David J Weston

List of Publications by Year
in descending order

71 papers	4,598 citations	117625 34 h-index	110387 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. Nature Biotechnology, 2018, 36, 566-569.	17.5	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. New Phytologist, 2015, 207, 491-504.	7.3	211
3	Engineering crassulacean acid metabolism to improve water-use efficiency. Trends in Plant Science, 2014, 19, 327-338.	8.8	206
4	Transcript, protein and metabolite temporal dynamics in the CAM plant Agave. Nature Plants, 2016, 2, 16178.	9.3	158
5	ATMOSPHERE: Plant Respiration in a Warmer World. Science, 2006, 312, 536-537.	12.6	137
6	The F-Box Gene Family Is Expanded in Herbaceous Annual Plants Relative to Woody Perennial Plants Â. Plant Physiology, 2008, 148, 1189-1200.	4.8	125
7	The <i>Sphagnum</i> microbiome: new insights from an ancient plant lineage. New Phytologist, 2016, 211, 57-64.	7.3	123
8	A Dual Role of Strigolactones in Phosphate Acquisition and Utilization in Plants. International Journal of Molecular Sciences, 2013, 14, 7681-7701.	4.1	117
9	Two Poplar-Associated Bacterial Isolates Induce Additive Favorable Responses in a Constructed Plant-Microbiome System. Frontiers in Plant Science, 2016, 7, 497.	3.6	113
10	Involvement of Arabidopsis RACK1 in Protein Translation and Its Regulation by Abscisic Acid Â Â Â. Plant Physiology, 2011, 155, 370-383.	4.8	111
11	Connecting genes, coexpression modules, and molecular signatures to environmental stress phenotypes in plants. BMC Systems Biology, 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. Molecular Plant-Microbe Interactions, 2012, 25, 765-778.	2.6	100
13	Leaf absorptance of photosynthetically active radiation in relation to chlorophyll meter estimates among woody plant species. Scientia Horticulturae, 2004, 101, 169-178.	3.6	97
14	Asymmetrical effects of mesophyll conductance on fundamental photosynthetic parameters and their relationships estimated from leaf gas exchange measurements. Plant, Cell and Environment, 2014, 37, 978-994.	5.7	90
15	Abiotic Stresses Shift Belowground <i>Populus</i> -Associated Bacteria Toward a Core Stress Microbiome. MSystems, 2018, 3, .	3.8	89
16	Experimental warming alters the community composition, diversity, and N₂ fixation activity of peat moss (<i>Sphagnum fallax</i>) microbiomes. Global Change Biology, 2019, 25, 2993-3004.	9.5	89
17	Abscisic Acid Receptors: Past, Present and Future^F. Journal of Integrative Plant Biology, 2011, 53, 469-479.	8.5	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>. Plant, Cell and Environment, 2011, 34, 1488-1506.	5.7	71

