

Martin H Spalding

List of Publications by Year in descending order

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80
papers

9,824
citations

71061

41
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64755

79
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83
all docs

83
docs citations

83
times ranked

10013
citing authors

#	ARTICLE	IF	CITATIONS
1	CRISPR/Cas9 Based Site-Specific Modification of FAD2 cis-Regulatory Motifs in Peanut (Arachis) Tj ETQq1 1 0.784314 rgBT /Overlock 10	1.1	15
2	Application of CRISPR/Cas9 System for Efficient Gene Editing in Peanut. <i>Plants</i> , 2022, 11, 1361.	1.6	7
3	Co-targeting strategy for precise, scarless gene editing with CRISPR/Cas9 and donor ssODNs in <i>Chlamydomonas</i> . <i>Plant Physiology</i> , 2021, 187, 2637-2655.	2.3	18
4	Structure and function of LCI1: a plasma membrane CO ₂ channel in the <i>Chlamydomonas</i> CO ₂ concentrating mechanism. <i>Plant Journal</i> , 2020, 102, 1107-1126.	2.8	17
5	Arabidopsis plants expressing only the redox-regulated Rca \pm isoform have constrained photosynthesis and plant growth. <i>Plant Journal</i> , 2020, 103, 2250-2262.	2.8	7
6	LCI1, a <i>Chlamydomonas reinhardtii</i> plasma membrane protein, functions in active CO ₂ uptake under low CO ₂ . <i>Plant Journal</i> , 2020, 102, 1127-1141.	2.8	27
7	In vivo evidence for a regulatory role of phosphorylation of <i>Arabidopsis</i> Rubisco activase at the Thr78 site. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 18723-18731.	3.3	22
8	A novel activation domain is essential for CIA5-mediated gene regulation in response to CO ₂ changes in <i>Chlamydomonas reinhardtii</i> . <i>Algal Research</i> , 2017, 24, 207-217.	2.4	5
9	Microfluidic chip for automated screening of carbon dioxide conditions for microalgal cell growth. <i>Biomicrofluidics</i> , 2017, 11, 064104.	1.2	10
10	An <i>Agrobacterium</i> -delivered CRISPR/Cas9 system for high-frequency targeted mutagenesis in maize. <i>Plant Biotechnology Journal</i> , 2017, 15, 257-268.	4.1	300
11	The Plastid Casein Kinase 2 Phosphorylates Rubisco Activase at the Thr-78 Site but Is Not Essential for Regulation of Rubisco Activation State. <i>Frontiers in Plant Science</i> , 2016, 7, 404.	1.7	15
12	Use of designer nucleases for targeted gene and genome editing in plants. <i>Plant Biotechnology Journal</i> , 2016, 14, 483-495.	4.1	195
13	Opportunistic proteolytic processing of carbonic anhydrase 1 from <i>Chlamydomonas</i> in <i>Arabidopsis</i> reveals a novel route for protein maturation. <i>Journal of Experimental Botany</i> , 2016, 67, 2339-2351.	2.4	2
14	The CO ₂ concentrating mechanism and photosynthetic carbon assimilation in limiting CO ₂ : how <i>Chlamydomonas</i> works against the gradient. <i>Plant Journal</i> , 2015, 82, 429-448.	2.8	214
15	Heritable site-specific mutagenesis using TALENs in maize. <i>Plant Biotechnology Journal</i> , 2015, 13, 1002-1010.	4.1	110
16	Expression activation and functional analysis of HLA ₃ , a putative inorganic carbon transporter in <i>Chlamydomonas reinhardtii</i> . <i>Plant Journal</i> , 2015, 82, 1-11.	2.8	61
17	Redesigning photosynthesis to sustainably meet global food and bioenergy demand. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 8529-8536.	3.3	751
18	Biocatalytic role of potato starch synthase III for \pm -glucan biosynthesis in <i>Synechocystis</i> sp. PCC6803 mutants. <i>International Journal of Biological Macromolecules</i> , 2015, 81, 710-717.	3.6	5

