Lawrence B Smart

List of Publications by Year
in descending order

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	Heterosis for Biomass-Related Traits in Interspecific Triploid Hybrids of Willow (Salix spp.). Bioenergy Research, 2022, 15, 1042-1056.	2.2	5
2	Comparative transcriptomics and eQTL mapping of response to Melampsora americana in selected Salix purpurea F2 progeny. BMC Genomics, 2022, 23, 71.	1.2	5
3	Mapping the sex determination region in the <i>Salix</i> F1 hybrid common parent population confirms a ZW system in six diverse species. G3: Genes, Genomes, Genetics, 2022, 12, .	0.8	9
4	Nonadditive gene expression is correlated with nonadditive phenotypic expression in interspecific triploid hybrids of willow (<i>Salix</i> spp.). G3: Genes, Genomes, Genetics, 2022, 12, .	0.8	3
5	Effects of Cold Temperature and Acclimation on Cold Tolerance and Cannabinoid Profiles of Cannabis sativa L. (Hemp). Horticulturae, 2022, 8, 531.	1.2	7
6	Genetic mapping of sexually dimorphic volatile and non-volatile floral secondary chemistry of a dioecious willow. Journal of Experimental Botany, 2022, 73, 6352-6366.	2.4	8
7	A General Model to Explain Repeated Turnovers of Sex Determination in the Salicaceae. Molecular Biology and Evolution, 2021, 38, 968-980.	3.5	53
8	Seasonâ€long characterization of highâ€cannabinoid hemp (<i>Cannabis sativa</i> L.) reveals variation in cannabinoid accumulation, flowering time, and disease resistance. GCB Bioenergy, 2021, 13, 546-561.	2.5	50
9	Yield and biomass quality of shrub willow hybrids in differing rotation lengths and spacing designs. Biomass and Bioenergy, 2021, 146, 105977.	2.9	4
10	Introduction: United States Hemp Research and Education Conference special issue. GCB Bioenergy, 2021, 13, 516-516.	2.5	0
11	A semiâ€commercial case study of willow biomass production in the northeastern United States. Agronomy Journal, 2021, 113, 1287-1302.	0.9	3
12	Limited effect of environmental stress on cannabinoid profiles in highâ€cannabidiol hemp (<i>Cannabis) Tj ETQq0 0 0 rgBT /Overlock 10	2.5	32
13	Morphometric relationships and their contribution to biomass and cannabinoid yield in hybrids of hemp (<i>Cannabis sativa</i>). Journal of Experimental Botany, 2021, 72, 7694-7709.	2.4	18
14	Integrative genomics reveals paths to sex dimorphism in <i>Salix purpurea</i> L. Horticulture Research, 2021, 8, 170.	2.9	12
15	Sexual dimorphism in the dioecious willow <i>Salix purpurea</i>. American Journal of Botany, 2021, 108, 1374-1387.	0.8	14
16	The Melampsora americana population on Salix purpurea in the Great Lakes region is highly diverse with a contributory influence of clonality. Phytopathology, 2021, , .	1.1	2
17	Sex determination through Xâ€“Y heterogamety in Salix nigra. Heredity, 2021, 126, 630-639.	1.2	26
18	Microbiome of Field Grown Hemp Reveals Potential Microbial Interactions With Root and Rhizosphere Soil. Frontiers in Microbiology, 2021, 12, 741597.	1.5	9

