Martin H Spalding

List of Publications by Year
in descending order

79 papers	9,824 citations	81434 41 h-index	75989 78 g-index
83 all docs	83 docs citations	83 times ranked	11271 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. Plants, 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>. Plant Physiology, 2021, 187, 2637-2655.	2.3	18
4	Structure and function of LCI1: a plasma membrane CO 2 channel in the Chlamydomonas CO 2 concentrating mechanism. Plant Journal, 2020, 102, 1107-1126.	2.8	17
5	Arabidopsis plants expressing only the redoxâ€regulated Rcaâ€Î± isoform have constrained photosynthesis and plant growth. Plant Journal, 2020, 103, 2250-2262.	2.8	7
6	LCI1, a Chlamydomonas reinhardtii plasma membrane protein, functions in active CO 2 uptake under low CO 2. Plant Journal, 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. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 18723-18731.	3.3	22
8	A novel activation domain is essential for CIA5-mediated gene regulation in response to CO2 changes in Chlamydomonas reinhardtii. Algal Research, 2017, 24, 207-217.	2.4	5
9	Microfluidic chip for automated screening of carbon dioxide conditions for microalgal cell growth. Biomicrofluidics, 2017, 11, 064104.	1.2	10
10	An <i>Agrobacterium</i>â€delivered <scp>CRISPR</scp>/Cas9 system for highâ€frequency targeted mutagenesis in maize. Plant Biotechnology Journal, 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. Frontiers in Plant Science, 2016, 7, 404.	1.7	15
12	Use of designer nucleases for targeted gene and genome editing in plants. Plant Biotechnology Journal, 2016, 14, 483-495.	4.1	195
13	Opportunistic proteolytic processing of carbonic anhydrase 1 from Chlamydomonas in Arabidopsis reveals a novel route for protein maturation. Journal of Experimental Botany, 2016, 67, 2339-2351.	2.4	2
14	The <scp>CO</scp>₂ concentrating mechanism and photosynthetic carbon assimilation in limiting <scp>CO</scp>₂: how Chlamydomonas works against the gradient. Plant Journal, 2015, 82, 429-448.	2.8	214
15	Heritable siteâ€specific mutagenesis using <scp>TALEN</scp>s in maize. Plant Biotechnology Journal, 2015, 13, 1002-1010.	4.1	110
16	Expression activation and functional analysis of <scp>HLA</scp>3, a putative inorganic carbon transporter in <i><scp>C</scp>hlamydomonas reinhardtii</i>. Plant Journal, 2015, 82, 1-11.	2.8	61
17	Redesigning photosynthesis to sustainably meet global food and bioenergy demand. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 8529-8536.	3.3	751
18	Biocatalytic role of potato starch synthase III for Î±-glucan biosynthesis in Synechocystis sp. PCC6803 mutants. International Journal of Biological Macromolecules, 2015, 81, 710-717.	3.6	5

#	Article	IF	Citations
19	Acclimation to Very Low CO₂: Contribution of Limiting CO₂ Inducible Proteins, LCIB and LCIA, to Inorganic Carbon Uptake in <i>Chlamydomonas reinhardtii</i>. Plant Physiology, 2014, 166, 2040-2050.	2.3	87
20	Large chromosomal deletions and heritable small genetic changes induced by CRISPR/Cas9 in rice. Nucleic Acids Research, 2014, 42, 10903-10914.	6.5	547
21	Highâ€throughput fluorescenceâ€activated cell sorting for lipid hyperaccumulating <i><scp>C</scp>hlamydomonas reinhardtii</i> mutants. Plant Biotechnology Journal, 2014, 12, 872-882.	4.1	42
22	TALEN-mediated genome editing: prospects and perspectives. Biochemical Journal, 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. Journal of the Acoustical Society of America, 2014, 135, 3632-3638.	0.5	7
24	LCIB in the Chlamydomonas CO2-concentrating mechanism. Photosynthesis Research, 2014, 121, 185-192.	1.6	25
25	Lysis of Chlamydomonas reinhardtii by high-intensity focused ultrasound as a function of exposure time. Ultrasonics Sonochemistry, 2014, 21, 1258-1264.	3.8	29
26	TALE activation of endogenous genes in Chlamydomonas reinhardtii. Algal Research, 2014, 5, 52-60.	2.4	51
27	Glycogen Synthase Isoforms in Synechocystis sp. PCC6803: Identification of Different Roles to Produce Glycogen by Targeted Mutagenesis. PLoS ONE, 2014, 9, e91524.	1.1	29
28	<i>Chlamydomonas reinhardtii</i> thermal tolerance enhancement mediated by a mutualistic interaction with vitamin B12-producing bacteria. ISME Journal, 2013, 7, 1544-1555.	4.4	140
29	Transcriptome-Wide Changes in <i>Chlamydomonas reinhardtii</i> Gene Expression Regulated by Carbon Dioxide and the CO₂-Concentrating Mechanism Regulator <i>CIA5</i>/<i>CCM1</i>. Plant Cell, 2012, 24, 1876-1893.	3.1	180
30	High-efficiency TALEN-based gene editing produces disease-resistant rice. Nature Biotechnology, 2012, 30, 390-392.	9.4	965
31	Modularly assembled designer TAL effector nucleases for targeted gene knockout and gene replacement in eukaryotes. Nucleic Acids Research, 2011, 39, 6315-6325.	6.5	368
32	Acclimation to low or limiting CO2 in non-synchronous Chlamydomonas causes a transient synchronization of the cell division cycle. Photosynthesis Research, 2011, 109, 161-168.	1.6	7
33	Insertional suppressors of Chlamydomonas reinhardtii that restore growth of air-dier lcib mutants in low CO2. Photosynthesis Research, 2011, 109, 123-132.	1.6	9
34	Carbon dioxide concentrating mechanism in Chlamydomonas reinhardtii: inorganic carbon transport and CO2 recapture. Photosynthesis Research, 2011, 109, 115-122.	1.6	112
35	TAL nucleases (TALNs): hybrid proteins composed of TAL effectors and FokI DNA-cleavage domain. Nucleic Acids Research, 2011, 39, 359-372.	6.5	477
36	Knockdown of limiting-CO ₂ â€“induced gene <i>HLA3</i> decreases HCO ₃ ^{âˆ’} transport and photosynthetic Ci affinity in <i>Chlamydomonas reinhardtii</i>. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5990-5995.	3.3	102

