

Frederik C Botha

List of Publications by Year in descending order

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96
papers

3,488
citations

126708

33
h-index

161609

54
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110
all docs

110
docs citations

110
times ranked

2927
citing authors

#	ARTICLE	IF	CITATIONS
1	Comparison of the root, leaf and internode transcriptomes in sugarcane (<i>Saccharum</i> spp. hybrids). <i>Current Research in Biotechnology</i> , 2022, 4, 167-178.	1.9	2
2	Transcriptome changes in the developing sugarcane culm associated with high yield and early-season high sugar content. <i>Theoretical and Applied Genetics</i> , 2022, 135, 1619-1636.	1.8	1
3	Limited allele-specific gene expression in highly polyploid sugarcane. <i>Genome Research</i> , 2022, 32, 297-308.	2.4	8
4	Effect of sugar feedback regulation on major genes and proteins of photosynthesis in sugarcane leaves. <i>Plant Physiology and Biochemistry</i> , 2021, 158, 321-333.	2.8	14
5	Association of gene expression with syringyl to guaiacyl ratio in sugarcane lignin. <i>Plant Molecular Biology</i> , 2021, 106, 173-192.	2.0	8
6	Metabolic changes in the developing sugarcane culm associated with high yield and early high sugar content. <i>Plant Direct</i> , 2020, 4, e00276.	0.8	12
7	Variation in sugarcane biomass composition and enzymatic saccharification of leaves, internodes and roots. <i>Biotechnology for Biofuels</i> , 2020, 13, 201.	6.2	11
8	Midrib Sucrose Accumulation and Sugar Transporter Gene Expression in YCS-Affected Sugarcane Leaves. <i>Tropical Plant Biology</i> , 2019, 12, 186-205.	1.0	8
9	The Impact of cDNA Normalization on Long-Read Sequencing of a Complex Transcriptome. <i>Frontiers in Genetics</i> , 2019, 10, 654.	1.1	8
10	Analysis of the diversity and tissue specificity of sucrose synthase genes in the long read transcriptome of sugarcane. <i>BMC Plant Biology</i> , 2019, 19, 160.	1.6	36
11	Field study reveals core plant microbiota and relative importance of their drivers. <i>Environmental Microbiology</i> , 2018, 20, 124-140.	1.8	255
12	De novo assembly and characterizing of the culm-derived meta-transcriptome from the polyploid sugarcane genome based on coding transcripts. <i>Heliyon</i> , 2018, 4, e00583.	1.4	12
13	Transcriptome analysis highlights key differentially expressed genes involved in cellulose and lignin biosynthesis of sugarcane genotypes varying in fiber content. <i>Scientific Reports</i> , 2018, 8, 11612.	1.6	91
14	High-Throughput Profiling of the Fiber and Sugar Composition of Sugarcane Biomass. <i>Bioenergy Research</i> , 2017, 10, 400-416.	2.2	42
15	A survey of the complex transcriptome from the highly polyploid sugarcane genome using full-length isoform sequencing and de novo assembly from short read sequencing. <i>BMC Genomics</i> , 2017, 18, 395.	1.2	180
16	Yellow Canopy Syndrome (YCS) in Sugarcane is Associated with Altered Carbon Partitioning in the Leaf. <i>Sugar Tech</i> , 2017, 19, 647-655.	0.9	7
17	Association of variation in the sugarcane transcriptome with sugar content. <i>BMC Genomics</i> , 2017, 18, 909.	1.2	41
18	Association of gene expression with biomass content and composition in sugarcane. <i>PLoS ONE</i> , 2017, 12, e0183417.	1.1	26

