Edgar P Spalding

List of Publications by Year
in descending order

86	8,324	44069 48	49909 87
papers	citations	h-index	g-index

97	97	97	8474
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A novel high-throughput hyperspectral scanner and analytical methods for predicting maize kernel composition and physical traits. Food Chemistry, 2022, 391, 133264.	8.2	4
2	A Digital Image-Based Phenotyping Platform for Analyzing Root Shape Attributes in Carrot. Frontiers in Plant Science, 2021, 12, 690031.	3.6	5
3	Machine learning-enabled phenotyping for GWAS and TWAS of WUE traits in 869 field-grown sorghum accessions. Plant Physiology, 2021, 187, 1481-1500.	4.8	44
4	Electrophysiological study of Arabidopsis ABCB4 and PIN2 auxin transporters: Evidence of auxin activation and interaction enhancing auxin selectivity. Plant Direct, 2021, 5, e361.	1.9	10
5	Relative utility of agronomic, phenological, and morphological traits for assessing genotypeâ€byâ€environment interaction in maize inbreds. Crop Science, 2020, 60, 62-81.	1.8	21
6	Switching the Direction of Stem Gravitropism by Altering Two Amino Acids in AtLAZY1. Plant Physiology, 2020, 182, 1039-1051.	4.8	37
7	Rapid Auxin-Mediated Cell Expansion. Annual Review of Plant Biology, 2020, 71, 379-402.	18.7	128
8	Characterizing introgression-by-environment interactions using maize near isogenic lines. Theoretical and Applied Genetics, 2020, 133, 2761-2773.	3.6	2
9	Maize genomes to fields (G2F): 2014â€“2017 field seasons: genotype, phenotype, climatic, soil, and inbred ear image datasets. BMC Research Notes, 2020, 13, 71.	1.4	38
10	Predicting Zea mays Flowering Time, Yield, and Kernel Dimensions by Analyzing Aerial Images. Frontiers in Plant Science, 2019, 10, 1251.	3.6	20
11	Genome-wide association analysis of stalk biomass and anatomical traits in maize. BMC Plant Biology, 2019, 19, 45.	3.6	77
12	Classifying coldâ€stress responses of inbred maize seedlings using <scp>RGB</scp> imaging. Plant Direct, 2019, 3, e00104.	1.9	34
13	A machine vision platform for measuring imbibition of maize kernels: quantification of genetic effects and correlations with germination. Plant Methods, 2018, 14, 115.	4.3	6
14	An Automated Image Analysis Pipeline Enables Genetic Studies of Shoot and Root Morphology in Carrot (Daucus carota L.). Frontiers in Plant Science, 2018, 9, 1703.	3.6	29
15	Regulation of Root Angle and Gravitropism. G3: Genes, Genomes, Genetics, 2018, 8, 3841-3855.	1.8	24
16	Distribution of Endogenous NO Regulates Early Gravitropic Response and PIN2 Localization in Arabidopsis Roots. Frontiers in Plant Science, 2018, 9, 495.	3.6	21
17	Maize Genomes to Fields: 2014 and 2015 field season genotype, phenotype, environment, and inbred ear image datasets. BMC Research Notes, 2018, 11, 452.	1.4	25
18	Genotype-by-environment interactions affecting heterosis in maize. PLoS ONE, 2018, 13, e0191321.	2.5	51

