

David J Weston

List of Publications by Year in descending order

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Version: 2024-02-01

71
papers

4,598
citations

117453

34
h-index

110170

64
g-index

79
all docs

79
docs citations

79
times ranked

6842
citing authors

#	ARTICLE	IF	CITATIONS
1	KBase: The United States Department of Energy Systems Biology Knowledgebase. <i>Nature Biotechnology</i> , 2018, 36, 566-569.	9.4	955
2	A roadmap for research on crassulacean acid metabolism (<scp>CAM</scp>) to enhance sustainable food and bioenergy production in a hotter, drier world. <i>New Phytologist</i> , 2015, 207, 491-504.	3.5	211
3	Engineering crassulacean acid metabolism to improve water-use efficiency. <i>Trends in Plant Science</i> , 2014, 19, 327-338.	4.3	206
4	Transcript, protein and metabolite temporal dynamics in the CAM plant Agave. <i>Nature Plants</i> , 2016, 2, 16178.	4.7	158
5	ATMOSPHERE: Plant Respiration in a Warmer World. <i>Science</i> , 2006, 312, 536-537.	6.0	137
6	The F-Box Gene Family Is Expanded in Herbaceous Annual Plants Relative to Woody Perennial Plants. <i>Plant Physiology</i> , 2008, 148, 1189-1200.	2.3	125
7	The <i>Sphagnum</i> microbiome: new insights from an ancient plant lineage. <i>New Phytologist</i> , 2016, 211, 57-64.	3.5	123
8	A Dual Role of Strigolactones in Phosphate Acquisition and Utilization in Plants. <i>International Journal of Molecular Sciences</i> , 2013, 14, 7681-7701.	1.8	117
9	Two Poplar-Associated Bacterial Isolates Induce Additive Favorable Responses in a Constructed Plant-Microbiome System. <i>Frontiers in Plant Science</i> , 2016, 7, 497.	1.7	113
10	Involvement of Arabidopsis RACK1 in Protein Translation and Its Regulation by Abscisic Acid. <i>Plant Physiology</i> , 2011, 155, 370-383.	2.3	111
11	Connecting genes, coexpression modules, and molecular signatures to environmental stress phenotypes in plants. <i>BMC Systems Biology</i> , 2008, 2, 16.	3.0	102
12	<i>Pseudomonas fluorescens</i> Induces Strain-Dependent and Strain-Independent Host Plant Responses in Defense Networks, Primary Metabolism, Photosynthesis, and Fitness. <i>Molecular Plant-Microbe Interactions</i> , 2012, 25, 765-778.	1.4	100
13	Leaf absorptance of photosynthetically active radiation in relation to chlorophyll meter estimates among woody plant species. <i>Scientia Horticulturae</i> , 2004, 101, 169-178.	1.7	97
14	Asymmetrical effects of mesophyll conductance on fundamental photosynthetic parameters and their relationships estimated from leaf gas exchange measurements. <i>Plant, Cell and Environment</i> , 2014, 37, 978-994.	2.8	90
15	Abiotic Stresses Shift Belowground <i>Populus</i> -Associated Bacteria Toward a Core Stress Microbiome. <i>MSystems</i> , 2018, 3, .	1.7	89
16	Experimental warming alters the community composition, diversity, and N₂ fixation activity of peat moss (<i>Sphagnum fallax</i>) microbiomes. <i>Global Change Biology</i> , 2019, 25, 2993-3004.	4.2	89
17	Abscisic Acid Receptors: Past, Present and Future^F. <i>Journal of Integrative Plant Biology</i> , 2011, 53, 469-479.	4.1	82
18	Comparative physiology and transcriptional networks underlying the heat shock response in <i>Populus trichocarpa</i>, <i>Arabidopsis thaliana</i> and <i>Glycine max</i>. <i>Plant, Cell and Environment</i> , 2011, 34, 1488-1506.	2.8	71