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19	Changes in photosynthesis and carbohydrate metabolism in sugarcane during the development of Yellow Canopy Syndrome. <i>Functional Plant Biology</i> , 2016, 43, 523.	1.1	11
20	Metabolic Changes Associated with the Sink-Source Transition During Sprouting of the Axillary Buds on the Sugarcane Culm. <i>Tropical Plant Biology</i> , 2016, 9, 1-11.	1.0	16
21	Potential for Genetic Improvement of Sugarcane as a Source of Biomass for Biofuels. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 182.	2.0	109
22	Metabolic engineering of sugars and simple sugar derivatives in plants. <i>Plant Biotechnology Journal</i> , 2013, 11, 142-156.	4.1	177
23	Expression of a β -1,3-glucanase from a biocontrol fungus in transgenic pearl millet. <i>South African Journal of Botany</i> , 2011, 77, 335-345.	1.2	30
24	Downregulation of pyrophosphate: d-fructose-6-phosphate 1-phosphotransferase activity in sugarcane culms enhances sucrose accumulation due to elevated hexose-phosphate levels. <i>Planta</i> , 2010, 231, 595-608.	1.6	52
25	Reduced neutral invertase activity in the culm tissues of transgenic sugarcane plants results in a decrease in respiration and sucrose cycling and an increase in the sucrose to hexose ratio. <i>Functional Plant Biology</i> , 2010, 37, 22.	1.1	40
26	Synthetic Promoter Engineering. , 2010, , 393-414.		22
27	Down-regulation of pyrophosphate: fructose 6-phosphate 1-phosphotransferase (PFP) activity in sugarcane enhances sucrose accumulation in immature internodes. <i>Transgenic Research</i> , 2008, 17, 85-92.	1.3	77
28	Molecular and kinetic characterisation of sugarcane pyrophosphate: fructose-6-phosphate 1-phosphotransferase and its possible role in the sucrose accumulation phenotype. <i>Functional Plant Biology</i> , 2007, 34, 517.	1.1	6
29	Downregulation of neutral invertase activity in sugarcane cell suspension cultures leads to a reduction in respiration and growth and an increase in sucrose accumulation. <i>Functional Plant Biology</i> , 2007, 34, 490.	1.1	47
30	Kinetic model of sucrose accumulation in maturing sugarcane culm tissue. <i>Phytochemistry</i> , 2007, 68, 2375-2392.	1.4	103
31	Grapevine promoter directs gene expression in the nectaries of transgenic tobacco. <i>Physiologia Plantarum</i> , 2006, 126, 418-434.	2.6	2
32	Routes of pyruvate synthesis in phosphorus-deficient lupin roots and nodules. <i>New Phytologist</i> , 2006, 169, 399-408.	3.5	59
33	Sequence analysis and transcriptional profiling of two vacuolar H ⁺ -pyrophosphatase isoforms in <i>Vitis vinifera</i> . <i>Journal of Plant Research</i> , 2006, 119, 469-478.	1.2	21
34	Characterization and functional investigation of an Arabidopsis cDNA encoding a homologue to the d-PGMase superfamily. <i>Journal of Experimental Botany</i> , 2005, 56, 1129-1142.	2.4	8
35	Partial purification and characterisation of sucrose synthase in sugarcane. <i>Journal of Plant Physiology</i> , 2005, 162, 11-20.	1.6	27
36	Increasing the utility of genomics in unravelling sucrose accumulation. <i>Field Crops Research</i> , 2005, 92, 149-158.	2.3	55

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37	Improved regeneration efficiency of a pearl millet (<i>Pennisetum glaucum</i> [L.] R.Br.) breeding line. <i>South African Journal of Botany</i> , 2004, 70, 502-508.	1.2	12
38	A kinetic study of sugarcane sucrose synthase. <i>FEBS Journal</i> , 2004, 271, 3971-3977.	0.2	22
39	Protein-level expression and localization of sucrose synthase in the sugarcane culm. <i>Physiologia Plantarum</i> , 2004, 121, 187-195.	2.6	33
40	Promoter analysis and transcription profiling: Integration of genetic data enhances understanding of gene expression. <i>Physiologia Plantarum</i> , 2004, 120, 74-83.	2.6	23
41	Cloning of a specific ripening-related gene from the multiple of ripening-related genes identified from a single band excised from a cDNA-AFLP gel. <i>Plant Molecular Biology Reporter</i> , 2004, 22, 225-236.	1.0	5
42	Pearl millet transformation system using the positive selectable marker gene phosphomannose isomerase. <i>Plant Cell Reports</i> , 2004, 22, 684-690.	2.8	74
43	Expression of neutral invertase in sugarcane. <i>Plant Science</i> , 2004, 166, 1125-1133.	1.7	31
44	Purification and characterisation of fructokinase from the culm of sugarcane. <i>Plant Science</i> , 2004, 167, 645-654.	1.7	16
45	Characterisation of the gene encoding the Merlot ripening-induced protein 1 (mrip1): evidence that this putative protein is a distinct member of the plant proline-rich protein family. <i>Plant Science</i> , 2004, 167, 1075-1089.	1.7	11
46	Expression of fructokinase isoforms in the sugarcane culm. <i>Plant Physiology and Biochemistry</i> , 2003, 41, 741-747.	2.8	14
47	Differential gene expression in sugarcane leaf and internodal tissues of varying maturity. <i>South African Journal of Botany</i> , 2002, 68, 434-442.	1.2	19
48	Purification and kinetic properties of UDP-glucose dehydrogenase from sugarcane. <i>Archives of Biochemistry and Biophysics</i> , 2002, 407, 209-216.	1.4	42
49	Sugarcane ESTs differentially expressed in immature and maturing internodal tissue. <i>Plant Science</i> , 2002, 162, 289-300.	1.7	51
50	Genes expressed in sugarcane maturing internodal tissue. <i>Plant Cell Reports</i> , 2002, 20, 1075-1081.	2.8	83
51	Carbon allocation to the insoluble fraction, respiration and triose-phosphate cycling in the sugarcane culm. <i>Physiologia Plantarum</i> , 2002, 116, 12-19.	2.6	39
52	Title is missing!. <i>Plant Growth Regulation</i> , 2002, 37, 157-166.	1.8	16
53	Analysis of sucrose accumulation in the sugar cane culm on the basis of in vitro kinetic data. <i>Biochemical Journal</i> , 2001, 358, 437.	1.7	89
54	Analysis of sucrose accumulation in the sugar cane culm on the basis of in vitro kinetic data. <i>Biochemical Journal</i> , 2001, 358, 437-445.	1.7	132