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19	Spontaneous polyploidization in cucumber. Theoretical and Applied Genetics, 2017, 130, 1481-1490.	3.6	4
20	Constitutive Expression of Arabidopsis <i>SMALL AUXIN UP RNA19</i> (<i>SAUR19</i>) in Tomato Confers Auxin-Independent Hypocotyl Elongation. Plant Physiology, 2017, 173, 1453-1462.	4.8	67
21	LAZY Genes Mediate the Effects of Gravity on Auxin Gradients and Plant Architecture. Plant Physiology, 2017, 175, 959-969.	4.8	120
22	The Next Generation of Training for Arabidopsis Researchers: Bioinformatics and Quantitative Biology. Plant Physiology, 2017, 175, 1499-1509.	4.8	11
23	TIPS: a system for automated image-based phenotyping of maize tassels. Plant Methods, 2017, 13, 21.	4.3	62
24	A robust, highâ€throughput method for computing maize ear, cob, and kernel attributes automatically from images. Plant Journal, 2017, 89, 169-178.	5.7	86
25	Jasmonoyl-L-Tryptophan Disrupts IAA Activity through the AUX1 Auxin Permease. Frontiers in Plant Science, 2017, 8, 736.	3.6	10
26	Morphological Plant Modeling: Unleashing Geometric and Topological Potential within the Plant Sciences. Frontiers in Plant Science, 2017, 8, 900.	3.6	61
27	Mapping Quantitative Trait Loci Underlying Function-Valued Traits Using Functional Principal Component Analysis and Multi-Trait Mapping. G3: Genes, Genomes, Genetics, 2016, 6, 79-86.	1.8	34
28	<scp>ABCB</scp>19â€mediated polar auxin transport modulates Arabidopsis hypocotyl elongation and the endoreplication variant of the cell cycle. Plant Journal, 2016, 85, 209-218.	5.7	28
29	Role of SKD1 Regulators LIP5 and IST1-LIKE1 in Endosomal Sorting and Plant Development. Plant Physiology, 2016, 171, 251-264.	4.8	61
30	Image analysis of anatomical traits in stalk transections of maize and other grasses. Plant Methods, 2015, 11, 26.	4.3	40
31	Phenotypic and Transcriptional Analysis of Divergently Selected Maize Populations Reveals the Role of Developmental Timing in Seed Size Determination Â Â. Plant Physiology, 2014, 165, 658-669.	4.8	37
32	A Simple Regression-Based Method to Map Quantitative Trait Loci Underlying Function-Valued Phenotypes. Genetics, 2014, 197, 1409-1416.	2.9	35
33	Block of ATP-Binding Cassette B19 Ion Channel Activity by 5-Nitro-2-(3-Phenylpropylamino)-Benzoic Acid Impairs Polar Auxin Transport and Root Gravitropism. Plant Physiology, 2014, 166, 2091-2099.	4.8	20
34	Advanced imaging techniques for the study of plant growth and development. Trends in Plant Science, 2014, 19, 304-310.	8.8	72
35	The Receptor-like Kinase FERONIA Is Required for Mechanical Signal Transduction in Arabidopsis Seedlings. Current Biology, 2014, 24, 1887-1892.	3.9	267
36	A high throughput robot system for machine vision based plant phenotype studies. Machine Vision and Applications, 2013, 24, 619-636.	2.7	44