#	Article	IF	Citations
37	Thylakoid Lumen Carbonic Anhydrase (<i>CAH3</i>) Mutation Suppresses Air-Dier Phenotype of <i>LCIB</i> Mutant in <i>Chlamydomonas reinhardtii</i>. Plant Physiology, 2009, 149, 929-937.	2.3	61
38	The CO2-Concentrating Mechanism and Carbon Assimilation. , 2009, , 257-301.		28
39	Microalgal carbon-dioxide-concentrating mechanisms: Chlamydomonas inorganic carbon transporters. Journal of Experimental Botany, 2007, 59, 1463-1473.	2.4	192
40	Effects of growth condition on the structure of glycogen produced in cyanobacterium Synechocystis sp. PCC6803. International Journal of Biological Macromolecules, 2007, 40, 498-504.	3.6	47
41	Novel metabolism in Chlamydomonas through the lens of genomics. Current Opinion in Plant Biology, 2007, 10, 190-198.	3.5	149
42	The <i>Chlamydomonas</i> Genome Reveals the Evolution of Key Animal and Plant Functions. Science, 2007, 318, 245-250.	6.0	2,354
43	Alterations in photosynthesis in Arabidopsis lacking IMMUTANS, a chloroplast terminal oxidase. Photosynthesis Research, 2007, 91, 11-23.	1.6	22
44	An inorganic carbon transport system responsible for acclimation specific to air levels of CO2 in Chlamydomonas reinhardtii. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 10110-10115.	3.3	94
45	Disruption of the glycolate dehydrogenase gene in the high-CO2-requiring mutant HCR89 of Chlamydomonas reinhardtii. Canadian Journal of Botany, 2005, 83, 820-833.	1.2	64
46	Growth, photosynthesis, and gene expression in Chlamydomonas over a range of CO2 concentrations and CO2/O2 ratios: CO2 regulates multiple acclimation states. Canadian Journal of Botany, 2005, 83, 796-809.	1.2	90
47	Quantification of Compartmented Metabolic Fluxes in Developing Soybean Embryos by Employing Biosynthetically Directed Fractional 13C Labeling, Two-Dimensional [13C, 1H] Nuclear Magnetic Resonance, and Comprehensive Isotopomer Balancing. Plant Physiology, 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. Carbohydrate Research, 2002, 337, 2195-2203.	1.1	38
49	Regulation of photosynthesis during Arabidopsis leaf development in continuous light. Photosynthesis Research, 2002, 72, 27-37.	1.6	66
50	Acclimation of Chlamydomonas to changing carbon availability. Functional Plant Biology, 2002, 29, 221.	1.1	45
51	Insertional Mutants of <i>Chlamydomonas reinhardtii</i> That Require Elevated CO2 for Survival. Plant Physiology, 2001, 127, 607-614.	2.3	36
52	Carbohydrate regulation of leaf development: Prolongation of leaf senescence in Rubisco antisense mutants of tobacco. Photosynthesis Research, 2000, 63, 1-8.	1.6	62
53	CO2 Acquisition, Concentration and Fixation in Cyanobacteria and Algae. Advances in Photosynthesis and Respiration, 2000, , 369-397.	1.0	55
54	Periplasmic Carbonic Anhydrase Structural Gene (Cah1) Mutant in Chlamydomonas reinhardtii1. Plant Physiology, 1999, 120, 757-764.	2.3	83