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55	Tissue discs as an experimental system for metabolic flux analysis in the sugarcane culm. South African Journal of Botany, 2001, 67, 244-249.	1.2	7
56	Distribution patterns of neutral invertase and sugar content in sugarcane internodal tissues. Plant Physiology and Biochemistry, 2000, 38, 819-824.	2.8	50
57	The introduction of an inverted repeat to the 5' untranslated leader sequence of a transgene strongly inhibits gene expression. Plant Cell Reports, 2000, 19, 1098-1101.	2.8	11
58	Preliminary Analysis of Expressed Sequence Tags for Sugarcane. Crop Science, 2000, 40, 1769-1779.	0.8	66
59	Sucrose phosphate synthase and sucrose synthase activity during maturation of internodal tissue in sugarcane. Functional Plant Biology, 2000, 27, 81.	1.1	47
60	Pyrophosphate:d-fructose-6-phosphate 1-phosphotransferase activity patterns in relation to sucrose storage across sugarcane varieties. Physiologia Plantarum, 1999, 107, 379-386.	2.6	27
61	Sugarcane Internodal Invertases and Tissue Maturity. Journal of Plant Physiology, 1999, 155, 470-476.	1.6	42
62	The differential display technique using short primers is not suited for the routine isolation of differentially expressed sequences in sugarcane. South African Journal of Botany, 1999, 65, 398-403.	1.2	0
63	Partial purification and characterisation of sugarcane neutral invertase. Phytochemistry, 1998, 49, 651-655.	1.4	53
64	Carbohydrate utilisation by cell suspension cultures of Phaseolus vulgaris. Physiologia Plantarum, 1998, 102, 429-436.	2.6	16
65	Carbon Partitioning during Sucrose Accumulation in Sugarcane Internodal Tissue. Plant Physiology, 1997, 115, 1651-1659.	2.3	144
66	Establishment of embryogenic callus and transient gene expression in selected sugarcane varieties. South African Journal of Botany, 1996, 62, 151-154.	1.2	23
67	Use of PCR-based methodologies for the determination of DNA diversity between Saccharum varieties. Euphytica, 1996, 89, 257-265.	0.6	44
68	Stability and potential use of RAPD markers in a sugarcane genealogy. Euphytica, 1995, 86, 117-125.	0.6	24
69	Effect of the Russian Wheat Aphid on the Composition and Synthesis of Water Soluble Proteins in Resistant and Susceptible Wheat. Journal of Agronomy and Crop Science, 1993, 170, 322-326.	1.7	7
70	Induction of Pyrophosphate-Dependent Phosphofructokinase in Watermelon (Citrullus lanatus) Cotyledons Coincides with Insufficient Cytosolic D-Fructose-1,6-Bisphosphate 1-Phosphohydrolase to Sustain Gluconeogenesis. Plant Physiology, 1993, 101, 1385-1390.	2.3	9
71	Respiratory metabolism and gene expression during seed germination. Plant Growth Regulation, 1992, 11, 211-224.	1.8	102
72	Evidence for an Ethylene Requirement to Reduce Soaking Injury in Bean Seeds and the Beneficial Effect of Heavy Metals. Journal of Experimental Botany, 1991, 42, 277-280.	2.4	9