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19	Acclimation to Very Low CO ₂ : Contribution of Limiting CO ₂ Inducible Proteins, LCIB and LCIA, to Inorganic Carbon Uptake in <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 2014, 166, 2040-2050.	2.3	87
20	Large chromosomal deletions and heritable small genetic changes induced by CRISPR/Cas9 in rice. <i>Nucleic Acids Research</i> , 2014, 42, 10903-10914.	6.5	547
21	High-throughput fluorescence-activated cell sorting for lipid hyperaccumulating <i>Chlamydomonas reinhardtii</i> mutants. <i>Plant Biotechnology Journal</i> , 2014, 12, 872-882.	4.1	42
22	TALEN-mediated genome editing: prospects and perspectives. <i>Biochemical Journal</i> , 2014, 462, 15-24.	1.7	109
23	Flow rate and duty cycle effects in lysis of <i>Chlamydomonas reinhardtii</i> using high-energy pulsed focused ultrasound. <i>Journal of the Acoustical Society of America</i> , 2014, 135, 3632-3638.	0.5	7
24	LCIB in the <i>Chlamydomonas</i> CO ₂ -concentrating mechanism. <i>Photosynthesis Research</i> , 2014, 121, 185-192.	1.6	25
25	Lysis of <i>Chlamydomonas reinhardtii</i> by high-intensity focused ultrasound as a function of exposure time. <i>Ultrasonics Sonochemistry</i> , 2014, 21, 1258-1264.	3.8	29
26	TALE activation of endogenous genes in <i>Chlamydomonas reinhardtii</i> . <i>Algal Research</i> , 2014, 5, 52-60.	2.4	51
27	Glycogen Synthase Isoforms in <i>Synechocystis</i> sp. PCC6803: Identification of Different Roles to Produce Glycogen by Targeted Mutagenesis. <i>PLoS ONE</i> , 2014, 9, e91524.	1.1	29
28	<i>Chlamydomonas reinhardtii</i> thermal tolerance enhancement mediated by a mutualistic interaction with vitamin B12-producing bacteria. <i>ISME Journal</i> , 2013, 7, 1544-1555.	4.4	140
29	Transcriptome-Wide Changes in <i>Chlamydomonas reinhardtii</i> Gene Expression Regulated by Carbon Dioxide and the CO ₂ -Concentrating Mechanism Regulator <i>CIA5</i> / <i>CCM1</i> . <i>Plant Cell</i> , 2012, 24, 1876-1893.	3.1	180
30	High-efficiency TALEN-based gene editing produces disease-resistant rice. <i>Nature Biotechnology</i> , 2012, 30, 390-392.	9.4	965
31	Modularly assembled designer TAL effector nucleases for targeted gene knockout and gene replacement in eukaryotes. <i>Nucleic Acids Research</i> , 2011, 39, 6315-6325.	6.5	368
32	Acclimation to low or limiting CO ₂ in non-synchronous <i>Chlamydomonas</i> causes a transient synchronization of the cell division cycle. <i>Photosynthesis Research</i> , 2011, 109, 161-168.	1.6	7
33	Insertional suppressors of <i>Chlamydomonas reinhardtii</i> that restore growth of air-dier <i>lcib</i> mutants in low CO ₂ . <i>Photosynthesis Research</i> , 2011, 109, 123-132.	1.6	9
34	Carbon dioxide concentrating mechanism in <i>Chlamydomonas reinhardtii</i> : inorganic carbon transport and CO ₂ recapture. <i>Photosynthesis Research</i> , 2011, 109, 115-122.	1.6	112
35	TAL nucleases (TALNs): hybrid proteins composed of TAL effectors and FokI DNA-cleavage domain. <i>Nucleic Acids Research</i> , 2011, 39, 359-372.	6.5	477
36	Knockdown of limiting-CO ₂ -induced gene <i>HLA3</i> decreases HCO ₃ ⁻ transport and photosynthetic Ci affinity in <i>Chlamydomonas reinhardtii</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 5990-5995.	3.3	102

