

Carroll P Vance

List of Publications by Year in descending order

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papers

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126
docs citations

126
times ranked

10821
citing authors

#	ARTICLE	IF	CITATIONS
1	Phosphorus acquisition and use: critical adaptations by plants for securing a nonrenewable resource. <i>New Phytologist</i> , 2003, 157, 423-447.	7.3	2,243
2	Legumes: Importance and Constraints to Greater Use. <i>Plant Physiology</i> , 2003, 131, 872-877.	4.8	1,351
3	Symbiotic Nitrogen Fixation and Phosphorus Acquisition. <i>Plant Nutrition in a World of Declining Renewable Resources</i> . <i>Plant Physiology</i> , 2001, 127, 390-397.	4.8	687
4	RNA-Seq Atlas of <i>Glycine max</i> : A guide to the soybean transcriptome. <i>BMC Plant Biology</i> , 2010, 10, 160.	3.6	634
5	Overexpression of Malate Dehydrogenase in Transgenic Alfalfa Enhances Organic Acid Synthesis and Confers Tolerance to Aluminum. <i>Plant Physiology</i> , 2001, 127, 1836-1844.	4.8	339
6	Phosphorus Stress in Common Bean: Root Transcript and Metabolic Responses. <i>Plant Physiology</i> , 2007, 144, 752-767.	4.8	300
7	Fungal Development and Induction of Defense Response Genes During Early Infection of Wheat Spikes by <i>Fusarium graminearum</i> . <i>Molecular Plant-Microbe Interactions</i> , 2000, 13, 159-169.	2.6	271
8	Root Nodule Enzymes of Ammonia Assimilation in Alfalfa (<i>Medicago sativa</i> L.). <i>Plant Physiology</i> , 1981, 67, 1198-1203.	4.8	236
9	Nitrogen Fixation, Nodule Development, and Vegetative Regrowth of Alfalfa (<i>Medicago sativa</i> L.) following Harvest. <i>Plant Physiology</i> , 1979, 64, 1-8.	4.8	231
10	Genome-Wide Identification of Nodule-Specific Transcripts in the Model Legume <i>Medicago truncatula</i> . <i>Plant Physiology</i> , 2002, 130, 519-537.	4.8	229
11	Glutamate synthase and nitrogen assimilation. <i>Trends in Plant Science</i> , 1998, 3, 51-56.	8.8	197
12	An RNA-Seq Transcriptome Analysis of Orthophosphate-Deficient White Lupin Reveals Novel Insights into Phosphorus Acclimation in Plants. <i>Plant Physiology</i> , 2013, 161, 705-724.	4.8	184
13	Proteoid Root Development of Phosphorus Deficient Lupin is Mimicked by Auxin and Phosphonate. <i>Annals of Botany</i> , 2000, 85, 921-928.	2.9	179
14	Nylon Filter Arrays Reveal Differential Gene Expression in Proteoid Roots of White Lupin in Response to Phosphorus Deficiency. <i>Plant Physiology</i> , 2003, 131, 1064-1079.	4.8	178
15	Essential role of MYB transcription factor: PvPHR1 and microRNA: PvmiR399 in phosphorus deficiency signalling in common bean roots. <i>Plant, Cell and Environment</i> , 2008, 31, 1834-1843.	5.7	178
16	Phenotypic and Genomic Analyses of a Fast Neutron Mutant Population Resource in Soybean. <i>Plant Physiology</i> , 2011, 156, 240-253.	4.8	175
17	MicroRNA expression profile in common bean (<i>Phaseolus vulgaris</i>) under nutrient deficiency stresses and manganese toxicity. <i>New Phytologist</i> , 2010, 187, 805-818.	7.3	174
18	Nitrogen Fixation by White Lupin under Phosphorus Deficiency. <i>Annals of Botany</i> , 2006, 98, 731-740.	2.9	170