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73	Pyrophosphate Dependent Phosphofructokinase of <i>Citrullus lanatus</i> : Molecular Forms and Expression of Subunits. <i>Plant Physiology</i> , 1991, 96, 1185-1192.	2.3	27
74	Alcohol dehydrogenase in the desert species <i>Acacia erioloba</i> : ontogeny during germination and induction in seedling roots. <i>South African Journal of Botany</i> , 1990, 56, 403-408.	1.2	4
75	Fructose 1,6-Bisphosphatase in the Green Alga <i>Selenastrum minutum</i> . <i>Plant Physiology</i> , 1990, 93, 1460-1465.	2.3	7
76	Control of Pyrophosphated-Fructose-6-Phosphate 1-Phosphotransferase Activity in the Cotyledons of <i>Citrullus lanatus</i> . <i>Plant Physiology</i> , 1990, 93, 683-688.	2.3	12
77	Molecular, Kinetic, and Immunological Properties of the 6-Phosphofructokinase from the Green Alga <i>Selenastrum minutum</i> . <i>Plant Physiology</i> , 1990, 93, 871-879.	2.3	22
78	Regulation of Carbon Partitioning to Respiration during Dark Ammonium Assimilation by the Green Alga <i>Selenastrum minutum</i> . <i>Plant Physiology</i> , 1990, 93, 166-175.	2.3	74
79	Anoxic Seed Germination of <i>Erythrina caffra</i> : Ethanol Fermentation and Response to Metabolic Inhibitors. <i>Journal of Experimental Botany</i> , 1989, 40, 375-381.	2.4	37
80	Characterization of the Cytosolic Aldolase from Germinating <i>Phaseolus vulgaris</i> Seeds. <i>Journal of Plant Physiology</i> , 1989, 135, 433-438.	1.6	10
81	The effect of submergence on germination and some aspects of the respiratory metabolism of <i>Cucumis sativus</i> L. seeds. <i>Plant Science</i> , 1989, 63, 7-13.	1.7	4
82	Vegetative and reproductive phenology of <i>Ziziphus mucronata</i> subsp. <i>mucronata</i> (Rhamnaceae). <i>South African Journal of Botany</i> , 1989, 55, 564-573.	1.2	11
83	The Germination Response of the Negatively Photoblastic Seeds of <i>Citrullus lanatus</i> to Light of Different Spectral Compositions. <i>Journal of Plant Physiology</i> , 1988, 132, 750-753.	1.6	6
84	Properties of the Phosphofructokinase Isoenzymes from Germinating Cucumber Seeds. <i>Journal of Plant Physiology</i> , 1988, 132, 204-209.	1.6	14
85	Comparison of the Activities and Some Properties of Pyrophosphate and ATP Dependent Fructose-6-Phosphate 1-Phosphotransferases of <i>Phaseolus vulgaris</i> Seeds. <i>Plant Physiology</i> , 1987, 83, 772-777.	2.3	37
86	Phosphoglyceromutase activity and concentration in the endosperm of developing and germinating <i>Ricinus communis</i> seeds. <i>Canadian Journal of Botany</i> , 1987, 65, 1908-1912.	1.2	17
87	Seed germination of <i>Ziziphus mucronata</i> subsp. <i>mucronata</i> . <i>South African Journal of Botany</i> , 1987, 53, 341-344.	1.2	6
88	Control of ribulose 1,5-bisphosphate carboxylase synthesis in the cotyledons of <i>Citrullus lanatus</i> . <i>Plant Science</i> , 1987, 53, 121-129.	1.7	12
89	Characterisation of pyrophosphate dependent phosphofructokinase from germinating bean seeds. <i>Plant Science</i> , 1987, 51, 151-157.	1.7	4
90	Isozymes of phosphoglyceromutase from the developing endosperm of <i>Ricinus communis</i> : Isolation and kinetic properties. <i>Archives of Biochemistry and Biophysics</i> , 1986, 245, 96-103.	1.4	29

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91	The effect of cyanide, SHAM and azide on the germination and respiration of <i>Citrullus lanatus</i> seeds. South African Journal of Botany, 1986, 52, 77-80.	1.2	1
92	Isolation and Characterization of Pyrophosphate:D-Fructose-6-phosphate 1-Phosphotransferase from Cucumber Seeds. Plant and Cell Physiology, 1986, 27, 1285-1295.	1.5	22
93	Effect of Water Stress on the Carbohydrate Metabolism of <i>Citrullus lanatus</i> Seeds during Germination. Plant Physiology, 1985, 77, 79-82.	2.3	21
94	The effect of water stress on the germination of <i>Citrullus lanatus</i> seeds. South African Journal of Botany, 1984, 3, 111-114.	1.2	9
95	Seed germination in <i>Citrullus lanatus</i> . Part 3. The possibility of light as an inhibitory factor for germination of seeds within the fruits based on light measurement studies. South African Journal of Botany, 1982, 1, 134-138.	1.2	1
96	Kinetic Properties of the ATP-Dependent Phosphofructokinase Isoenzymes from Cucumber Seeds. Plant and Cell Physiology, 0, , .	1.5	4