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37	Thylakoid Lumen Carbonic Anhydrase (<i>CAH3</i>) Mutation Suppresses Air-Dier Phenotype of <i>LCIB</i> Mutant in <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 2009, 149, 929-937.	2.3	61
38	The CO ₂ -Concentrating Mechanism and Carbon Assimilation. , 2009, , 257-301.		28
39	Microalgal carbon-dioxide-concentrating mechanisms: <i>Chlamydomonas</i> inorganic carbon transporters. <i>Journal of Experimental Botany</i> , 2007, 59, 1463-1473.	2.4	192
40	Effects of growth condition on the structure of glycogen produced in cyanobacterium <i>Synechocystis</i> sp. PCC6803. <i>International Journal of Biological Macromolecules</i> , 2007, 40, 498-504.	3.6	47
41	Novel metabolism in <i>Chlamydomonas</i> through the lens of genomics. <i>Current Opinion in Plant Biology</i> , 2007, 10, 190-198.	3.5	149
42	The <i>Chlamydomonas</i> Genome Reveals the Evolution of Key Animal and Plant Functions. <i>Science</i> , 2007, 318, 245-250.	6.0	2,354
43	Alterations in photosynthesis in <i>Arabidopsis</i> lacking IMMUTANS, a chloroplast terminal oxidase. <i>Photosynthesis Research</i> , 2007, 91, 11-23.	1.6	22
44	An inorganic carbon transport system responsible for acclimation specific to air levels of CO ₂ in <i>Chlamydomonas reinhardtii</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 10110-10115.	3.3	94
45	Disruption of the glycolate dehydrogenase gene in the high-CO ₂ -requiring mutant HCR89 of <i>Chlamydomonas reinhardtii</i> . <i>Canadian Journal of Botany</i> , 2005, 83, 820-833.	1.2	64
46	Growth, photosynthesis, and gene expression in <i>Chlamydomonas</i> over a range of CO ₂ concentrations and CO ₂ /O ₂ ratios: CO ₂ regulates multiple acclimation states. <i>Canadian Journal of Botany</i> , 2005, 83, 796-809.	1.2	90
47	Quantification of Compartmented Metabolic Fluxes in Developing Soybean Embryos by Employing Biosynthetically Directed Fractional ¹³ C Labeling, Two-Dimensional [¹³ C, ¹ H] Nuclear Magnetic Resonance, and Comprehensive Isotopomer Balancing. <i>Plant Physiology</i> , 2004, 136, 3043-3057.	2.3	152
48	Characterization of cyanobacterial glycogen isolated from the wild type and from a mutant lacking of branching enzyme. <i>Carbohydrate Research</i> , 2002, 337, 2195-2203.	1.1	38
49	Regulation of photosynthesis during <i>Arabidopsis</i> leaf development in continuous light. <i>Photosynthesis Research</i> , 2002, 72, 27-37.	1.6	66
50	Acclimation of <i>Chlamydomonas</i> to changing carbon availability. <i>Functional Plant Biology</i> , 2002, 29, 221.	1.1	45
51	Insertional Mutants of <i>Chlamydomonas reinhardtii</i> That Require Elevated CO ₂ for Survival. <i>Plant Physiology</i> , 2001, 127, 607-614.	2.3	36
52	Insertional Mutants of <i>Chlamydomonas reinhardtii</i> That Require Elevated CO ₂ for Survival. <i>Plant Physiology</i> , 2001, 127, 607-614.	2.3	3
53	Carbohydrate regulation of leaf development: Prolongation of leaf senescence in Rubisco antisense mutants of tobacco. <i>Photosynthesis Research</i> , 2000, 63, 1-8.	1.6	62
54	CO ₂ Acquisition, Concentration and Fixation in Cyanobacteria and Algae. <i>Advances in Photosynthesis and Respiration</i> , 2000, , 369-397.	1.0	55

