Donald L Smith

List of Publications by Year
in descending order

91 papers	5,014 citations	87888 38 h-index	102487 66 g-index
91 all docs	91 docs citations	91 times ranked	4295 citing authors

#	Article	IF	Citations
1	Plant Growth-Promoting Rhizobacteria: Context, Mechanisms of Action, and Roadmap to Commercialization of Biostimulants for Sustainable Agriculture. Frontiers in Plant Science, 2018, 9, 1473.	3.6	1,088
2	Biomass for a sustainable bioeconomy: An overview of world biomass production and utilization. Renewable and Sustainable Energy Reviews, 2021, 139, 110691.	16.4	319
3	Enhanced Soybean Plant Growth Resulting from Coinoculation of <i>Bacillus</i> Strains with <i>Bradyrhizobium japonicum</i>. Crop Science, 2003, 43, 1774-1781.	1.8	204
4	Isolation of plant-growth-promotingBacillusstrains from soybean root nodules. Canadian Journal of Microbiology, 2002, 48, 230-238.	1.7	202
5	Chitosan and chitin oligomers increase phenylalanine ammonia-lyase and tyrosine ammonia-lyase activities in soybean leaves. Journal of Plant Physiology, 2003, 160, 859-863.	3.5	173
6	PGPR in Agriculture: A Sustainable Approach to Increasing Climate Change Resilience. Frontiers in Sustainable Food Systems, 2021, 5, .	3.9	120
7	Plant Associated Rhizobacteria for Biocontrol and Plant Growth Enhancement. Frontiers in Plant Science, 2021, 12, 634796.	3.6	98
8	Plant endophytes promote growth and alleviate salt stress in Arabidopsis thaliana. Scientific Reports, 2020, 10, 12740.	3.3	87
9	Impact of low root temperatures in soybean [Glycine max. (L.) Merr.] on nodulation and nitrogen fixation. Environmental and Experimental Botany, 1995, 35, 279-285.	4.2	84
10	Switchgrass Biomass and Chemical Composition for Biofuel in Eastern Canada. Agronomy Journal, 1999, 91, 696-701.	1.8	78
11	Climate change, weather variability and corn yield at a higher latitude locale: Southwestern Quebec. Climatic Change, 2008, 88, 187-197.	3.6	78
12	Greenhouse gas fluxes associated with soybean production under two tillage systems in southwestern Quebec. Soil and Tillage Research, 2009, 104, 134-139.	5.6	78
13	Bacteriocins from the rhizosphere microbiome â€“ from an agriculture perspective. Frontiers in Plant Science, 2015, 6, 909.	3.6	78
14	Microbial signaling and plant growth promotion. Canadian Journal of Plant Science, 2014, 94, 1051-1063.	0.9	77
15	Signaling in the phytomicrobiome: breadth and potential. Frontiers in Plant Science, 2015, 6, 709.	3.6	73
16	Inter-organismal signaling and management of the phytomicrobiome. Frontiers in Plant Science, 2015, 6, 722.	3.6	72
17	Effects of low root zone temperatures on the early stages of symbiosis establishment between soybean [Glycine max(L.) Merr.] and Bradyrhizobium japonicum. Journal of Experimental Botany, 1994, 45, 1467-1473.	4.8	70
18	Editorial: Signaling in the Phytomicrobiome. Frontiers in Plant Science, 2017, 8, 611.	3.6	69