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37	<scp>A</scp>t<scp>LAZY</scp>1 is a signaling component required for gravitropism of the <i><scp>A</scp>rabidopsis thaliana</i> inflorescence. Plant Journal, 2013, 74, 267-279.	5.7	125
38	Diverting the downhill flow of auxin to steer growth during tropisms. American Journal of Botany, 2013, 100, 203-214.	1.7	58
39	Image analysis is driving a renaissance in growth measurement. Current Opinion in Plant Biology, 2013, 16, 100-104.	7.1	115
40	Mapping Quantitative Trait Loci Affecting Arabidopsis thaliana Seed Morphology Features Extracted Computationally From Images. G3: Genes, Genomes, Genetics, 2013, 3, 109-118.	1.8	39
41	Interacting Glutamate Receptor-Like Proteins in Phloem Regulate Lateral Root Initiation in <i>Arabidopsis</i> Â Â. Plant Cell, 2013, 25, 1304-1313.	6.6	125
42	High-Throughput Computer Vision Introduces the Time Axis to a Quantitative Trait Map of a Plant Growth Response. Genetics, 2013, 195, 1077-1086.	2.9	72
43	Ca2+ Conduction by an Amino Acid-Gated Ion Channel Related to Glutamate Receptors Â. Plant Physiology, 2012, 159, 40-46.	4.8	138
44	The iPlant Collaborative: Cyberinfrastructure for Plant Biology. Frontiers in Plant Science, 2011, 2, 34.	3.6	396
45	Separating parental environment from seed size effects on next generation growth and development in <i>Arabidopsis</i>. Plant, Cell and Environment, 2011, 34, 291-301.	5.7	70
46	The ins and outs of cellular Ca2+ transport. Current Opinion in Plant Biology, 2011, 14, 715-720.	7.1	84
47	AUXIN UP-REGULATED F-BOX PROTEIN1 Regulates the Cross Talk between Auxin Transport and Cytokinin Signaling during Plant Root Growth Â Â. Plant Physiology, 2011, 156, 1878-1893.	4.8	36
48	A role for ABCB19-mediated polar auxin transport in seedling photomorphogenesis mediated by cryptochromeâ€ƒ1 and phytochromeâ€ƒB. Plant Journal, 2010, 62, 179-191.	5.7	77
49	The inside view on plant growth. Nature Methods, 2010, 7, 506-507.	19.0	3
50	Detection of a Gravitropism Phenotype in<i>glutamate receptor-like 3.3</i>Mutants of<i>Arabidopsis thaliana</i>Using Machine Vision and Computation. Genetics, 2010, 186, 585-593.	2.9	69
51	The ER-Localized TWD1 Immunophilin Is Necessary for Localization of Multidrug Resistance-Like Proteins Required for Polar Auxin Transport in <i>Arabidopsis</i> Roots. Plant Cell, 2010, 22, 3295-3304.	6.6	98
52	HYPOTrace: Image Analysis Software for Measuring Hypocotyl Growth and Shape Demonstrated on Arabidopsis Seedlings Undergoing Photomorphogenesis. Plant Physiology, 2009, 149, 1632-1637.	4.8	97
53	Plasticity of Arabidopsis Root Gravitropism throughout a Multidimensional Condition Space Quantified by Automated Image Analysis Â Â. Plant Physiology, 2009, 152, 206-216.	4.8	71
54	Auxin transport into cotyledons and cotyledon growth depend similarly on the ABCB19 Multidrug Resistanceâ€like transporter. Plant Journal, 2009, 60, 91-101.	5.7	50

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55	Computer Vision as a Tool to Study Plant Development. Methods in Molecular Biology, 2009, 553, 317-326.	0.9	8
56	Plant ABC proteins â€“ a unified nomenclature and updated inventory. Trends in Plant Science, 2008, 13, 151-159.	8.8	652
57	Glutamate Receptor Subtypes Evidenced by Differences in Desensitization and Dependence on the <i>GLR3.3</i> and <i>GLR3.4</i> Genes. Plant Physiology, 2008, 146, 323-324.	4.8	103
58	Separate functions for nuclear and cytoplasmic cryptochrome 1 during photomorphogenesis of <i>Arabidopsis</i> seedlings. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18813-18818.	7.1	97
59	Mutations in Arabidopsis Multidrug Resistance-Like ABC Transporters Separate the Roles of Acropetal and Basipetal Auxin Transport in Lateral Root Development. Plant Cell, 2007, 19, 1826-1837.	6.6	164
60	Separating the Roles of Acropetal and Basipetal Auxin Transport on Gravitropism with Mutations in Two Arabidopsis Multidrug Resistance-Like ABC Transporter Genes. Plant Cell, 2007, 19, 1838-1850.	6.6	184
61	Computerâ€vision analysis of seedling responses to light and gravity. Plant Journal, 2007, 52, 374-381.	5.7	108
62	Calcium Entry Mediated by GLR3.3, an Arabidopsis Glutamate Receptor with a Broad Agonist Profile. Plant Physiology, 2006, 142, 963-971.	4.8	217
63	The Contributions of Anthony B. Bleecker to Ethylene Signaling and Beyond. Plant Cell, 2006, 18, 3347-3349.	6.6	1
64	Protection of Plasma Membrane K+ Transport by the Salt Overly Sensitive1 Na+-H+ Antiporter during Salinity Stress. Plant Physiology, 2004, 136, 2548-2555.	4.8	176
65	Arabidopsis Seedling Growth Response and Recovery to Ethylene. A Kinetic Analysis. Plant Physiology, 2004, 136, 2913-2920.	4.8	164
66	Genomic and physiological studies of early cryptochrome 1 action demonstrate roles for auxin and gibberellin in the control of hypocotyl growth by blue light. Plant Journal, 2003, 36, 203-214.	5.7	149
67	Enhanced gravi- and phototropism in plant mdr mutants mislocalizing the auxin efflux protein PIN1. Nature, 2003, 423, 999-1002.	27.8	253
68	Light Signaling. Plant Physiology, 2003, 133, 1417-1419.	4.8	8
69	Primary Inhibition of Hypocotyl Growth and Phototropism Depend Differently on Phototropin-Mediated Increases in Cytoplasmic Calcium Induced by Blue Light. Plant Physiology, 2003, 133, 1464-1470.	4.8	94
70	Multidrug Resistance-Like Genes of Arabidopsis Required for Auxin Transport and Auxin-Mediated Development. Plant Cell, 2001, 13, 2441.	6.6	1
71	Unexpected roles for cryptochrome 2 and phototropin revealed by high-resolution analysis of blue light-mediated hypocotyl growth inhibition. Plant Journal, 2001, 26, 471-478.	5.7	233
72	Opposing roles of phytochrome A and phytochrome B in early cryptochrome-mediated growth inhibition. Plant Journal, 2001, 28, 333-340.	5.7	57