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19	Molecular Control of Acid Phosphatase Secretion into the Rhizosphere of Proteoid Roots from Phosphorus-Stressed White Lupin. <i>Plant Physiology</i> , 2001, 127, 594-606.	4.8	165
20	Global Changes in the Transcript and Metabolic Profiles during Symbiotic Nitrogen Fixation in Phosphorus-Stressed Common Bean Plants. <i>Plant Physiology</i> , 2009, 151, 1221-1238.	4.8	163
21	Signaling of phosphorus deficiency-induced gene expression in white lupin requires sugar and phloem transport. <i>Plant Journal</i> , 2004, 41, 257-268.	5.7	157
22	Alfalfa malate dehydrogenase (MDH): molecular cloning and characterization of five different forms reveals a unique nodule-enhanced MDH. <i>Plant Journal</i> , 1998, 15, 173-184.	5.7	152
23	RNA Interference Identifies a Calcium-Dependent Protein Kinase Involved in <i>Medicago truncatula</i> Root Development. <i>Plant Cell</i> , 2005, 17, 2911-2921.	6.6	147
24	An RNA-Seq based gene expression atlas of the common bean. <i>BMC Genomics</i> , 2014, 15, 866.	2.8	142
25	Sequencing and Analysis of Common Bean ESTs. Building a Foundation for Functional Genomics. <i>Plant Physiology</i> , 2005, 137, 1211-1227.	4.8	138
26	The Composition and Origins of Genomic Variation among Individuals of the Soybean Reference Cultivar Williams 82. <i>Plant Physiology</i> , 2011, 155, 645-655.	4.8	137
27	Using RNA-Seq for gene identification, polymorphism detection and transcript profiling in two alfalfa genotypes with divergent cell wall composition in stems. <i>BMC Genomics</i> , 2011, 12, 199.	2.8	131
28	Products of Dark CO ₂ Fixation in Pea Root Nodules Support Bacteroid Metabolism. <i>Plant Physiology</i> , 1990, 93, 12-19.	4.8	124
29	Acclimation of white lupin to phosphorus deficiency involves enhanced expression of genes related to organic acid metabolism. <i>Plant and Soil</i> , 2003, 248, 99-116.	3.7	115
30	Localization of Superoxide Dismutases and Hydrogen Peroxide in Legume Root Nodules. <i>Molecular Plant-Microbe Interactions</i> , 2004, 17, 1294-1305.	2.6	115
31	Primary assimilation of nitrogen in alfalfa nodules: molecular features of the enzymes involved. <i>Plant Science</i> , 1994, 101, 51-64.	3.6	98
32	Complementary genetic and genomic approaches help characterize the linkage group I seed protein QTL in soybean. <i>BMC Plant Biology</i> , 2010, 10, 41.	3.6	96
33	Systemic Signaling and Local Sensing of Phosphate in Common Bean: Cross-Talk between Photosynthate and MicroRNA399. <i>Molecular Plant</i> , 2010, 3, 428-437.	8.3	93
34	Alfalfa Root Nodule Carbon Dioxide Fixation. <i>Plant Physiology</i> , 1983, 72, 469-473.	4.8	88
35	Biodegradation of atrazine in transgenic plants expressing a modified bacterial atrazine chlorohydrolase (<i>atzA</i>) gene. <i>Plant Biotechnology Journal</i> , 2005, 3, 475-486.	8.3	86
36	Systemic expression of defense response genes in wheat spikes as a response to <i>Fusarium graminearum</i> infection. <i>Physiological and Molecular Plant Pathology</i> , 2001, 58, 1-12.	2.5	85