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19	Phylogenomics of the genus <i>Populus</i> reveals extensive interspecific gene flow and balancing selection. New Phytologist, 2020, 225, 1370-1382.	3.5	93
20	Evaluating the Microbiome of Hemp. Phytobiomes Journal, 2020, 4, 351-363.	1.4	12
21	Transcriptome analysis of contrasting resistance to herbivory by Empoasca fabae in two shrub willow species and their hybrid progeny. PLoS ONE, 2020, 15, e0236586.	1.1	4
22	Differential Susceptibility of Diverse <i>Salix</i> spp. to <i>Melampsora americana</i> and <i>Melampsora paradoxa</i>. Plant Disease, 2020, 104, 2949-2957.	0.7	9
23	Developing Production Guidelines for Baby Leaf Hemp (Cannabis sativa L.) as an Edible Salad Green: Cultivar, Sowing Density and Seed Size. Agriculture (Switzerland), 2020, 10, 617.	1.4	10
24	Genotypic diversity in willow (Salix spp.) is associated with chemical and morphological polymorphism, suggesting human-assisted dissemination in the Eastern Mediterranean. Biochemical Systematics and Ecology, 2020, 91, 104081.	0.6	6
25	A willow sex chromosome reveals convergent evolution of complex palindromic repeats. Genome Biology, 2020, 21, 38.	3.8	74
26	Pathways to sex determination in plants: how many roads lead to Rome?. Current Opinion in Plant Biology, 2020, 54, 61-68.	3.5	54
27	Development and validation of genetic markers for sex and cannabinoid chemotype in <i>Cannabis sativa</i> L.. GCB Bioenergy, 2020, 12, 213-222.	2.5	77
28	Genetic and Environmental Influences on First Rotation Shrub Willow (Salix spp.) Bark and Wood Elemental Composition. Bioenergy Research, 2020, 13, 797-809.	2.2	4
29	Cross-Infectivity of Powdery Mildew Isolates Originating from Hemp (<i>Cannabis sativa</i>) and Japanese Hop (<i>Humulus japonicus</i>) in New York. Plant Health Progress, 2020, 21, 47-53.	0.8	30
30	Genetic diversity and population structure of native, naturalized, and cultivated Salix purpurea. Tree Genetics and Genomes, 2019, 15, 1.	0.6	13
31	Joint linkage and association mapping of complex traits in shrub willow (Salix purpurea L.). Annals of Botany, 2019, 124, 701-715.	1.4	37
32	Tolerance of novel inter-specific shrub willow hybrids to water stress. Trees - Structure and Function, 2019, 33, 1015-1026.	0.9	12
33	Breeding progress and preparedness for massâ€scale deployment of perennial lignocellulosic biomass crops switchgrass, miscanthus, willow and poplar. GCB Bioenergy, 2019, 11, 118-151.	2.5	116
34	Discovery of Geographically Robust Hybrid Poplar Clones. Silvae Genetica, 2019, 68, 101-110.	0.4	7
35	Differential growth response to fertilization of ten elite shrub willow (Salix spp.) bioenergy cultivars. Trees - Structure and Function, 2018, 32, 1061-1072.	0.9	8
36	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 PRISMâ€ELM model. GCB Bioenergy, 2018, 10, 735-751.	2.5	54

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37	Effects of nitrogen fertilization in shrub willow short rotation coppice production â€“ a quantitative review. GCB Bioenergy, 2018, 10, 548-564.	2.5	34
38	Hardwood Tree Genomics: Unlocking Woody Plant Biology. Frontiers in Plant Science, 2018, 9, 1799.	1.7	50
39	Characterization of a large sex determination region in Salix purpurea L. (Salicaceae). Molecular Genetics and Genomics, 2018, 293, 1437-1452.	1.0	61
40	Genotype Ã— environment interaction analysis of North American shrub willow yield trials confirms superior performance of triploid hybrids. GCB Bioenergy, 2017, 9, 445-459.	2.5	41
41	A mixed model approach for evaluating yield improvements in interspecific hybrids of shrub willow, a dedicated bioenergy crop. Industrial Crops and Products, 2017, 96, 57-70.	2.5	19
42	Contributions of environment and genotype to variation in shrub willow biomass composition. Industrial Crops and Products, 2017, 108, 149-161.	2.5	29
43	Dominance and Sexual Dimorphism Pervade the Salix purpurea L. Transcriptome. Genome Biology and Evolution, 2017, 9, 2377-2394.	1.1	35
44	Electrical capacitance as a predictor of root dry weight in shrub willow (Salix ; Salicaceae) parents and progeny. Applications in Plant Sciences, 2016, 4, 1600031.	0.8	10
45	Untapped Potential: Opportunities and Challenges for Sustainable Bioenergy Production from Marginal Lands in the Northeast USA. Bioenergy Research, 2015, 8, 482-501.	2.2	79
46	Variability in pyrolysis product yield from novel shrub willow genotypes. Biomass and Bioenergy, 2015, 72, 74-84.	2.9	13
47	Ploidy Level Affects Important Biomass Traits of Novel Shrub Willow (Salix) Hybrids. Bioenergy Research, 2015, 8, 259-269.	2.2	47
48	Whole-Genome Sequences of 13 Endophytic Bacteria Isolated from Shrub Willow (Salix) Grown in Geneva, New York. Genome Announcements, 2014, 2, .	0.8	25
49	Early selection of novel triploid hybrids of shrub willow with improved biomass yield relative to diploids. BMC Plant Biology, 2014, 14, 74.	1.6	50
50	Genetic evidence for three discrete taxa of Melampsora (Pucciniales) affecting willows (Salix spp.) in New York State. Fungal Biology, 2014, 118, 704-720.	1.1	12
51	Yield and Woody Biomass Traits of Novel Shrub Willow Hybrids at Two Contrasting Sites. Bioenergy Research, 2013, 6, 533-546.	2.2	92
52	Enzymatic saccharification of shrub willow genotypes with differing biomass composition for biofuel production. Frontiers in Plant Science, 2013, 4, 57.	1.7	39
53	Correlations of expression of cell wall biosynthesis genes with variation in biomass composition in shrub willow (Salix spp.) biomass crops. Tree Genetics and Genomes, 2012, 8, 775-788.	0.6	17
54	Biological conversion assay using Clostridium phytofermentans to estimate plant feedstock quality. Biotechnology for Biofuels, 2012, 5, 5.	6.2	28