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73	Photocontrol of stem growth. Current Opinion in Plant Biology, 2001, 4, 436-440.	7.1	107
74	<i>Multidrug Resistance</i>â€“like Genes of Arabidopsis Required for Auxin Transport and Auxin-Mediated Development. Plant Cell, 2001, 13, 2441-2454.	6.6	462
75	Functions of AKT1 and AKT2 Potassium Channels Determined by Studies of Single and Double Mutants of Arabidopsis. Plant Physiology, 2001, 127, 1012-1019.	4.8	107
76	Light-Induced Growth Promotion by SPA1 Counteracts Phytochrome-Mediated Growth Inhibition during De-Etiolation. Plant Physiology, 2001, 126, 1291-1298.	4.8	17
77	Functions of AKT1 and AKT2 Potassium Channels Determined by Studies of Single and Double Mutants of Arabidopsis. Plant Physiology, 2001, 127, 1012-1019.	4.8	18
78	The Identity of Plant Glutamate Receptors. Science, 2001, 292, 1486b-1487.	12.6	175
79	Glutamate-Gated Calcium Fluxes in Arabidopsis. Plant Physiology, 2000, 124, 1511-1514.	4.8	188
80	Potassium Uptake Supporting Plant Growth in the Absence of AKT1 Channel Activity. Journal of General Physiology, 1999, 113, 909-918.	1.9	266
81	A Role for the AKT1 Potassium Channel in Plant Nutrition. Science, 1998, 280, 918-921.	12.6	673
82	Two Genetically Separable Phases of Growth Inhibition Induced by Blue Light in Arabidopsis Seedlings. Plant Physiology, 1998, 118, 609-615.	4.8	71
83	Anion Channels and the Stimulation of Anthocyanin Accumulation by Blue Light in Arabidopsis Seedlings1. Plant Physiology, 1998, 116, 503-509.	4.8	51
84	AN APPARATUS FOR STUDYING RAPID ELECTROPHYSIOLOGICAL RESPONSES TO LIGHT DEMONSTRATED ON Arabidopsis LEAVES. Photochemistry and Photobiology, 1995, 62, 934-939.	2.5	12
85	Activation of K + Channels in the Plasma Membrane of Arabidopsis by ATP Produced Photosynthetically. Plant Cell, 1993, 5, 477.	6.6	29
86	Large plasma-membrane depolarization precedes rapid blue-light-induced growth inhibition in cucumber. Planta, 1989, 178, 407-410.	3.2	108