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19	Closing the Yield Gap for Cannabis: A Meta-Analysis of Factors Determining Cannabis Yield. Frontiers in Plant Science, 2019, 10, 495.	3.6	67
20	Root traits and nitrogen fertilizer recovery efficiency of corn grown in biochar-amended soil under greenhouse conditions. Plant and Soil, 2017, 415, 465-477.	3.7	66
21	A PGPR-Produced Bacteriocin for Sustainable Agriculture: A Review of Thuricin 17 Characteristics and Applications. Frontiers in Plant Science, 2020, 11, 916.	3.6	65
22	Inoculation of soybean (Glycine max. (L.) Merr.) with genistein-preincubated Bradyrhizobium japonicum or genistein directly applied into soil increases soybean protein and dry matter yield under short season conditions. Plant and Soil, 1996, 179, 233-241.	3.7	64
23	Using signal molecule genistein to alleviate the stress of suboptimal root zone temperature on soybean-Bradyrhizobium symbiosis under different soil textures. Journal of Plant Interactions, 2008, 3, 287-295.	2.1	64
24	Co-inoculation dose and root zone temperature for plant growth promoting rhizobacteria on soybean [Glycine max (L.) Merr] grown in soil-less media. Soil Biology and Biochemistry, 2002, 34, 1953-1957.	8.8	62
25	Genistein accumulation in soybean (Glycine max[L.] Merr.) root systems under suboptimal root zone temperatures. Journal of Experimental Botany, 1996, 47, 785-792.	4.8	61
26	Relevance of Plant Growth Promoting Microorganisms and Their Derived Compounds, in the Face of Climate Change. Agronomy, 2020, 10, 1179.	3.0	61
27	Biocontrol Rhizobacterium Pseudomonas sp. 23S Induces Systemic Resistance in Tomato (Solanum) Tj ETQq1 1 0.784314 rgBT /Overlo Microbiology, 2018, 9, 2119.	3.5	59
28	Carbon Dioxide and Nitrous Oxide Fluxes in Corn Grown under Two Tillage Systems in Southwestern Quebec. Soil Science Society of America Journal, 2009, 73, 113-119.	2.2	58
29	Biochar is a growth-promoting alternative to peat moss for the inoculation of corn with a pseudomonad. Agronomy for Sustainable Development, 2016, 36, 1.	5.3	58
30	Plant Growth-Promoting Rhizobacteria for Cannabis Production: Yield, Cannabinoid Profile and Disease Resistance. Frontiers in Microbiology, 2019, 10, 1761.	3.5	56
31	Nod factor [Nod Bj V (C18:1, MeFuc)] and lumichrome enhance photosynthesis and growth of corn and soybean. Journal of Plant Physiology, 2008, 165, 1342-1351.	3.5	54
32	Proteomic analysis of the bacteriocin thuricin 17 produced byBacillus thuringiensisNEB17. FEMS Microbiology Letters, 2006, 255, 27-32.	1.8	51
33	Proteomic Studies on the Effects of Lipo-Chitooligosaccharide and Thuricin 17 under Unstressed and Salt Stressed Conditions in Arabidopsis thaliana. Frontiers in Plant Science, 2016, 7, 1314.	3.6	50
34	A Proteomic Approach to Lipo-Chitooligosaccharide and Thuricin 17 Effects on Soybean GerminationUnstressed and Salt Stress. PLoS ONE, 2016, 11, e0160660.	2.5	48
35	Switchgrass establishment and seeding year production can be improved by inoculation with rhizosphere endophytes. Biomass and Bioenergy, 2012, 47, 295-301.	5.7	47
36	Title is missing!. Plant and Soil, 1997, 192, 141-151.	3.7	43

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37	Pre-incubation of Bradyrhizobium japonicum with jasmonates accelerates nodulation and nitrogen fixation in soybean (Glycine max) at optimal and suboptimal root zone temperatures. Physiologia Plantarum, 2005, 125, 311-323.	5.2	41
38	Inhibition of the expression of Bradyrhizobium japonicum nod genes at low temperatures. Soil Biology and Biochemistry, 1996, 28, 1579-1583.	8.8	39
39	Enzymatic production of N-acetyl chitooligosaccharides by crude enzyme derived from Paenibacillus illioisensis KJA-424. Carbohydrate Polymers, 2007, 67, 256-259.	10.2	36
40	Induction of defense-related enzymes in soybean leaves by class IId bacteriocins (thuricin 17 and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6	5.3	36
41	Phytomicrobiome Coordination Signals Hold Potential for Climate Change-Resilient Agriculture. Frontiers in Plant Science, 2020, 11, 634.	3.6	36
42	Crop yield and SOC responses to biochar application were dependent on soil texture and crop type in southern Quebec, Canada. Journal of Plant Nutrition and Soil Science, 2016, 179, 399-408.	1.9	35
43	Nod factor induces soybean resistance to powdery mildew. Plant Physiology and Biochemistry, 2005, 43, 1022-1030.	5.8	34
44	Growth promotion of greenhouse tomatoes with Pseudomonas sp. and Bacillus sp. biofilms and planktonic cells. Applied Soil Ecology, 2019, 138, 61-68.	4.3	32
45	Changes in Soybean Global Gene Expression after Application of Lipo-Chitooligosaccharide from Bradyrhizobium japonicum under Sub-Optimal Temperature. PLoS ONE, 2012, 7, e31571.	2.5	28
46	The environmental impacts of organic greenhouse tomato production based on the nitrogen-fixing plant (Azolla). Journal of Cleaner Production, 2020, 245, 118679.	9.3	28
47	Stability and Antibacterial Activity of Bacteriocins Produced by Bacillus thuringiensis and Bacillus thuringiensis ssp. kurstaki. Journal of Microbiology and Biotechnology, 2008, 18, 1836-1840.	2.1	28
48	Gas exchange characteristics and dry matter accumulation of soybean treated with Nod factors. Journal of Plant Physiology, 2007, 164, 1391-1393.	3.5	27
49	The Plant Growth Regulator Lipo-chitooligosaccharide (LCO) Enhances the Germination of Canola (Brassica napus [L.]). Journal of Plant Growth Regulation, 2015, 34, 183-195.	5.1	26
50	An inducible activator produced by a Serratia proteamaculans strain and its soybean growthâ€promoting activity under greenhouse conditions. Journal of Experimental Botany, 2002, 53, 1495-1502.	4.8	24
51	An inducible activator produced by a Serratia proteamaculans strain and its soybean growth-promoting activity under greenhouse conditions. Journal of Experimental Botany, 2002, 53, 1495-502.	4.8	23
52	Methyl jasmonate, alone or in combination with genistein, and Bradyrhizobium japonicum increases soybean (Glycine max L.) plant dry matter production and grain yield under short season conditions. Field Crops Research, 2006, 95, 412-419.	5.1	22
53	Evidence for enhanced N availability during switchgrass establishment and seeding year production following inoculation with rhizosphere endophytes. Archives of Agronomy and Soil Science, 2014, 60, 1553-1563.	2.6	21
54	Biochar and plant growth promoting rhizobacteria effects on switchgrass (Panicum virgatum cv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 and Bioenergy, 2016, 95, 167-173.	5.7	21

