Wolfgang Busch

List of Publications by Year
in descending order

77 papers	9,764 citations	61857 43 h-index	66788 78 g-index
102 all docs	102 docs citations	102 times ranked	11967 citing authors

#	Article	IF	Citations
1	Integration of Spatial and Temporal Information During Floral Induction in Arabidopsis. Science, 2005, 309, 1056-1059.	6.0	1,230
2	Transcriptional Regulation of ROS Controls Transition from Proliferation to Differentiation in the Root. Cell, 2010, 143, 606-616.	13.5	926
3	WUSCHEL controls meristem function by direct regulation of cytokinin-inducible response regulators. Nature, 2005, 438, 1172-1175.	13.7	747
4	The bHLH Transcription Factor POPEYE Regulates Response to Iron Deficiency in<i>Arabidopsis</i>Roots Â. Plant Cell, 2010, 22, 2219-2236.	3.1	561
5	Spatiotemporal regulation of cell-cycle genes by SHORTROOT links patterning and growth. Nature, 2010, 466, 128-132.	13.7	385
6	Dual roles of the nuclear cap-binding complex and SERRATE in pre-mRNA splicing and microRNA processing in <i>Arabidopsis thaliana</i>. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 8795-8800.	3.3	378
7	Identification of novel heat shock factor-dependent genes and biochemical pathways in Arabidopsis thaliana. Plant Journal, 2004, 41, 1-14.	2.8	330
8	Whole-Genome Analysis of the SHORT-ROOT Developmental Pathway in Arabidopsis. PLoS Biology, 2006, 4, e143.	2.6	283
9	Auxin steers root cell expansion via apoplastic pH regulation in <i>Arabidopsis thaliana</i>. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E4884-E4893.	3.3	250
10	An extracellular network of Arabidopsis leucine-rich repeat receptor kinases. Nature, 2018, 553, 342-346.	13.7	241
11	The Transporter Classification (TC) System, 2002. Critical Reviews in Biochemistry and Molecular Biology, 2002, 37, 287-337.	2.3	240
12	Transcriptional Control of a Plant Stem Cell Niche. Developmental Cell, 2010, 18, 841-853.	3.1	221
13	Two Families of Mechanosensitive Channel Proteins. Microbiology and Molecular Biology Reviews, 2003, 67, 66-85.	2.9	208
14	Auxin minimum triggers the developmental switch from cell division to cell differentiation in the <i>Arabidopsis</i> root. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E7641-E7649.	3.3	193
15	Requirement of B2-Type<i>Cyclin-Dependent Kinases</i>for Meristem Integrity in<i>Arabidopsis thaliana</i>. Plant Cell, 2008, 20, 88-100.	3.1	181
16	Cell Identity Regulators Link Development and Stress Responses in the Arabidopsis Root. Developmental Cell, 2011, 21, 770-782.	3.1	178
17	Phosphatidylinositol 4,5-Bisphosphate Influences PIN Polarization by Controlling Clathrin-Mediated Membrane Trafficking in<i>Arabidopsis</i>Â Â. Plant Cell, 2014, 25, 4894-4911.	3.1	158
18	A Scalable Open-Source Pipeline for Large-Scale Root Phenotyping of <i>Arabidopsis</i>. Plant Cell, 2014, 26, 2390-2403.	3.1	144

