review of Plant Biology</i> , 2010 , 61, 209-34	30.7	652
23	Regulation of starch metabolism: the age of enlightenment?. <i>Current Opinion in Plant Biology</i> , 2010 , 13, 321-9	9.9	149
22	Blocking the metabolism of starch breakdown products in Arabidopsis leaves triggers chloroplast degradation. <i>Molecular Plant</i> , 2009 , 2, 1233-46	14.4	106
21	STARCH-EXCESS4 is a laforin-like Phosphoglucan phosphatase required for starch degradation in Arabidopsis thaliana. <i>Plant Cell</i> , 2009 , 21, 334-46	11.6	180
20	Starch granule biosynthesis in Arabidopsis is abolished by removal of all debranching enzymes but restored by the subsequent removal of an endoamylase. <i>Plant Cell</i> , 2008 , 20, 3448-66	11.6	109
19	Beta-AMYLASE4, a noncatalytic protein required for starch breakdown, acts upstream of three active beta-amylases in Arabidopsis chloroplasts. <i>Plant Cell</i> , 2008 , 20, 1040-58	11.6	228
18	Starch breakdown: recent discoveries suggest distinct pathways and novel mechanisms. <i>Functional Plant Biology</i> , 2007 , 34, 465-473	2.7	63
17	Similar protein phosphatases control starch metabolism in plants and glycogen metabolism in mammals. <i>Journal of Biological Chemistry</i> , 2006 , 281, 11815-8	5.4	123
16	Evidence for distinct mechanisms of starch granule breakdown in plants. <i>Journal of Biological Chemistry</i> , 2006 , 281, 12050-9	5.4	115

15	Quantification of starch in plant tissues. <i>Nature Protocols</i> , 2006 , 1, 1342-5	18.8	248
14	Arabidopsis mutants Atisa1 and Atisa2 have identical phenotypes and lack the same multimeric isoamylase, which influences the branch point distribution of amylopectin during starch synthesis. <i>Plant Journal</i> , 2005 , 41, 815-30	6.9	152
13	alpha-Amylase is not required for breakdown of transitory starch in Arabidopsis leaves. <i>Journal of Biological Chemistry</i> , 2005 , 280, 9773-9	5.4	128
12	Plastidial alpha-glucan phosphorylase is not required for starch degradation in Arabidopsis leaves but has a role in the tolerance of abiotic stress. <i>Plant Physiology</i> , 2004 , 135, 849-58	6.6	191
11	Diurnal changes in the transcriptome encoding enzymes of starch metabolism provide evidence for both transcriptional and posttranscriptional regulation of starch metabolism in Arabidopsis leaves. <i>Plant Physiology</i> , 2004 , 136, 2687-99	6.6	323
10	A previously unknown maltose transporter essential for starch degradation in leaves. <i>Science</i> , 2004 , 303, 87-9	33.3	370
9	A cytosolic glucosyltransferase is required for conversion of starch to sucrose in Arabidopsis leaves at night. <i>Plant Journal</i> , 2004 , 37, 853-63	6.9	212
8	Starch synthesis in Arabidopsis. Granule synthesis, composition, and structure. <i>Plant Physiology</i> , 2002 , 129, 516-29	6.6	144
7	The priming of amylose synthesis in Arabidopsis leaves. <i>Plant Physiology</i> , 2002 , 128, 1069-76	6.6	34
6	A critical role for disproportionating enzyme in starch breakdown is revealed by a knock-out mutation in Arabidopsis. <i>Plant Journal</i> , 2001 , 26, 89-100	6.9	200
5	The Arabidopsis sex1 mutant is defective in the R1 protein, a general regulator of starch degradation in plants, and not in the chloroplast hexose transporter. <i>Plant Cell</i> , 2001 , 13, 1907-18	11.6	228
4	The control of amylose synthesis. <i>Journal of Plant Physiology</i> , 2001 , 158, 479-487	3.6	131
3	A starch-accumulating mutant of Arabidopsis thaliana deficient in a chloroplastic starch-hydrolysing enzyme. <i>Plant Journal</i> , 1998 , 15, 357-65	6.9	183
2	A mutant of Arabidopsis lacking a chloroplastic isoamylase accumulates both starch and phytoglycogen. <i>Plant Cell</i> , 1998 , 10, 1699-712	11.6	219
1	Linking circadian time to growth rate quantitatively via carbon metabolism		6