

# Lawrence B Smart

## List of Publications by Year in descending order

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Version: 2024-02-01

80  
papers

3,279  
citations

136740

32  
h-index

168136

53  
g-index

92  
all docs

92  
docs citations

92  
times ranked

3298  
citing authors

#	ARTICLE	IF	CITATIONS
1	Increased Accumulation of Cuticular Wax and Expression of Lipid Transfer Protein in Response to Periodic Drying Events in Leaves of Tree Tobacco. <i>Plant Physiology</i> , 2006, 140, 176-183.	2.3	357
2	The development of short-rotation willow in the northeastern United States for bioenergy and bioproducts, agroforestry and phytoremediation. <i>Biomass and Bioenergy</i> , 2006, 30, 715-727.	2.9	237
3	Genes Involved in Osmoregulation during Turgor-Driven Cell Expansion of Developing Cotton Fibers Are Differentially Regulated1. <i>Plant Physiology</i> , 1998, 116, 1539-1549.	2.3	177
4	MIP Genes are Down-regulated Under Drought Stress in <i>Nicotiana glauca</i> . <i>Plant and Cell Physiology</i> , 2001, 42, 686-693.	1.5	134
5	Breeding progress and preparedness for mass-scale deployment of perennial lignocellulosic biomass crops switchgrass, miscanthus, willow and poplar. <i>GCB Bioenergy</i> , 2019, 11, 118-151.	2.5	116
6	Phylogenomics of the genus <i>Populus</i> reveals extensive interspecific gene flow and balancing selection. <i>New Phytologist</i> , 2020, 225, 1370-1382.	3.5	93
7	Yield and Woody Biomass Traits of Novel Shrub Willow Hybrids at Two Contrasting Sites. <i>Bioenergy Research</i> , 2013, 6, 533-546.	2.2	92
8	Untapped Potential: Opportunities and Challenges for Sustainable Bioenergy Production from Marginal Lands in the Northeast USA. <i>Bioenergy Research</i> , 2015, 8, 482-501.	2.2	79
9	Development and validation of genetic markers for sex and cannabinoid chemotype in <i>Cannabis sativa</i> L.. <i>GCB Bioenergy</i> , 2020, 12, 213-222.	2.5	77
10	A willow sex chromosome reveals convergent evolution of complex palindromic repeats. <i>Genome Biology</i> , 2020, 21, 38.	3.8	74
11	Absence of PsaC subunit allows assembly of photosystem I core but prevents the binding of PsaD and PsaE in <i>Synechocystis</i> sp. PCC6803. <i>Plant Molecular Biology</i> , 1995, 29, 331-342.	2.0	70
12	Analysis of Biomass Composition Using High-Resolution Thermogravimetric Analysis and Percent Bark Content for the Selection of Shrub Willow Bioenergy Crop Varieties. <i>Bioenergy Research</i> , 2009, 2, 1-9.	2.2	61
13	Characterization of a large sex determination region in <i>Salix purpurea</i> L. (Salicaceae). <i>Molecular Genetics and Genomics</i> , 2018, 293, 1437-1452.	1.0	61
14	Expression of photosynthesis genes in the cyanobacterium <i>Synechocystis</i> sp. PCC 6803:psaA-psaB andpsbA transcripts accumulate in dark-grown cells. <i>Plant Molecular Biology</i> , 1991, 17, 959-971.	2.0	55
15	Mutational analysis of the structure and biogenesis of the photosystem I reaction center in the cyanobacterium <i>Synechocystis</i> sp. PCC 6803.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1993, 90, 1132-1136.	3.3	54
16	Poplar and shrub willow energy crops in the United States: field trial results from the multiyear regional feedstock partnership and yield potential maps based on the PRISM-ELM model. <i>GCB Bioenergy</i> , 2018, 10, 735-751.	2.5	54
17	Pathways to sex determination in plants: how many roads lead to Rome?. <i>Current Opinion in Plant Biology</i> , 2020, 54, 61-68.	3.5	54
18	A General Model to Explain Repeated Turnovers of Sex Determination in the Salicaceae. <i>Molecular Biology and Evolution</i> , 2021, 38, 968-980.	3.5	53