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55	Periplasmic Carbonic Anhydrase Structural Gene (Cah1) Mutant in <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 1999, 120, 757-764.	2.3	83
56	Post-translational processing of the highly processed, secreted periplasmic carbonic anhydrase of <i>Chlamydomonas</i> is largely conserved in transgenic tobacco. <i>Plant Molecular Biology</i> , 1995, 29, 303-315.	2.0	14
57	Translational Regulation of the Large and Small Subunits of Ribulose Bisphosphate Carboxylase/Oxygenase during Induction of the CO ₂ -Concentrating Mechanism in <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 1992, 98, 1409-1414.	2.3	31
58	Changes in Photorespiratory Enzyme Activity in Response to Limiting CO ₂ in <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 1991, 97, 420-425.	2.3	57
59	Changes in protein and gene expression during induction of the CO ₂ -concentrating mechanism in wild-type and mutant <i>Chlamydomonas</i> . <i>Canadian Journal of Botany</i> , 1991, 69, 1008-1016.	1.2	33
60	Effect of photon flux density on inorganic carbon accumulation and net CO ₂ exchange in a high-CO ₂ -requiring mutant of <i>Chlamydomonas reinhardtii</i> . <i>Photosynthesis Research</i> , 1990, 24, 245-252.	1.6	9
61	A 36 Kilodalton Limiting-CO ₂ Induced Polypeptide of <i>Chlamydomonas</i> Is Distinct from the 37 Kilodalton Periplasmic Carbonic Anhydrase. <i>Plant Physiology</i> , 1990, 93, 116-121.	2.3	56
62	A Photorespiratory Mutant of <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 1990, 93, 231-237.	2.3	63
63	Adaptation of <i>Chlamydomonas reinhardtii</i> High-CO ₂ -Requiring Mutants to Limiting CO ₂ . <i>Plant Physiology</i> , 1989, 90, 1195-1200.	2.3	27
64	Membrane-Associated Polypeptides Induced in <i>Chlamydomonas</i> by Limiting CO ₂ Concentrations. <i>Plant Physiology</i> , 1989, 89, 133-137.	2.3	70
65	Photosynthesis and photorespiration in freshwater green algae. <i>Aquatic Botany</i> , 1989, 34, 181-209.	0.8	40
66	Imazaquin and chlorsulfuron resistance and cross resistance in mutants of <i>Chlamydomonas reinhardtii</i> . <i>Molecular Genetics and Genomics</i> , 1988, 213, 394-399.	2.4	31
67	CO ₂ exchange characteristics during dark-light transitions in wild-type and mutant <i>Chlamydomonas reinhardtii</i> cells. <i>Photosynthesis Research</i> , 1985, 6, 363-369.	1.6	9
68	Influence of carbon dioxide concentration during growth on fluorescence induction characteristics of the Green Alga <i>Chlamydomonas reinhardtii</i> . <i>Photosynthesis Research</i> , 1984, 5, 169-176.	1.6	76
69	Genetic and physiological analysis of the CO ₂ -concentrating system of <i>Chlamydomonas reinhardtii</i> . <i>Planta</i> , 1983, 159, 261-266.	1.6	30
70	Evidence for a saturable transport component in the inorganic carbon uptake of <i>Chlamydomonas reinhardtii</i> . <i>FEBS Letters</i> , 1983, 154, 335-338.	1.3	30
71	Reduced Inorganic Carbon Transport in a CO ₂ -Requiring Mutant of <i>Chlamydomonas reinhardtii</i> . <i>Plant Physiology</i> , 1983, 73, 273-276.	2.3	108
72	Carbonic Anhydrase-Deficient Mutant of <i>Chlamydomonas reinhardtii</i> Requires Elevated Carbon Dioxide Concentration for Photoautotrophic Growth. <i>Plant Physiology</i> , 1983, 73, 268-272.	2.3	169

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73	Photosynthesis is required for induction of the CO ₂ -concentrating system in <i>Chlamydomonas reinhardtii</i> . FEBS Letters, 1982, 145, 41-44.	1.3	75
74	Photosynthesis in Isolated Chloroplasts of the Crassulacean Acid Metabolism Plant <i>Sedum praealtum</i> . Plant Physiology, 1980, 65, 1044-1048.	2.3	23
75	Quantum Requirement for Photosynthesis in <i>Sedum praealtum</i> during Two Phases of Crassulacean Acid Metabolism. Plant Physiology, 1980, 66, 463-465.	2.3	17
76	Intracellular localization of phosphoenolpyruvate carboxykinase in leaves of C4 and CAM plants. Plant Science Letters, 1980, 19, 1-8.	1.9	46
77	Malate decarboxylation in isolated mitochondria from the crassulacean acid metabolism plant <i>Sedum praealtum</i> . Archives of Biochemistry and Biophysics, 1980, 199, 448-456.	1.4	22
78	Isolation and Oxidative Properties of Intact Mitochondria from the Leaves of <i>Sedum praealtum</i> . Plant Physiology, 1979, 64, 182-186.	2.3	43
79	Photosynthesis in enzymatically isolated leaf cells from the CAM plant <i>Sedum telephium</i> L.. Planta, 1978, 141, 59-63.	1.6	26
80	Temperature response of CO ₂ fixation in isolated <i>Opuntia</i> cells. Plant Science Letters, 1978, 13, 389-396.	1.9	11