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37	Nitrogen Assimilating Enzyme Activities and Enzyme Protein during Development and Senescence of Effective and Plant Gene-Controlled Ineffective Alfalfa Nodules. <i>Plant Physiology</i> , 1989, 91, 898-904.	4.8	82
38	Transgenic tobacco plants that overexpress alfalfa NADH-glutamate synthase have higher carbon and nitrogen content. <i>Journal of Experimental Botany</i> , 2001, 52, 2079-2087.	4.8	77
39	Transgenic proteoid roots of white lupin: a vehicle for characterizing and silencing root genes involved in adaptation to P stress. <i>Plant Journal</i> , 2005, 44, 840-853.	5.7	77
40	White Lupin Cluster Root Acclimation to Phosphorus Deficiency and Root Hair Development Involve Unique Glycerophosphodiester Phosphodiesterases. <i>Plant Physiology</i> , 2011, 156, 1131-1148.	4.8	77
41	Genomic and Genetic Control of Phosphate Stress in Legumes. <i>Plant Physiology</i> , 2007, 144, 594-603.	4.8	74
42	Purification and Characterization of NADH-Glutamate Synthase from Alfalfa Root Nodules. <i>Plant Physiology</i> , 1989, 90, 351-358.	4.8	69
43	Aspartate Aminotransferase in Effective and Ineffective Alfalfa Nodules. <i>Plant Physiology</i> , 1992, 98, 868-878.	4.8	69
44	Update on White Lupin Cluster Root Acclimation to Phosphorus Deficiency Update on Lupin Cluster Roots. <i>Plant Physiology</i> , 2011, 156, 1025-1032.	4.8	69
45	Legume Symbiotic Nitrogen Fixation: Agronomic Aspects. , 1998, , 509-530.		68
46	Aspartate Aminotransferase in Alfalfa Root Nodules. <i>Plant Physiology</i> , 1989, 90, 1622-1629.	4.8	65
47	Control of nitrogen and carbon metabolism in root nodules. <i>Physiologia Plantarum</i> , 1992, 85, 266-274.	5.2	63
48	Interactions between light intensity and phosphorus nutrition affect the phosphate-mining capacity of white lupin (<i>Lupinus albus</i> L.). <i>Journal of Experimental Botany</i> , 2014, 65, 2995-3003.	4.8	63
49	Soluble and Cell Wall Peroxidases in Reed Canarygrass in Relation to Disease Resistance and Localized Lignin Formation. <i>Plant Physiology</i> , 1976, 57, 920-922.	4.8	58
50	Regulation of Lignin Formation in Reed Canarygrass in Relation to Disease Resistance. <i>Plant Physiology</i> , 1976, 57, 915-919.	4.8	57
51	Nitrate Assimilation during Vegetative Regrowth of Alfalfa. <i>Plant Physiology</i> , 1981, 68, 1052-1057.	4.8	57
52	Alfalfa root nodule phosphoenolpyruvate carboxylase: characterization of the cDNA and expression in effective and plant-controlled ineffective nodules. <i>Plant Molecular Biology</i> , 1992, 20, 437-450.	3.9	57
53	Integrating microarray analysis and the soybean genome to understand the soybeans iron deficiency response. <i>BMC Genomics</i> , 2009, 10, 376.	2.8	56
54	Asparagine Biosynthesis in Alfalfa (<i>Medicago sativa</i> L.) Root Nodules. <i>Plant Physiology</i> , 1986, 82, 390-395.	4.8	54