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55	Characterization of Selected Plant Growth-Promoting Rhizobacteria and Their Non-Host Growth Promotion Effects. Microbiology Spectrum, 2021, 9, e0027921.	3.0	21
56	Nod Bj-V (C18:1, MeFuc) production by Bradyrhizobium japonicum (USDA110, 532C) at suboptimal growth temperatures. Journal of Plant Physiology, 2006, 163, 107-111.	3.5	19
57	Bradyrhizobium japonicum Preincubated with Methyl Jasmonate Increases Soybean Nodulation and Nitrogen Fixation. Agronomy Journal, 2006, 98, 289-294.	1.8	17
58	Isolation and diversity of culturable rhizobacteria associated with economically important crops and uncultivated plants in QuÃ©bec, Canada. Systematic and Applied Microbiology, 2018, 41, 629-640.	2.8	17
59	The biological approaches of altering the growth and biochemical properties of medicinal plants under salinity stress. Applied Microbiology and Biotechnology, 2021, 105, 7201-7213.	3.6	17
60	Three plant growth-promoting rhizobacteria alter morphological development, physiology, and flower yield of Cannabis sativa L.. Industrial Crops and Products, 2022, 178, 114583.	5.2	17
61	Chitinases produced by Paenibacillus illinoisensis and Bacillus thuringiensis subsp. pakistani degrade Nod factor from Bradyrhizobium japonicum. Microbiological Research, 2008, 163, 345-349.	5.3	16
62	Supplementation with solutions of lipo-chitooligosacharide Nod Bj V (C18:1, MeFuc) and thuricin 17 regulates leaf arrangement, biomass, and root development of canola (Brassica napus [L.]). Plant Growth Regulation, 2016, 78, 31-41.	3.4	15
63	Environmental assessment of the essential oils produced from dragonhead (Dracocephalum) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf Production, 2018, 204, 1070-1086.	9.3	15
64	The response of soybean to nod factors and a bacteriocin. Plant Signaling and Behavior, 2016, 11, e1241934.	2.4	14
65	Multiâ€Year Effects of Biochar, Lipoâ€Chitooligosaccharide, Thuricin 17, and Experimental Bioâ€Fertilizer for Switchgrass. Agronomy Journal, 2018, 110, 77-84.	1.8	14
66	Getting to the root of the matter: Water-soluble and volatile components in thermally-treated biosolids and biochar differentially regulate maize (Zea mays) seedling growth. PLoS ONE, 2018, 13, e0206924.	2.5	14
67	Microbial Derived Compounds, a Step Toward Enhancing Microbial Inoculants Technology for Sustainable Agriculture. Frontiers in Microbiology, 2021, 12, 634807.	3.5	14
68	Title is missing!. Plant and Soil, 2001, 229, 41-46.	3.7	13
69	Nod factor supply under water stress conditions modulates cytokinin biosynthesis and enhances nodule formation and N nutrition in soybean. Plant Signaling and Behavior, 2016, 11, e1212799.	2.4	13
70	Inter-Organismal Signaling in the Rhizosphere. Rhizosphere Biology, 2021, , 255-293.	0.6	12
71	Effect of chitin hexamer and thuricin 17 on lignification-related and antioxidative enzymes in Soybean Plants. Journal of Plant Biology, 2008, 51, 145-149.	2.1	11
72	Co-inoculation of Phosphate-Solubilizing Bacteria and Mycorrhizal Fungi: Effect on Seed Yield, Physiological Variables, and Fixed Oil and Essential Oil Productivity of Ajowan (Carum copticum L.) Under Water Deficit. Journal of Soil Science and Plant Nutrition, 2021, 21, 3159-3179.	3.4	11