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55	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. Restoration Ecology, 2012, 20, 456-461.	1.4	10
56	Differential expression of genes encoding phosphate transporters contributes to arsenic tolerance and accumulation in shrub willow (Salix spp.). Environmental and Experimental Botany, 2012, 75, 248-257.	2.0	41
57	Shrub Willow. , 2012, , 687-708.		11
58	Analysis of Biomass Composition Using High-Resolution Thermogravimetric Analysis and Percent Bark Content for the Selection of Shrub Willow Bioenergy Crop Varieties. Bioenergy Research, 2009, 2, 1-9.	2.2	61
59	Population genetic structure of native versus naturalized sympatric shrub willows (<i>Salix</i>;) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.8	36
60	High-resolution Thermogravimetric Analysis For Rapid Characterization of Biomass Composition and Selection of Shrub Willow Varieties. Applied Biochemistry and Biotechnology, 2008, 145, 3-11.	1.4	36
61	Quantitative Genetics of Traits Indicative of Biomass Production and Heterosis in 34 Full-sib F1 Salix eriocephala Families. Bioenergy Research, 2008, 1, 80-90.	2.2	21
62	Cuticular wax composition of Salix varieties in relation to biomass productivity. Phytochemistry, 2008, 69, 396-402.	1.4	17
63	Hydroponic Screening of Shrub Willow (<i>Salix</i> Spp.) for Arsenic Tolerance and Uptake. International Journal of Phytoremediation, 2008, 10, 515-528.	1.7	44
64	Genetic Improvement of Willow (Salix spp.) as a Dedicated Bioenergy Crop. , 2008, , 377-396.		26
65	Increased Accumulation of Cuticular Wax and Expression of Lipid Transfer Protein in Response to Periodic Drying Events in Leaves of Tree Tobacco. Plant Physiology, 2006, 140, 176-183.	2.3	357
66	A second member of the Nicotiana glauca lipid transfer protein gene family, NgLTP2, encodes a divergent and differentially expressed protein. Functional Plant Biology, 2006, 33, 141.	1.1	6
67	The development of short-rotation willow in the northeastern United States for bioenergy and bioproducts, agroforestry and phytoremediation. Biomass and Bioenergy, 2006, 30, 715-727.	2.9	237
68	Collection and storage of pollen from <i>Salix</i> (Salicaceae). American Journal of Botany, 2002, 89, 248-252.	0.8	19
69	Predicting within-family variability in juvenile height growth of Salix based upon similarity among parental AFLP fingerprints. Theoretical and Applied Genetics, 2002, 105, 106-112.	1.8	21
70	Diversity of cuticular wax among Salix species and Populus species hybrids. Phytochemistry, 2002, 60, 715-725.	1.4	52
71	MIP Genes are Down-regulated Under Drought Stress in Nicotiana glauca. Plant and Cell Physiology, 2001, 42, 686-693.	1.5	134
72	Isolation of genes predominantly expressed in guard cells and epidermal cells of Nicotiana glauca. Plant Molecular Biology, 2000, 42, 857-869.	2.0	16

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73	Isolation of RNA and Protein from Guard Cells of Nicotiana glauca. Plant Molecular Biology Reporter, 1999, 17, 371-383.	1.0	4
74	Genes Involved in Osmoregulation during Turgor-Driven Cell Expansion of Developing Cotton Fibers Are Differentially Regulated1. Plant Physiology, 1998, 116, 1539-1549.	2.3	177
75	Absence of PsaC subunit allows assembly of photosystem I core but prevents the binding of PsaD and PsaE in Synechocystis sp. PCC6803. Plant Molecular Biology, 1995, 29, 331-342.	2.0	70
76	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. Biophysical Journal, 1995, 69, 1544-1553.	0.2	42
77	Genetic inactivation of the psaB gene in Synechocystis sp. PCC 6803 disrupts assembly of photosystem I. Plant Molecular Biology, 1993, 21, 177-180.	2.0	31
78	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. Biochemistry, 1993, 32, 4411-4419.	1.2	49
79	Mutational analysis of the structure and biogenesis of the photosystem I reaction center in the cyanobacterium Synechocystis sp. PCC 6803.. Proceedings of the National Academy of Sciences of the United States of America, 1993, 90, 1132-1136.	3.3	54
80	Expression of photosynthesis genes in the cyanobacteriumSynechocystis sp. PCC 6803:psaA-psaB andpsbA transcripts accumulate in dark-grown cells. Plant Molecular Biology, 1991, 17, 959-971.	2.0	55