#	Article	IF	Citations
55	Post-translational processing of the highly processed, secreted periplasmic carbonic anhydrase of Chlamydomonas is largely conserved in transgenic tobacco. Plant Molecular Biology, 1995, 29, 303-315.	2.0	14
56	Translational Regulation of the Large and Small Subunits of Ribulose Bisphosphate Carboxylase/Oxygenase during Induction of the CO₂-Concentrating Mechanism in <i>Chlamydomonas reinhardtii</i>. Plant Physiology, 1992, 98, 1409-1414.	2.3	31
57	Changes in Photorespiratory Enzyme Activity in Response to Limiting CO2 in Chlamydomonas reinhardtii. Plant Physiology, 1991, 97, 420-425.	2.3	57
58	Changes in protein and gene expression during induction of the CO2-concentrating mechanism in wild-type and mutant Chlamydomonas. Canadian Journal of Botany, 1991, 69, 1008-1016.	1.2	33
59	Effect of photon flux density on inorganic carbon accumulation and net CO2 exchange in a high-CO2-requiring mutant of Chlamydomonas reinhardtii. Photosynthesis Research, 1990, 24, 245-252.	1.6	9
60	A 36 Kilodalton Limiting-CO₂ Induced Polypeptide of <i>Chlamydomonas</i> Is Distinct from the 37 Kilodalton Periplasmic Carbonic Anhydrase. Plant Physiology, 1990, 93, 116-121.	2.3	56
61	A Photorespiratory Mutant of <i>Chlamydomonas reinhardtii</i>. Plant Physiology, 1990, 93, 231-237.	2.3	63
62	Adaptation of Chlamydomonas reinhardtii High-CO2-Requiring Mutants to Limiting CO2. Plant Physiology, 1989, 90, 1195-1200.	2.3	27
63	Membrane-Associated Polypeptides Induced in Chlamydomonas by Limiting CO2 Concentrations. Plant Physiology, 1989, 89, 133-137.	2.3	70
64	Photosynthesis and photorespiration in freshwater green algae. Aquatic Botany, 1989, 34, 181-209.	0.8	40
65	Imazaquin and chlorsulfuron resistance and cross resistance in mutants of Chlamydomonas reinhardtii. Molecular Genetics and Genomics, 1988, 213, 394-399.	2.4	31
66	CO2 exchange characteristics during dark-light transitions in wild-type and mutant Chlamydomonas reinhardii cells. Photosynthesis Research, 1985, 6, 363-369.	1.6	9
67	Influence of carbon dioxide concentration during growth on fluorescence induction characteristics of the Green Alga Chlamydomonas reinhardii. Photosynthesis Research, 1984, 5, 169-176.	1.6	76
68	Genetic and physiological analysis of the CO2-concentrating system of Chlamydomonas reinhardii. Planta, 1983, 159, 261-266.	1.6	30
69	Evidence for a saturable transport component in the inorganic carbon uptake of Chlamydomonas reinhardii. FEBS Letters, 1983, 154, 335-338.	1.3	30
70	Reduced Inorganic Carbon Transport in a CO2-Requiring Mutant of Chlamydomonas reinhardii. Plant Physiology, 1983, 73, 273-276.	2.3	108
71	Carbonic Anhydrase-Deficient Mutant of <i>Chlamydomonas reinhardii</i> Requires Elevated Carbon Dioxide Concentration for Photoautotrophic Growth. Plant Physiology, 1983, 73, 268-272.	2.3	169
72	Photosynthesis is required for induction of the CO2 -concentrating system in Chlamydomonas reinhardii. FEBS Letters, 1982, 145, 41-44.	1.3	75

#	Article	IF	Citations
73	Photosynthesis in Isolated Chloroplasts of the Crassulacean Acid Metabolism Plant Sedum praealtum. Plant Physiology, 1980, 65, 1044-1048.	2.3	23
74	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
75	Intracellular localization of phosphoenolpyruvate carboxykinase in leaves of C4 and CAM plants. Plant Science Letters, 1980, 19, 1-8.	1.9	46
76	Malate decarboxylation in isolated mitochondria from the crassulacean acid metabolism plant Sedum praealtum. Archives of Biochemistry and Biophysics, 1980, 199, 448-456.	1.4	22
77	Isolation and Oxidative Properties of Intact Mitochondria from the Leaves of <i>Sedum praealtum</i>. Plant Physiology, 1979, 64, 182-186.	2.3	43
78	Photosynthesis in enzymatically isolated leaf cells from the CAM plant Sedum telephium L.. Planta, 1978, 141, 59-63.	1.6	26
79	Temperature response of CO2 fixation in isolated Opuntia cells. Plant Science Letters, 1978, 13, 389-396.	1.9	11