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55	The <i>Medicago sativa</i> gene index 1.2: a web-accessible gene expression atlas for investigating expression differences between <i>Medicago sativa</i> subspecies. <i>BMC Genomics</i> , 2015, 16, 502.	2.8	54
56	Genome Resilience and Prevalence of Segmental Duplications Following Fast Neutron Irradiation of Soybean. <i>Genetics</i> , 2014, 198, 967-981.	2.9	53
57	Recruitment of Novel Calcium-Binding Proteins for Root Nodule Symbiosis in <i>Medicago truncatula</i> . <i>Plant Physiology</i> , 2006, 141, 167-177.	4.8	52
58	Knockdown of <i>CELL DIVISION CYCLE16</i> Reveals an Inverse Relationship between Lateral Root and Nodule Numbers and a Link to Auxin in <i>Medicago truncatula</i> . <i>Plant Physiology</i> , 2009, 151, 1155-1166.	4.8	52
59	Legume genomics: understanding biology through DNA and RNA sequencing. <i>Annals of Botany</i> , 2014, 113, 1107-1120.	2.9	52
60	Identification of candidate phosphorus stress induced genes in <i>Phaseolus vulgaris</i> through clustering analysis across several plant species. <i>Functional Plant Biology</i> , 2006, 33, 789.	2.1	50
61	Quantitative Trait Loci, Epigenetics, Sugars, and MicroRNAs: Quaternaries in Phosphate Acquisition and Use. <i>Plant Physiology</i> , 2010, 154, 582-588.	4.8	50
62	Alfalfa Root Nodule Carbon Dioxide Fixation. <i>Plant Physiology</i> , 1984, 75, 261-264.	4.8	49
63	Alfalfa Root Nodule Carbon Dioxide Fixation. <i>Plant Physiology</i> , 1987, 84, 501-508.	4.8	48
64	Alfalfa NADH-dependent glutamate synthase: structure of the gene and importance in symbiotic N ₂ fixation. <i>Plant Journal</i> , 1995, 8, 345-358.	5.7	48
65	Regulation of Phytoalexin Synthesis in Jackbean Callus Cultures. <i>Plant Physiology</i> , 1978, 61, 226-230.	4.8	45
66	A Standardized Method for Analysis of <i>Medicago truncatula</i> Phenotypic Development. <i>Plant Physiology</i> , 2006, 142, 207-219.	4.8	45
67	An Integrative Approach to Genomic Introgression Mapping. <i>Plant Physiology</i> , 2010, 154, 3-12.	4.8	45
68	NADH-Glutamate Synthase in Alfalfa Root Nodules. Immunocytochemical Localization. <i>Plant Physiology</i> , 1999, 119, 829-838.	4.8	42
69	Regulatory Patterns of a Large Family of Defensin-Like Genes Expressed in Nodules of <i>Medicago truncatula</i> . <i>PLoS ONE</i> , 2013, 8, e60355.	2.5	41
70	The Alfalfa (<i>Medicago sativa</i>) TDY1 Gene Encodes a Mitogen-Activated Protein Kinase Homolog. <i>Molecular Plant-Microbe Interactions</i> , 1999, 12, 882-893.	2.6	39
71	Overexpression of Malate Dehydrogenase in Transgenic Alfalfa Enhances Organic Acid Synthesis and Confers Tolerance to Aluminum. <i>Plant Physiology</i> , 2001, 127, 1836-1844.	4.8	39
72	Transport and Partitioning of CO ₂ Fixed by Root Nodules of Ureide and Amide Producing Legumes. <i>Plant Physiology</i> , 1985, 78, 774-778.	4.8	38

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73	Aspartate Aminotransferase in Alfalfa Root Nodules. <i>Plant Physiology</i> , 1990, 93, 603-610.	4.8	38
74	NADH-Glutamate Synthase in Alfalfa Root Nodules. Genetic Regulation and Cellular Expression1. <i>Plant Physiology</i> , 1999, 119, 817-828.	4.8	38
75	Analyses of phosphoenolpyruvate carboxylase gene structure and expression in alfalfa nodules. <i>Plant Journal</i> , 1997, 12, 293-304.	5.7	37
76	The Affymetrix Medicago GeneChip [®] array is applicable for transcript analysis of alfalfa (<i>Medicago</i>) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	2.1	37
77	Decreased NADH glutamate synthase activity in nodules and flowers of alfalfa (<i>Medicago sativa</i> L.) transformed with an antisense glutamate synthase transgene. <i>Journal of Experimental Botany</i> , 2000, 51, 29-39.	4.8	36
78	Fast neutron-induced structural rearrangements at a soybean NAP1 locus result in gnarled trichomes. <i>Theoretical and Applied Genetics</i> , 2016, 129, 1725-1738.	3.6	35
79	Antisense inhibition of NADH glutamate synthase impairs carbon/nitrogen assimilation in nodules of alfalfa (<i>Medicago sativa</i> L.). <i>Plant Journal</i> , 2003, 33, 1037-1049.	5.7	34
80	Root and Nodule Enzymes of Ammonia Assimilation in Two Plant-Conditioned Symbiotically Ineffective Genotypes of Alfalfa (<i>Medicago sativa</i> L.). <i>Plant Physiology</i> , 1982, 69, 614-618.	4.8	33
81	Inhibition of alfalfa root nodule phosphoenolpyruvate carboxylase through an antisense strategy impacts nitrogen fixation and plant growth. <i>Phytochemistry</i> , 1998, 49, 341-346.	2.9	32
82	Insights into Symbiotic Nitrogen Fixation in <i>Medicago truncatula</i> . <i>Molecular Plant-Microbe Interactions</i> , 2006, 19, 330-341.	2.6	32
83	Genomic structure, expression and evolution of the alfalfa aspartate aminotransferase genes. <i>Plant Molecular Biology</i> , 1994, 25, 387-399.	3.9	31
84	Nonphotosynthetic CO ₂ Fixation by Alfalfa (<i>Medicago sativa</i> L.) Roots and Nodules. <i>Plant Physiology</i> , 1987, 85, 283-289.	4.8	25
85	Transgenic alfalfa secretes a fungal endochitinase protein to the rhizosphere. <i>Plant and Soil</i> , 2005, 269, 233-243.	3.7	24
86	Crucial roles of sucrose and microRNA399 in systemic signaling of P deficiency. <i>Plant Signaling and Behavior</i> , 2010, 5, 1556-1560.	2.4	24
87	Transcript profiling of two alfalfa genotypes with contrasting cell wall composition in stems using a cross-species platform: optimizing analysis by masking biased probes. <i>BMC Genomics</i> , 2010, 11, 323.	2.8	23
88	Expression Map for Genes Involved in Nitrogen and Carbon Metabolism in Alfalfa Root Nodules. <i>Molecular Plant-Microbe Interactions</i> , 1999, 12, 526-535.	2.6	22
89	Synthesis of Nodulins and Nodule-Enhanced Polypeptides by Plant Gene-Controlled Ineffective Alfalfa Nodules. <i>Journal of Experimental Botany</i> , 1991, 42, 969-977.	4.8	20
90	Plants without arbuscular mycorrhizae. <i>Plant Ecophysiology</i> , 2008, , 117-142.	1.5	20