#	Article	IF	Citations
19	Microbial-type terpene synthase genes occur widely in nonseed land plants, but not in seed plants. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12328-12333.	7.1	70
20	Newly identified helper bacteria stimulate ectomycorrhizal formation in Populus. Frontiers in Plant Science, 2014, 5, 579.	3.6	68
21	Inhibition and acclimation of C3 photosynthesis to moderate heat: a perspective from thermally contrasting genotypes of Acer rubrum (red maple). Tree Physiology, 2007, 27, 1083-1092.	3.1	65
22	Diel rewiring and positive selection of ancient plant proteins enabled evolution of CAM photosynthesis in Agave. BMC Genomics, 2018, 19, 588.	2.8	64
23	Root bacterial endophytes alter plant phenotype, but not physiology. PeerJ, 2016, 4, e2606.	2.0	64
24	Transcriptional responses of Arabidopsis thaliana to chewing and sucking insect herbivores. Frontiers in Plant Science, 2014, 5, 565.	3.6	61
25	Metabolic functions of Pseudomonas fluorescens strains from Populus deltoides depend on rhizosphere or endosphere isolation compartment. Frontiers in Microbiology, 2015, 6, 1118.	3.5	60
26	<scp><i>S</i></scp><i>phagnum</i> physiology in the context of changing climate: emergent influences of genomics, modelling and hostâ€“microbiome interactions on understanding ecosystem function. Plant, Cell and Environment, 2015, 38, 1737-1751.	5.7	60
27	Climateâ€resilient agroforestry: physiological responses to climate change and engineering of crassulacean acid metabolism (<scp>CAM</scp>) as a mitigation strategy. Plant, Cell and Environment, 2015, 38, 1833-1849.	5.7	59
28	Analyses of transcriptome sequences reveal multiple ancient largeâ€scale duplication events in the ancestor of Sphagnopsida (Bryophyta). New Phytologist, 2016, 211, 300-318.	7.3	56
29	Root and Rhizosphere Bacterial Phosphatase Activity Varies with Tree Species and Soil Phosphorus Availability in Puerto Rico Tropical Forest. Frontiers in Plant Science, 2017, 8, 1834.	3.6	54
30	The Sphagnome Project: enabling ecological and evolutionary insights through a genusâ€level sequencing project. New Phytologist, 2018, 217, 16-25.	7.3	54
31	Extensive Genome-Wide Phylogenetic Discordance Is Due to Incomplete Lineage Sorting and Not Ongoing Introgression in a Rapidly Radiated Bryophyte Genus. Molecular Biology and Evolution, 2021, 38, 2750-2766.	8.9	54
32	A Carotenoid-Deficient Mutant in Pantoea sp. YR343, a Bacteria Isolated from the Rhizosphere of Populus deltoides, Is Defective in Root Colonization. Frontiers in Microbiology, 2016, 7, 491.	3.5	48
33	Molybdenum-Based Diazotrophy in a Sphagnum Peatland in Northern Minnesota. Applied and Environmental Microbiology, 2017, 83, .	3.1	46
34	Informing models through empirical relationships between foliar phosphorus, nitrogen and photosynthesis across diverse woody species in tropical forests of Panama. New Phytologist, 2017, 215, 1425-1437.	7.3	46
35	Efficient Purging of Deleterious Mutations in Plants with Haploid Selfing. Genome Biology and Evolution, 2014, 6, 1238-1252.	2.5	38
36	Gene expression profiling: opening the black box of plant ecosystem responses to global change. Global Change Biology, 2009, 15, 1201-1213.	9.5	35

#	Article	IF	Citations
37	Leaf endophytes and <i>Populus</i> genotype affect severity of damage from the necrotrophic leaf pathogen, <i>Drepanopeziza populi</i>. Ecosphere, 2013, 4, 1-12.	2.2	35
38	Phylogenomics reveals convergent evolution of red-violet coloration in land plants and the origins of the anthocyanin biosynthetic pathway. Molecular Phylogenetics and Evolution, 2020, 151, 106904.	2.7	35
39	Temporal and Spatial Variation in Peatland Carbon Cycling and Implications for Interpreting Responses of an Ecosystemâ€Scale Warming Experiment. Soil Science Society of America Journal, 2017, 81, 1668-1688.	2.2	34
40	Characterization of Rubisco activase from thermally contrasting genotypes of <i>Acer rubrum</i> (Aceraceae). American Journal of Botany, 2007, 94, 926-934.	1.7	30
41	Multimodal MSI in Conjunction with Broad Coverage Spatially Resolved MS² Increases Confidence in Both Molecular Identification and Localization. Analytical Chemistry, 2018, 90, 702-707.	6.5	30
42	Bringing function to structure: Rootâ€œsoil interactions shaping phosphatase activity throughout a soil profile in Puerto Rico. Ecology and Evolution, 2021, 11, 1150-1164.	1.9	28
43	Plant carbohydrate storage: intraâ€•and interâ€specific tradeâ€offs reveal a major life history trait. New Phytologist, 2022, 235, 2211-2222.	7.3	28
44	Diversity of Active Viral Infections within the Sphagnum Microbiome. Applied and Environmental Microbiology, 2018, 84, .	3.1	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. Chemical Communications, 2019, 55, 306-309.	4.1	27
46	Initial characterization of shade avoidance response suggests functional diversity between <i>Populus</i> phytochrome B genes. New Phytologist, 2012, 196, 726-737.	7.3	25
47	Functional Genomics of Drought Tolerance in Bioenergy Crops. Critical Reviews in Plant Sciences, 2014, 33, 205-224.	5.7	25
48	Novel metabolic interactions and environmental conditions mediate the boreal peatmoss-cyanobacteria mutualism. ISME Journal, 2022, 16, 1074-1085.	9.8	25
49	A New Perspective on Ecological Prediction Reveals Limits to Climate Adaptation in a Temperate Tree Species. Current Biology, 2020, 30, 1447-1453.e4.	3.9	23
50	Biophysical drivers of seasonal variability in <i>Sphagnum</i> gross primary production in a northern temperate bog. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 1078-1097.	3.0	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. MBio, 2022, 13, .	4.1	18
52	Habitatâ€adapted microbial communities mediate <i>Sphagnum</i> peatmoss resilience to warming. New Phytologist, 2022, 234, 2111-2125.	7.3	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 CO₂. Biogeosciences, 2021, 18, 467-486.	3.3	17
54	Cultivating the Bacterial Microbiota of <i>Populus</i> Roots. MSystems, 2021, 6, e0130620.	3.8	17