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73	Seed Priming with Devosia sp. Cell-Free Supernatant (CFS) and Citrus Bioflavonoids Enhance Canola and Soybean Seed Germination. Molecules, 2022, 27, 3410.	3.8	11
74	Developments in crops and management systems to improve lignocellulosic feedstock production. Biofuels, Bioproducts and Biorefining, 2013, 7, 582-601.	3.7	10
75	Carbon dynamics in a biochar-amended loamy soil under switchgrass. Canadian Journal of Soil Science, 2015, 95, 1-13.	1.2	10
76	The response of canola cultivars to lipo-chitooligosaccharide (Nod Bj V [C18:1, MeFuc]) and thuricin 17. Plant Growth Regulation, 2016, 78, 421-434.	3.4	10
77	Exploiting inter-organismal chemical communication for improved inoculants. Canadian Journal of Plant Science, 2006, 86, 951-966.	0.9	9
78	Mucilaginibacter sp. K Improves Growth and Induces Salt Tolerance in Nonhost Plants via Multilevel Mechanisms. Frontiers in Plant Science, 0, 13, .	3.6	9
79	Corn Yield Simulation Using the STICS Model under Varying Nitrogen Management and Climate-Change Scenarios. Journal of Irrigation and Drainage Engineering - ASCE, 2014, 140, .	1.0	8
80	A Graphical-User-Interface application for multifractal analysis of soil and plant structures. Computers and Electronics in Agriculture, 2020, 174, 105454.	7.7	8
81	Signals in the Underground: Microbial Signaling and Plant Productivity. Soil Biology, 2008, , 291-318.	0.8	8
82	Microbial Derived Compounds Are a Promising Approach to Mitigating Salinity Stress in Agricultural Crops. Frontiers in Microbiology, 2021, 12, 765320.	3.5	8
83	Induction of pathogenesis-related proteins during biocontrol of Rhizoctonia solani with Pseudomonas aureofaciens in soybean (Glycine max L. Merr.) plants. BioControl, 2007, 52, 895-904.	2.0	7
84	Synchrotron X-ray microtomography and multifractal analysis for the characterization of pore structure and distribution in softwood pellet biochar. Biochar, 2021, 3, 671-686.	12.6	7
85	Thuricin17 Production and Proteome Differences in Bacillus thuringiensis NEB17 Cell-Free Supernatant Under NaCl Stress. Frontiers in Sustainable Food Systems, 2021, 5, .	3.9	6
86	Cell-Free Supernatant Obtained From a Salt Tolerant Bacillus amyloliquefaciens Strain Enhances Germination and Radicle Length Under NaCl Stressed and Optimal Conditions. Frontiers in Sustainable Food Systems, 2022, 6, .	3.9	6
87	Effects of addition of flavonoid signals and environmental factors on nodulation and nodule development in the pea (Pisum sativum) - Rhizobium leguminosarum bv. viciae symbiosis. Soil Research, 2003, 41, 267.	1.1	5
88	A micromolar concentration of lipo-chitooligosaccharide (Nod Bj V [C18:1, MeFuc]) regulates the emergence and seed productivity of rapid cycling canola (Brassica napus [L.]) plants. Plant Signaling and Behavior, 2016, 11, e1238544.	2.4	1
89	PGPR to Alleviate the Stress of Suboptimal Root Zone Temperature on Leguminous Plant Growth. , 2014, , 111-137.		1
90	Plant growth-promoting rhizobacteria (PGPR) as plant biostimulants in agriculture. Burleigh Dodds Series in Agricultural Science, 2020, , 197-226.	0.2	1

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91	Effect of Nod factor sprays on soybean growth and productivity under field conditions. Acta Agriculturae Scandinavica - Section B Soil and Plant Science, 2011, 61, 228-234.	0.6	0