Nathalie Verbruggen

List of Publications by Year
in descending order

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82 papers	11,288 citations	47006 47 h-index	60623 81 g-index
84 all docs	84 docs citations	84 times ranked	11255 citing authors

#	Article	IF	Citations
1	Proline accumulation in plants: a review. Amino Acids, 2008, 35, 753-759.	2.7	1,435
2	How do plants respond to nutrient shortage by biomass allocation?. Trends in Plant Science, 2006, 11, 610-617.	8.8	957
3	Molecular mechanisms of metal hyperaccumulation in plants. New Phytologist, 2009, 181, 759-776.	7.3	869
4	Plant science: the key to preventing slow cadmium poisoning. Trends in Plant Science, 2013, 18, 92-99.	8.8	844
5	Mechanisms to cope with arsenic or cadmium excess in plants. Current Opinion in Plant Biology, 2009, 12, 364-372.	7.1	678
6	Small heat shock proteins and stress tolerance in plants. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 2002, 1577, 1-9.	2.4	556
7	Response to copper excess in Arabidopsis thaliana: Impact on the root system architecture, hormone distribution, lignin accumulation and mineral profile. Plant Physiology and Biochemistry, 2010, 48, 673-682.	5.8	321
8	At-HSP17.6A, encoding a small heat-shock protein in Arabidopsis, can enhance osmotolerance upon overexpression. Plant Journal, 2001, 27, 407-415.	5.7	289
9	A Major Quantitative Trait Locus for Cadmium Tolerance in Arabidopsis halleri Colocalizes with HMA4, a Gene Encoding a Heavy Metal ATPase. Plant Physiology, 2007, 144, 1052-1065.	4.8	288
10	Natural variation in cadmium tolerance and its relationship to metal hyperaccumulation for seven populations of Thlaspi caerulescens from western Europe. Plant, Cell and Environment, 2003, 26, 1657-1672.	5.7	242
11	Physiological characterization of Mg deficiency in Arabidopsis thaliana. Journal of Experimental Botany, 2005, 56, 2153-2161.	4.8	212
12	Physiological and molecular responses to magnesium nutritional imbalance in plants. Plant and Soil, 2013, 368, 87-99.	3.7	207
13	Physiological characterisation of magnesium deficiency in sugar beet: acclimation to low magnesium differentially affects photosystemsï¿½I and II. Planta, 2004, 220, 344-355.	3.2	193
14	Copper and cobalt accumulation in plants: a critical assessment of the current state of knowledge. New Phytologist, 2017, 213, 537-551.	7.3	190
15	Magnesium deficiency in sugar beets alters sugar partitioning and phloem loading in young mature leaves. Planta, 2005, 220, 541-549.	3.2	177
16	Expression of cell cycle regulatory genes and morphological alterations in response to salt stress in Arabidopsis thaliana. Planta, 2000, 211, 632-640.	3.2	176
17	Isolation, characterization, and chromosomal location of a gene encoding theÎ”1-pyrroline-5-carboxylate synthetase inArabidopsis thaliana. FEBS Letters, 1995, 372, 13-19.	2.8	174
18	A novel CPx-ATPase from the cadmium hyperaccumulatorThlaspi caerulescens. FEBS Letters, 2004, 569, 140-148.	2.8	165