#	Article	IF	Citations
55	Biosystems Design to Accelerate C ₃ -to-CAM Progression. Biodesign Research, 2020, 2020, .	1.9	16
56	Plant Biosystems Design Research Roadmap 1.0. Biodesign Research, 2020, 2020, .	1.9	16
57	Nitrogen and phosphorus cycling in an ombrotrophic peatland: a benchmark for assessing change. Plant and Soil, 2021, 466, 649-674.	3.7	15
58	<i>Populus</i>Responses to Edaphic and Climatic Cues: Emerging Evidence from Systems Biology Research. Critical Reviews in Plant Sciences, 2009, 28, 368-374.	5.7	14
59	From systems biology to photosynthesis and whole-plant physiology. Plant Signaling and Behavior, 2012, 7, 260-262.	2.4	13
60	Correlating laser-induced breakdown spectroscopy with neutron activation analysis to determine the elemental concentration in the ionome of the Populus trichocarpa leaf. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 138, 46-53.	2.9	11
61	Genomics in a changing arctic: critical questions await the molecular ecologist. Molecular Ecology, 2015, 24, 2301-2309.	3.9	10
62	Relatively rare root endophytic bacteria drive plant resource allocation patterns and tissue nutrient concentration in unpredictable ways. American Journal of Botany, 2019, 106, 1423-1434.	1.7	9
63	Evolutionary analyses of nonâ€family genes in plants. Plant Journal, 2013, 73, 788-797.	5.7	7
64	DISCo-microbe: design of an identifiable synthetic community of microbes. PeerJ, 2020, 8, e8534.	2.0	7
65	Modeling the molecular and climatic controls on flowering. New Phytologist, 2012, 194, 599-601.	7.3	6
66	The physiological acclimation and growth response of Populus trichocarpa to warming. Physiologia Plantarum, 2021, 173, 1008-1029.	5.2	5
67	Biological Parts for Plant Biodesign to Enhance Land-Based Carbon Dioxide Removal. Biodesign Research, 2021, 2021, .	1.9	5
68	Scaling nitrogen and carbon interactions: what are the consequences of biological buffering?. Ecology and Evolution, 2015, 5, 2839-2850.	1.9	4
69	Protocol for Projecting Allele Frequency Change underÂFuture Climate Change at Adaptive-AssociatedÂLoci. STAR Protocols, 2020, 1, 100061.	1.2	4
70	Extending the Arabidopsis flowering paradigm to a mass flowering phenomenon in the tropics. Molecular Ecology, 2013, 22, 4603-4605.	3.9	1
71	Insights into the Role of Rubisco Activase in Heat Stress-limited Photosynthesis. Hortscience: A Publication of the American Society for Hortcultural Science, 2004, 39, 855D-855.	1.0	0