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91	Identification of genes induced in proteoid roots of white lupin under nitrogen and phosphorus deprivation, with functional characterization of a formamidase. <i>Plant and Soil</i> , 2010, 334, 137-150.	3.7	20
92	Transcript profiling of common bean (<i>Phaseolus vulgaris</i> L.) using the GeneChip(R) Soybean Genome Array: optimizing analysis by masking biased probes. <i>BMC Plant Biology</i> , 2010, 10, 85.	3.6	19
93	Cellular localization of nodule-enhanced aspartate aminotransferase in <i>Medicago sativa</i> L.. <i>Planta</i> , 1994, 192, 202-210.	3.2	18
94	A re-sequencing based assessment of genomic heterogeneity and fast neutron-induced deletions in a common bean cultivar. <i>Frontiers in Plant Science</i> , 2013, 4, 210.	3.6	18
95	Nodule physiology of a supernodulating pea mutant. <i>Physiologia Plantarum</i> , 1989, 77, 606-612.	5.2	17
96	Aspartate Aminotransferase in Alfalfa Root Nodules. <i>Plant Physiology</i> , 1990, 94, 1634-1640.	4.8	17
97	Transgene silencing of sucrose synthase in alfalfa (<i>Medicago sativa</i> L.) stem vascular tissue suggests a role for invertase in cell wall cellulose synthesis. <i>BMC Plant Biology</i> , 2015, 15, 283.	3.6	17
98	White Lupin (<i>Lupinus albus</i>) response to phosphorus stress: evidence for complex regulation of LaSAP1. <i>Plant and Soil</i> , 2009, 322, 1-15.	3.7	16
99	Aspartate Aminotransferase in Alfalfa Nodules: Localization of mRNA During Effective and Ineffective Nodule Development and Promoter Analysis. <i>Molecular Plant-Microbe Interactions</i> , 1999, 12, 263-274.	2.6	15
100	<i>Medicago truncatula</i> as a Model for Dicot Cell Wall Development. <i>Bioenergy Research</i> , 2009, 2, 59-76.	3.9	15
101	eQTL Networks Reveal Complex Genetic Architecture in the Immature Soybean Seed. <i>Plant Genome</i> , 2014, 7, plantgenome2013.08.0027.	2.8	15
102	Biodegradation of atrazine by three transgenic grasses and alfalfa expressing a modified bacterial atrazine chlorohydrolase gene. <i>Transgenic Research</i> , 2015, 24, 475-488.	2.4	15
103	Single-Feature Polymorphism Discovery in the Transcriptome of Tetraploid Alfalfa. <i>Plant Genome</i> , 2009, 2, .	2.8	14
104	Carbon metabolism in <i>Bradyrhizobium japonicum</i> bacteroids. <i>FEMS Microbiology Letters</i> , 1989, 63, 327-340.	1.8	13
105	Localized and internal effect of nitrate on symbiotic dinitrogen fixation. <i>Physiologia Plantarum</i> , 1997, 101, 59-66.	5.2	13
106	Genomic Heterogeneity and Structural Variation in Soybean Near Isogenic Lines. <i>Frontiers in Plant Science</i> , 2013, 4, 104.	3.6	12
107	Purification and properties of caffeic acid O-methyltransferase from alfalfa root nodules. <i>Phytochemistry</i> , 1981, 20, 41-43.	2.9	11
108	Symbiotic properties of <i>Lotus pedunculitis</i> root nodules induced by <i>Rhizobium loti</i> and <i>Bradyrhizobium</i> sp. (<i>Lotus</i>). <i>Physiologia Plantarum</i> , 1987, 69, 435-442.	5.2	11