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19	Microbial-type terpene synthase genes occur widely in nonseed land plants, but not in seed plants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 12328-12333.	3.3	70
20	Newly identified helper bacteria stimulate ectomycorrhizal formation in <i>Populus</i> . <i>Frontiers in Plant Science</i> , 2014, 5, 579.	1.7	68
21	Inhibition and acclimation of C3 photosynthesis to moderate heat: a perspective from thermally contrasting genotypes of <i>Acer rubrum</i> (red maple). <i>Tree Physiology</i> , 2007, 27, 1083-1092.	1.4	65
22	Diel rewiring and positive selection of ancient plant proteins enabled evolution of CAM photosynthesis in <i>Agave</i> . <i>BMC Genomics</i> , 2018, 19, 588.	1.2	64
23	Root bacterial endophytes alter plant phenotype, but not physiology. <i>PeerJ</i> , 2016, 4, e2606.	0.9	64
24	Transcriptional responses of <i>Arabidopsis thaliana</i> to chewing and sucking insect herbivores. <i>Frontiers in Plant Science</i> , 2014, 5, 565.	1.7	61
25	Metabolic functions of <i>Pseudomonas fluorescens</i> strains from <i>Populus deltoides</i> depend on rhizosphere or endosphere isolation compartment. <i>Frontiers in Microbiology</i> , 2015, 6, 1118.	1.5	60
26	<i>Sphagnum</i> physiology in the context of changing climate: emergent influences of genomics, modelling and host-microbiome interactions on understanding ecosystem function. <i>Plant, Cell and Environment</i> , 2015, 38, 1737-1751.	2.8	60
27	Climate-resilient agroforestry: physiological responses to climate change and engineering of crassulacean acid metabolism (CAM) as a mitigation strategy. <i>Plant, Cell and Environment</i> , 2015, 38, 1833-1849.	2.8	59
28	Analyses of transcriptome sequences reveal multiple ancient large-scale duplication events in the ancestor of Sphagnopsida (Bryophyta). <i>New Phytologist</i> , 2016, 211, 300-318.	3.5	56
29	Root and Rhizosphere Bacterial Phosphatase Activity Varies with Tree Species and Soil Phosphorus Availability in Puerto Rico Tropical Forest. <i>Frontiers in Plant Science</i> , 2017, 8, 1834.	1.7	54
30	The Sphagnum Project: enabling ecological and evolutionary insights through a genus-level sequencing project. <i>New Phytologist</i> , 2018, 217, 16-25.	3.5	54
31	Extensive Genome-Wide Phylogenetic Discordance Is Due to Incomplete Lineage Sorting and Not Ongoing Introgression in a Rapidly Radiated Bryophyte Genus. <i>Molecular Biology and Evolution</i> , 2021, 38, 2750-2766.	3.5	54
32	A Carotenoid-Deficient Mutant in <i>Pantoea</i> sp. YR343, a Bacteria Isolated from the Rhizosphere of <i>Populus deltoides</i> , Is Defective in Root Colonization. <i>Frontiers in Microbiology</i> , 2016, 7, 491.	1.5	48
33	Molybdenum-Based Diazotrophy in a Sphagnum Peatland in Northern Minnesota. <i>Applied and Environmental Microbiology</i> , 2017, 83, .	1.4	46
34	Informing models through empirical relationships between foliar phosphorus, nitrogen and photosynthesis across diverse woody species in tropical forests of Panama. <i>New Phytologist</i> , 2017, 215, 1425-1437.	3.5	46
35	Efficient Purging of Deleterious Mutations in Plants with Haploid Selfing. <i>Genome Biology and Evolution</i> , 2014, 6, 1238-1252.	1.1	38
36	Gene expression profiling: opening the black box of plant ecosystem responses to global change. <i>Global Change Biology</i> , 2009, 15, 1201-1213.	4.2	35

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37	Leaf endophytes and <i>Populus</i> genotype affect severity of damage from the necrotrophic leaf pathogen, <i>Drepanopeziza populi</i> . <i>Ecosphere</i> , 2013, 4, 1-12.	1.0	35
38	Phylogenomics reveals convergent evolution of red-violet coloration in land plants and the origins of the anthocyanin biosynthetic pathway. <i>Molecular Phylogenetics and Evolution</i> , 2020, 151, 106904.	1.2	35
39	Temporal and Spatial Variation in Peatland Carbon Cycling and Implications for Interpreting Responses of an Ecosystemâ€Scale Warming Experiment. <i>Soil Science Society of America Journal</i> , 2017, 81, 1668-1688.	1.2	34
40	Characterization of Rubisco activase from thermally contrasting genotypes of <i>Acer rubrum</i> (Aceraceae). <i>American Journal of Botany</i> , 2007, 94, 926-934.	0.8	30
41	Multimodal MSI in Conjunction with Broad Coverage Spatially Resolved MS ² Increases Confidence in Both Molecular Identification and Localization. <i>Analytical Chemistry</i> , 2018, 90, 702-707.	3.2	30
42	Bringing function to structure: Rootâ€soil interactions shaping phosphatase activity throughout a soil profile in Puerto Rico. <i>Ecology and Evolution</i> , 2021, 11, 1150-1164.	0.8	28
43	Plant carbohydrate storage: intraâ€and interâ€specific tradeâ€offs reveal a major life history trait. <i>New Phytologist</i> , 2022, 235, 2211-2222.	3.5	28
44	Diversity of Active Viral Infections within the Sphagnum Microbiome. <i>Applied and Environmental Microbiology</i> , 2018, 84, .	1.4	27
45	Towards resolving the spatial metabolome with unambiguous molecular annotations in complex biological systems by coupling mass spectrometry imaging with structures for lossless ion manipulations. <i>Chemical Communications</i> , 2019, 55, 306-309.	2.2	27
46	Initial characterization of shade avoidance response suggests functional diversity between <i>Populus</i> phytochrome B genes. <i>New Phytologist</i> , 2012, 196, 726-737.	3.5	25
47	Functional Genomics of Drought Tolerance in Bioenergy Crops. <i>Critical Reviews in Plant Sciences</i> , 2014, 33, 205-224.	2.7	25
48	Novel metabolic interactions and environmental conditions mediate the boreal peatmoss-cyanobacteria mutualism. <i>ISME Journal</i> , 2022, 16, 1074-1085.	4.4	25
49	A New Perspective on Ecological Prediction Reveals Limits to Climate Adaptation in a Temperate Tree Species. <i>Current Biology</i> , 2020, 30, 1447-1453.e4.	1.8	23
50	Biophysical drivers of seasonal variability in <i>Sphagnum</i> gross primary production in a northern temperate bog. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017, 122, 1078-1097.	1.3	22
51	Defining the <i>Sphagnum</i> Core Microbiome across the North American Continent Reveals a Central Role for Diazotrophic Methanotrophs in the Nitrogen and Carbon Cycles of Boreal Peatland Ecosystems. <i>MBio</i> , 2022, 13, .	1.8	18
52	Habitatâ€adapted microbial communities mediate <i>Sphagnum</i> peatmoss resilience to warming. <i>New Phytologist</i> , 2022, 234, 2111-2125.	3.5	18
53	Extending a land-surface model with <i>Sphagnum</i> moss to simulate responses of a northern temperate bog to whole ecosystem warming and elevated CO ₂ . <i>Biogeosciences</i> , 2021, 18, 467-486.	1.3	17
54	Cultivating the Bacterial Microbiota of <i>Populus</i> Roots. <i>MSystems</i> , 2021, 6, e0130620.	1.7	17