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19	Diversity of cuticular wax among <i>Salix</i> species and <i>Populus</i> species hybrids. <i>Phytochemistry</i> , 2002, 60, 715-725.	1.4	52
20	Early selection of novel triploid hybrids of shrub willow with improved biomass yield relative to diploids. <i>BMC Plant Biology</i> , 2014, 14, 74.	1.6	50
21	Hardwood Tree Genomics: Unlocking Woody Plant Biology. <i>Frontiers in Plant Science</i> , 2018, 9, 1799.	1.7	50
22	Season-long characterization of high-cannabinoid hemp ( <i>Cannabis sativa</i> L.) reveals variation in cannabinoid accumulation, flowering time, and disease resistance. <i>GCB Bioenergy</i> , 2021, 13, 546-561.	2.5	50
23	Site-directed conversion of cysteine-565 to serine in PsaB of photosystem I results in the assembly of iron-sulfur [3Fe-4S] and iron-sulfur [4Fe-4S] clusters in Fx. A mixed-ligand iron-sulfur [4Fe-4S] cluster is capable of electron transfer to FA and FB. <i>Biochemistry</i> , 1993, 32, 4411-4419.	1.2	49
24	Ploidy Level Affects Important Biomass Traits of Novel Shrub Willow ( <i>Salix</i> ) Hybrids. <i>Bioenergy Research</i> , 2015, 8, 259-269.	2.2	47
25	Hydroponic Screening of Shrub Willow ( <i>Salix</i> Spp.) for Arsenic Tolerance and Uptake. <i>International Journal of Phytoremediation</i> , 2008, 10, 515-528.	1.7	44
26	A mixed-ligand iron-sulfur cluster (C556SPaB or C565SPsaB) in the Fx-binding site leads to a decreased quantum efficiency of electron transfer in photosystem I. <i>Biophysical Journal</i> , 1995, 69, 1544-1553.	0.2	42
27	Differential expression of genes encoding phosphate transporters contributes to arsenic tolerance and accumulation in shrub willow ( <i>Salix</i> spp.). <i>Environmental and Experimental Botany</i> , 2012, 75, 248-257.	2.0	41
28	Genotype × environment interaction analysis of North American shrub willow yield trials confirms superior performance of triploid hybrids. <i>GCB Bioenergy</i> , 2017, 9, 445-459.	2.5	41
29	Enzymatic saccharification of shrub willow genotypes with differing biomass composition for biofuel production. <i>Frontiers in Plant Science</i> , 2013, 4, 57.	1.7	39
30	Joint linkage and association mapping of complex traits in shrub willow ( <i>Salix purpurea</i> L.). <i>Annals of Botany</i> , 2019, 124, 701-715.	1.4	37
31	High-resolution Thermogravimetric Analysis For Rapid Characterization of Biomass Composition and Selection of Shrub Willow Varieties. <i>Applied Biochemistry and Biotechnology</i> , 2008, 145, 3-11.	1.4	36
32	Population genetic structure of native versus naturalized sympatric shrub willows ( <i>Salix</i> ); Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	0.8	36
33	Dominance and Sexual Dimorphism Pervade the <i>Salix purpurea</i> L. Transcriptome. <i>Genome Biology and Evolution</i> , 2017, 9, 2377-2394.	1.1	35
34	Effects of nitrogen fertilization in shrub willow short rotation coppice production – a quantitative review. <i>GCB Bioenergy</i> , 2018, 10, 548-564.	2.5	34
35	Limited effect of environmental stress on cannabinoid profiles in high-cannabidiol hemp ( <i>Cannabis</i> ) Tj ETQq1 1 0.784314 rgBT /Ove	2.5	32
36	Genetic inactivation of the <i>psaB</i> gene in <i>Synechocystis</i> sp. PCC 6803 disrupts assembly of photosystem I. <i>Plant Molecular Biology</i> , 1993, 21, 177-180.	2.0	31