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19	Genome-wide association study using cellular traits identifies a new regulator of root development in Arabidopsis. Nature Genetics, 2014, 46, 77-81.	9.4	144
20	Heat Shock Factors HsfB1 and HsfB2b Are Involved in the Regulation of Pdf1.2 Expression and Pathogen Resistance in Arabidopsis. Molecular Plant, 2009, 2, 152-165.	3.9	138
21	Omics meet networksâ€”using systems approaches to infer regulatory networks in plants. Current Opinion in Plant Biology, 2010, 13, 126-131.	3.5	132
22	The DOF transcription factor OBP1 is involved in cell cycle regulation in <i>Arabidopsis thaliana</i>. Plant Journal, 2008, 56, 779-792.	2.8	120
23	Root System Depth in Arabidopsis Is Shaped by EXOCYST70A3 via the Dynamic Modulation of Auxin Transport. Cell, 2019, 178, 400-412.e16.	13.5	116
24	The rate and potential relevance of new mutations in a colonizing plant lineage. PLoS Genetics, 2018, 14, e1007155.	1.5	116
25	Genetic analysis of the Arabidopsis TIR1/AFB auxin receptors reveals both overlapping and specialized functions. ELife, 2020, 9, .	2.8	115
26	From phenotypes to causal sequences: using genome wide association studies to dissect the sequence basis for variation of plant development. Current Opinion in Plant Biology, 2015, 23, 98-108.	3.5	110
27	A Regulatory Framework for Shoot Stem Cell Control Integrating Metabolic, Transcriptional, and Phytohormone Signals. Developmental Cell, 2014, 28, 438-449.	3.1	104
28	A microfluidic device and computational platform for high-throughput live imaging of gene expression. Nature Methods, 2012, 9, 1101-1106.	9.0	100
29	MYB30 links ROS signaling, root cell elongation, and plant immune responses. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E4710-E4719.	3.3	98
30	Combinatorial interaction network of transcriptomic and phenotypic responses to nitrogen and hormones in the <i>Arabidopsis thaliana</i> root. Science Signaling, 2016, 9, rs13.	1.6	81
31	Underground tuning: quantitative regulation of root growth. Journal of Experimental Botany, 2015, 66, 1099-1112.	2.4	79
32	DETORQUEO, QUIRKY, and ZERZAUST Represent Novel Components Involved in Organ Development Mediated by the Receptor-Like Kinase STRUBBELIG in Arabidopsis thaliana. PLoS Genetics, 2009, 5, e1000355.	1.5	78
33	Natural allelic variation of FRO2 modulates Arabidopsis root growth under iron deficiency. Nature Communications, 2017, 8, 15603.	5.8	73
34	Advanced imaging techniques for the study of plant growth and development. Trends in Plant Science, 2014, 19, 304-310.	4.3	72
35	The Lateral Root Cap Acts as an Auxin Sink that Controls Meristem Size. Current Biology, 2019, 29, 1199-1205.e4.	1.8	72
36	Genetic control of root growth: from genes to networks. Annals of Botany, 2016, 117, 9-24.	1.4	68

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37	GTL1 and DF1 regulate root hair growth through transcriptional repression of <i>ROOT HAIR DEFECTIVE 6-LIKE 4</i> in <i>Arabidopsis</i>. Development (Cambridge), 2018, 145, .	1.2	63
38	LPCAT1 controls phosphate homeostasis in a zinc-dependent manner. ELife, 2018, 7, .	2.8	63
39	Organ-specific regulation of growth-defense tradeoffs by plants. Current Opinion in Plant Biology, 2016, 29, 129-137.	3.5	62
40	GSNOR provides plant tolerance to iron toxicity via preventing iron-dependent nitrosative and oxidative cytotoxicity. Nature Communications, 2019, 10, 3896.	5.8	59
41	The IUBMB-Endorsed Transporter Classification System. Molecular Biotechnology, 2004, 27, 253-262.	1.3	58
42	Natural Variation of Root Traits: From Development to Nutrient Uptake. Plant Physiology, 2014, 166, 518-527.	2.3	58
43	Reassess the <i>t</i> Test: Interact with All Your Data via ANOVA. Plant Cell, 2015, 27, 2088-2094.	3.1	48
44	Natural allelic variation of the AZI1 gene controls root growth under zinc-limiting condition. PLoS Genetics, 2018, 14, e1007304.	1.5	47
45	Natural genetic variation shapes root system responses to phytohormones in Arabidopsis. Plant Journal, 2018, 96, 468-481.	2.8	46
46	Systems genomics approaches provide new insights into Arabidopsis thaliana root growth regulation under combinatorial mineral nutrient limitation. PLoS Genetics, 2019, 15, e1008392.	1.5	46
47	Adaptation and Phenotypic Diversification in Arabidopsis through Loss-of-Function Mutations in Protein-Coding Genes. Plant Cell, 2019, 31, 1012-1025.	3.1	42
48	Information processing without brains â€“ the power of intercellular regulators in plants. Development (Cambridge), 2010, 137, 1215-1226.	1.2	38
49	The Brassicaceae Family Displays Divergent, Shoot-Skewed NLR Resistance Gene Expression. Plant Physiology, 2018, 176, 1598-1609.	2.3	36
50	Profiling a plant: expression analysis in Arabidopsis. Current Opinion in Plant Biology, 2007, 10, 136-141.	3.5	35
51	A multi-marker association method for genome-wide association studies without the need for population structure correction. Nature Communications, 2016, 7, 13299.	5.8	35
52	The Emerging Role of GSNOR in Oxidative Stress Regulation. Trends in Plant Science, 2021, 26, 156-168.	4.3	34
53	Local HY5 Activity Mediates Hypocotyl Growth and Shoot-to-Root Communication. Plant Communications, 2020, 1, 100078.	3.6	32
54	Genotypes, Networks, Phenotypes: Moving Toward Plant Systems Genetics. Annual Review of Cell and Developmental Biology, 2016, 32, 103-126.	4.0	30