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55	Biosystems Design to Accelerate C ₃ -to-CAM Progression. <i>Biodesign Research</i> , 2020, 2020, .	0.8	16
56	Plant Biosystems Design Research Roadmap 1.0. <i>Biodesign Research</i> , 2020, 2020, .	0.8	16
57	Nitrogen and phosphorus cycling in an ombrotrophic peatland: a benchmark for assessing change. <i>Plant and Soil</i> , 2021, 466, 649-674.	1.8	15
58	<i>Populus</i> Responses to Edaphic and Climatic Cues: Emerging Evidence from Systems Biology Research. <i>Critical Reviews in Plant Sciences</i> , 2009, 28, 368-374.	2.7	14
59	From systems biology to photosynthesis and whole-plant physiology. <i>Plant Signaling and Behavior</i> , 2012, 7, 260-262.	1.2	13
60	Correlating laser-induced breakdown spectroscopy with neutron activation analysis to determine the elemental concentration in the ionome of the <i>Populus trichocarpa</i> leaf. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2017, 138, 46-53.	1.5	11
61	Genomics in a changing arctic: critical questions await the molecular ecologist. <i>Molecular Ecology</i> , 2015, 24, 2301-2309.	2.0	10
62	Relatively rare root endophytic bacteria drive plant resource allocation patterns and tissue nutrient concentration in unpredictable ways. <i>American Journal of Botany</i> , 2019, 106, 1423-1434.	0.8	9
63	Evolutionary analyses of non-family genes in plants. <i>Plant Journal</i> , 2013, 73, 788-797.	2.8	7
64	DISCo-microbe: design of an identifiable synthetic community of microbes. <i>PeerJ</i> , 2020, 8, e8534.	0.9	7
65	Modeling the molecular and climatic controls on flowering. <i>New Phytologist</i> , 2012, 194, 599-601.	3.5	6
66	The physiological acclimation and growth response of <i>Populus trichocarpa</i> to warming. <i>Physiologia Plantarum</i> , 2021, 173, 1008-1029.	2.6	5
67	Biological Parts for Plant Biodesign to Enhance Land-Based Carbon Dioxide Removal. <i>Biodesign Research</i> , 2021, 2021, .	0.8	5
68	Scaling nitrogen and carbon interactions: what are the consequences of biological buffering?. <i>Ecology and Evolution</i> , 2015, 5, 2839-2850.	0.8	4
69	Protocol for Projecting Allele Frequency Change under Future Climate Change at Adaptive-Associated Loci. <i>STAR Protocols</i> , 2020, 1, 100061.	0.5	4
70	Extending the <i>Arabidopsis</i> flowering paradigm to a mass flowering phenomenon in the tropics. <i>Molecular Ecology</i> , 2013, 22, 4603-4605.	2.0	1
71	Insights into the Role of Rubisco Activase in Heat Stress-limited Photosynthesis. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2004, 39, 855D-855.	0.5	0