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37	Cross-Infectivity of Powdery Mildew Isolates Originating from Hemp ( <i>Cannabis sativa</i> ) and Japanese Hop ( <i>Humulus japonicus</i> ) in New York. <i>Plant Health Progress</i> , 2020, 21, 47-53.	0.8	30
38	Contributions of environment and genotype to variation in shrub willow biomass composition. <i>Industrial Crops and Products</i> , 2017, 108, 149-161.	2.5	29
39	Biological conversion assay using <i>Clostridium</i> phytofermentans to estimate plant feedstock quality. <i>Biotechnology for Biofuels</i> , 2012, 5, 5.	6.2	28
40	Sex determination through X <sup>Y</sup> heterogamety in <i>Salix nigra</i> . <i>Heredity</i> , 2021, 126, 630-639.	1.2	26
41	Genetic Improvement of Willow ( <i>Salix</i> spp.) as a Dedicated Bioenergy Crop. , 2008, , 377-396.		26
42	Whole-Genome Sequences of 13 Endophytic Bacteria Isolated from Shrub Willow ( <i>Salix</i> ) Grown in Geneva, New York. <i>Genome Announcements</i> , 2014, 2, .	0.8	25
43	Predicting within-family variability in juvenile height growth of <i>Salix</i> based upon similarity among parental AFLP fingerprints. <i>Theoretical and Applied Genetics</i> , 2002, 105, 106-112.	1.8	21
44	Quantitative Genetics of Traits Indicative of Biomass Production and Heterosis in 34 Full-sib F1 <i>Salix eriocephala</i> Families. <i>Bioenergy Research</i> , 2008, 1, 80-90.	2.2	21
45	Collection and storage of pollen from <i>Salix</i> ( <i>Salicaceae</i> ). <i>American Journal of Botany</i> , 2002, 89, 248-252.	0.8	19
46	A mixed model approach for evaluating yield improvements in interspecific hybrids of shrub willow, a dedicated bioenergy crop. <i>Industrial Crops and Products</i> , 2017, 96, 57-70.	2.5	19
47	Morphometric relationships and their contribution to biomass and cannabinoid yield in hybrids of hemp ( <i>Cannabis sativa</i> ). <i>Journal of Experimental Botany</i> , 2021, 72, 7694-7709.	2.4	18
48	Cuticular wax composition of <i>Salix</i> varieties in relation to biomass productivity. <i>Phytochemistry</i> , 2008, 69, 396-402.	1.4	17
49	Correlations of expression of cell wall biosynthesis genes with variation in biomass composition in shrub willow ( <i>Salix</i> spp.) biomass crops. <i>Tree Genetics and Genomes</i> , 2012, 8, 775-788.	0.6	17
50	Isolation of genes predominantly expressed in guard cells and epidermal cells of <i>Nicotiana glauca</i> . <i>Plant Molecular Biology</i> , 2000, 42, 857-869.	2.0	16
51	Sexual dimorphism in the dioecious willow <i>Salix purpurea</i> . <i>American Journal of Botany</i> , 2021, 108, 1374-1387.	0.8	14
52	Variability in pyrolysis product yield from novel shrub willow genotypes. <i>Biomass and Bioenergy</i> , 2015, 72, 74-84.	2.9	13
53	Genetic diversity and population structure of native, naturalized, and cultivated <i>Salix purpurea</i> . <i>Tree Genetics and Genomes</i> , 2019, 15, 1.	0.6	13
54	Genetic evidence for three discrete taxa of <i>Melampsora</i> (Pucciniales) affecting willows ( <i>Salix</i> spp.) in New York State. <i>Fungal Biology</i> , 2014, 118, 704-720.	1.1	12