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55	The IUBMB-Endorsed Transporter Classification System. , 2003, 227, 21-36.		27
56	HY5 and phytochrome activity modulate shoot-to-root coordination during thermomorphogenesis in <i>Arabidopsis</i>. Development (Cambridge), 2020, 147, .	1.2	27
57	Regulation of Root Angle and Gravitropism. G3: Genes, Genomes, Genetics, 2018, 8, 3841-3855.	0.8	24
58	KIRMES: kernel-based identification of regulatory modules in euchromatic sequences. Bioinformatics, 2009, 25, 2126-2133.	1.8	21
59	Innovating carbon-capture biotechnologies through ecosystem-inspired solutions. One Earth, 2021, 4, 49-59.	3.6	21
60	Identification of novel genes involved in phosphate accumulation in Lotus japonicusÂthrough Genome Wide Association mapping of root system architecture and anion content. PLoS Genetics, 2019, 15, e1008126.	1.5	15
61	Ribosome assembly factor Adenylate Kinase 6 maintains cell proliferation and cell size homeostasis during root growth. New Phytologist, 2020, 225, 2064-2076.	3.5	15
62	Root system traits impact early fire blight susceptibility in apple (Malus Ã— domestica). BMC Plant Biology, 2019, 19, 579.	1.6	12
63	A genome-wide association study reveals cytokinin as a major component in the root defense responses against <i>Ralstonia solanacearum</i>. Journal of Experimental Botany, 2021, 72, 2727-2740.	2.4	12
64	The Next Generation of Training for Arabidopsis Researchers: Bioinformatics and Quantitative Biology. Plant Physiology, 2017, 175, 1499-1509.	2.3	11
65	A framework for the extraction of quantitative traits from 2D images of mature Arabidopsis thaliana. Machine Vision and Applications, 2016, 27, 647-661.	1.7	8
66	Generalized box-plot for root growth ensembles. BMC Bioinformatics, 2017, 18, 65.	1.2	6
67	Using natural variation to understand plant responses to iron availability. Journal of Experimental Botany, 2021, 72, 2154-2164.	2.4	6
68	Large-Scale Phenotyping of Root Traits in the Model Legume Lotus japonicus. Methods in Molecular Biology, 2017, 1610, 155-167.	0.4	5
69	Image-Based Phenotyping of the Mature Arabidopsis Shoot System. Lecture Notes in Computer Science, 2015, , 231-246.	1.0	4
70	Automated High-Throughput Root Phenotyping of Arabidopsis thaliana Under Nutrient Deficiency Conditions. Methods in Molecular Biology, 2017, 1610, 135-153.	0.4	3
71	Genome-Wide Association Mapping in Plants Exemplified for Root Growth in Arabidopsis thaliana. Methods in Molecular Biology, 2015, 1284, 343-357.	0.4	3
72	Genome-Wide Association Mapping of Root Traits in the Context of Plant Hormone Research. Methods in Molecular Biology, 2017, 1497, 47-55.	0.4	3

#	Article	IF	Citations
73	Multikingdom diffusion barrier control. Science, 2021, 371, 125-125.	6.0	2
74	A Multiplexed, Time-Resolved Assay of Root Gravitropic Bending on Agar Plates. Methods in Molecular Biology, 2022, 2368, 61-70.	0.4	2
75	Topological Image Analysis and (Normalised) Representations for Plant Phenotyping. , 2014, , .		1
76	Long-Term Confocal Imaging of Arabidopsis thaliana Roots for Simultaneous Quantification of Root Growth and Fluorescent Signals. Methods in Molecular Biology, 2017, 1610, 169-183.	0.4	1
77	Identification of Heat- Shock Factor Regulated Genes and Pathways. , 2006, , 227-245.		0