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109	Real-time RT-PCR profiling of transcription factors including 34 MYBs and signaling components in white lupin reveals their P status dependent and organ-specific expression. <i>Plant and Soil</i> , 2011, 342, 481-493.	3.7	10
110	Symbiotic Nitrogen Fixation: Recent Genetic Advances. , 1990, , 43-88.		10
111	A Host-Controlled, Serogroup-Specific, Ineffective-Nodulation System in the Bradyrhizobium-Soybean (<i>Glycine max</i>) Symbiosis. <i>Molecular Plant-Microbe Interactions</i> , 1997, 10, 994-1001.	2.6	9
112	Aluminum resistance mechanisms in oat (<i>Avena sativa</i> L.). <i>Plant and Soil</i> , 2012, 351, 121-134.	3.7	9
113	Flavonoids are involved in phosphorus-deficiency-induced cluster-root formation in white lupin. <i>Annals of Botany</i> , 2022, 129, 101-112.	2.9	9
114	Molecular analysis of allelic polymorphism at the AAT2 locus of alfalfa. <i>Molecular Genetics and Genomics</i> , 1993, 241-241, 124-128.	2.4	5
115	Acclimation of white lupin to phosphorus deficiency involves enhanced expression of genes related to organic acid metabolism. , 2003, , 99-116.		5
116	Carbon metabolism in <i>Bradyrhizobium japonicum</i> bacteroids. <i>FEMS Microbiology Letters</i> , 1989, 63, 327-340.	1.8	4
117	Cloning and Developmental Expression of a Nodule-Enhanced Sucrose Synthase cDNA from Alfalfa. , 1999, , 23-31.		3
118	Decreased NADH glutamate synthase activity in nodules and flowers of alfalfa (<i>Medicago sativa</i> L.) transformed with an antisense glutamate synthase transgene. <i>Journal of Experimental Botany</i> , 2000, 51, 29-39.	4.8	3
119	Molecular Characterization of NADH-Dependent Glutamate Synthase from Alfalfa Nodules. <i>Plant Cell</i> , 1993, 5, 215.	6.6	2
120	Nitrogen Assimilation in Alfalfa: Isolation and Characterization of an Asparagine Synthetase Gene Showing Enhanced Expression in Root Nodules and Dark-Adapted Leaves. <i>Plant Cell</i> , 1997, 9, 1339.	6.6	2
121	Tissue Cultures Derived from Ineffective Root Nodules of Alfalfa. <i>Plant Physiology</i> , 1984, 76, 984-988.	4.8	1
122	Control of nitrogen and carbon metabolism in root nodules. <i>Physiologia Plantarum</i> , 1992, 85, 266-274.	5.2	1
123	Carbon and Nitrogen Metabolism in Lotus. <i>CSSA Special Publication - Crop Science Society of America</i> , 2015, , 167-185.	0.1	1
124	Characterization of the Linkage Group I Seed Protein QTL in Soybean. , 2012, , 175-195.		0