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55	Tolerance of novel inter-specific shrub willow hybrids to water stress. <i>Trees - Structure and Function</i> , 2019, 33, 1015-1026.	0.9	12
56	Evaluating the Microbiome of Hemp. <i>Phytobiomes Journal</i> , 2020, 4, 351-363.	1.4	12
57	Integrative genomics reveals paths to sex dimorphism in <i>Salix purpurea</i> L. <i>Horticulture Research</i> , 2021, 8, 170.	2.9	12
58	Shrub Willow. , 2012, , 687-708.		11
59	A Molecular and Fitness Evaluation of Commercially Available versus Locally Collected Blue Lupine <i>Lupinus perennis</i> L. Seeds for Use in Ecosystem Restoration Efforts. <i>Restoration Ecology</i> , 2012, 20, 456-461.	1.4	10
60	Electrical capacitance as a predictor of root dry weight in shrub willow ( <i>Salix</i> ; Salicaceae) parents and progeny. <i>Applications in Plant Sciences</i> , 2016, 4, 1600031.	0.8	10
61	Developing Production Guidelines for Baby Leaf Hemp ( <i>Cannabis sativa</i> L.) as an Edible Salad Green: Cultivar, Sowing Density and Seed Size. <i>Agriculture (Switzerland)</i> , 2020, 10, 617.	1.4	10
62	Differential Susceptibility of Diverse <i>Salix</i> spp. to <i>Melampsora americana</i> and <i>Melampsora paradoxa</i> . <i>Plant Disease</i> , 2020, 104, 2949-2957.	0.7	9
63	Microbiome of Field Grown Hemp Reveals Potential Microbial Interactions With Root and Rhizosphere Soil. <i>Frontiers in Microbiology</i> , 2021, 12, 741597.	1.5	9
64	Mapping the sex determination region in the <i>Salix</i> F1 hybrid common parent population confirms a ZW system in six diverse species. <i>G3: Genes, Genomes, Genetics</i> , 2022, 12, .	0.8	9
65	Differential growth response to fertilization of ten elite shrub willow ( <i>Salix</i> spp.) bioenergy cultivars. <i>Trees - Structure and Function</i> , 2018, 32, 1061-1072.	0.9	8
66	Genetic mapping of sexually dimorphic volatile and non-volatile floral secondary chemistry of a dioecious willow. <i>Journal of Experimental Botany</i> , 2022, 73, 6352-6366.	2.4	8
67	Discovery of Geographically Robust Hybrid Poplar Clones. <i>Silvae Genetica</i> , 2019, 68, 101-110.	0.4	7
68	Effects of Cold Temperature and Acclimation on Cold Tolerance and Cannabinoid Profiles of <i>Cannabis sativa</i> L. (Hemp). <i>Horticulturae</i> , 2022, 8, 531.	1.2	7
69	A second member of the <i>Nicotiana glauca</i> lipid transfer protein gene family, NgLTP2, encodes a divergent and differentially expressed protein. <i>Functional Plant Biology</i> , 2006, 33, 141.	1.1	6
70	Genotypic diversity in willow ( <i>Salix</i> spp.) is associated with chemical and morphological polymorphism, suggesting human-assisted dissemination in the Eastern Mediterranean. <i>Biochemical Systematics and Ecology</i> , 2020, 91, 104081.	0.6	6
71	Heterosis for Biomass-Related Traits in Interspecific Triploid Hybrids of Willow ( <i>Salix</i> spp.). <i>Bioenergy Research</i> , 2022, 15, 1042-1056.	2.2	5
72	Comparative transcriptomics and eQTL mapping of response to <i>Melampsora americana</i> in selected <i>Salix purpurea</i> F2 progeny. <i>BMC Genomics</i> , 2022, 23, 71.	1.2	5

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73	Isolation of RNA and Protein from Guard Cells of <i>Nicotiana glauca</i> . <i>Plant Molecular Biology Reporter</i> , 1999, 17, 371-383.	1.0	4
74	Transcriptome analysis of contrasting resistance to herbivory by <i>Empoasca fabae</i> in two shrub willow species and their hybrid progeny. <i>PLoS ONE</i> , 2020, 15, e0236586.	1.1	4
75	Genetic and Environmental Influences on First Rotation Shrub Willow ( <i>Salix</i> spp.) Bark and Wood Elemental Composition. <i>Bioenergy Research</i> , 2020, 13, 797-809.	2.2	4
76	Yield and biomass quality of shrub willow hybrids in differing rotation lengths and spacing designs. <i>Biomass and Bioenergy</i> , 2021, 146, 105977.	2.9	4
77	A semi-commercial case study of willow biomass production in the northeastern United States. <i>Agronomy Journal</i> , 2021, 113, 1287-1302.	0.9	3
78	Nonadditive gene expression is correlated with nonadditive phenotypic expression in interspecific triploid hybrids of willow ( <i>Salix</i> spp.). <i>G3: Genes, Genomes, Genetics</i> , 2022, 12, .	0.8	3
79	The <i>Melampsora americana</i> population on <i>Salix purpurea</i> in the Great Lakes region is highly diverse with a contributory influence of clonality. <i>Phytopathology</i> , 2021, , .	1.1	2
80	Introduction: United States Hemp Research and Education Conference special issue. <i>GCB Bioenergy</i> , 2021, 13, 516-516.	2.5	0