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19	The Genetic Basis of Zinc Tolerance in the Metallophyte Arabidopsis halleri ssp. halleri (Brassicaceae): An Analysis of Quantitative Trait Loci. Genetics, 2007, 176, 659-674.	2.9	160
20	Altered Levels of Proline Dehydrogenase Cause Hypersensitivity to Proline and Its Analogs in Arabidopsis. Plant Physiology, 2002, 128, 73-83.	4.8	155
21	Systems analysis of the responses to longâ€term magnesium deficiency and restoration in <i>Arabidopsis thaliana</i>. New Phytologist, 2010, 187, 132-144.	7.3	140
22	Early transcriptomic changes induced by magnesium deficiency in <i>Arabidopsis thaliana</i> reveal the alteration of circadian clock gene expression in roots and the triggering of abscisic acidâ€responsive genes. New Phytologist, 2010, 187, 119-131.	7.3	133
23	An update on magnesium homeostasis mechanisms in plants. Metallomics, 2013, 5, 1170.	2.4	133
24	Intraspecific variability of cadmium tolerance and accumulation, and cadmium-induced cell wall modifications in the metal hyperaccumulator Arabidopsis halleri. Journal of Experimental Botany, 2015, 66, 3215-3227.	4.8	120
25	Characterization of an Arabidopsis thaliana receptor-like protein kinase gene activated by oxidative stress and pathogen attack. Plant Journal, 1999, 18, 321-327.	5.7	119
26	<i>CATION EXCHANGER1</i> Cosegregates with Cadmium Tolerance in the Metal Hyperaccumulator <i>Arabidopsis halleri</i> and Plays a Role in Limiting Oxidative Stress in <i>Arabidopsis</i> Spp.. Plant Physiology, 2015, 169, 549-559.	4.8	109
27	Evidence for copper homeostasis function of metallothionein (MT3) in the hyperaccumulatorThlaspi caerulescens. FEBS Letters, 2004, 577, 9-16.	2.8	108
28	Variation in HMA4 gene copy number and expression among Noccaea caerulescens populations presenting different levels of Cd tolerance and accumulation. Journal of Experimental Botany, 2012, 63, 4179-4189.	4.8	105
29	Cd-tolerant Suillus luteus: A fungal insurance for pines exposed to Cd. Environmental Pollution, 2009, 157, 1581-1588.	7.5	103
30	Expression of antioxidant enzymes in response to abscisic acid and high osmoticum in tobacco BY-2 cell cultures. Plant Science, 1998, 138, 27-34.	3.6	102
31	Adaptation to high zinc depends on distinct mechanisms in metallicolous populations of <i>Arabidopsis halleri</i>. New Phytologist, 2018, 218, 269-282.	7.3	90
32	Variations in plant metallothioneins: the heavy metal hyperaccumulator Thlaspi caerulescens as a study case. Planta, 2005, 222, 716-729.	3.2	89
33	Contrasting cadmium resistance strategies in two metallicolous populations of <i>Arabidopsis halleri</i>. New Phytologist, 2018, 218, 283-297.	7.3	88
34	Evidence of various mechanisms of Cd sequestration in the hyperaccumulator Arabidopsis halleri, the non-accumulator Arabidopsis lyrata, and their progenies by combined synchrotron-based techniques. Journal of Experimental Botany, 2015, 66, 3201-3214.	4.8	86
35	The 5â€² untranslated region of the At-P5R gene is involved in both transcriptional and post-transcriptional regulation. Plant Journal, 2001, 26, 157-169.	5.7	83
36	Biodiversity of Mineral Nutrient and Trace Element Accumulation in Arabidopsis thaliana. PLoS ONE, 2012, 7, e35121.	2.5	82

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37	Genetic architecture of zinc hyperaccumulation in <i>Arabidopsis halleri</i>: the essential role of QTLâ€ƒÃ—â€ƒenvironment interactions. New Phytologist, 2010, 187, 355-367.	7.3	81
38	Chitinase-Like Protein CTL1 Plays a Role in Altering Root System Architecture in Response to Multiple Environmental Conditions Â Â Â. Plant Physiology, 2010, 152, 904-917.	4.8	77
39	Tolerance to cadmium in plants: the special case of hyperaccumulators. BioMetals, 2013, 26, 633-638.	4.1	75
40	Low magnesium status in plants enhances tolerance to cadmium exposure. New Phytologist, 2011, 192, 428-436.	7.3	73
41	A Compact Model for the Complex Plant Circadian Clock. Frontiers in Plant Science, 2016, 7, 74.	3.6	73
42	Toxic Effects of Cd and Zn on the Photosynthetic Apparatus of the Arabidopsis halleri and Arabidopsis arenosa Pseudo-Metallophytes. Frontiers in Plant Science, 2019, 10, 748.	3.6	65
43	Quantitative trait loci analysis of mineral element concentrations in an <i>Arabidopsis halleri</i>â€ƒÃ—â€ƒ<i>Arabidopsis lyrata petraea</i> F₂ progeny grown on cadmiumâ€contaminated soil. New Phytologist, 2010, 187, 368-379.	7.3	64
44	Endoplasmic reticulum-localized CCX2 is required for osmotolerance by regulating ER and cytosolic Ca ²⁺ dynamics in <i>Arabidopsis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3966-3971.	7.1	61
45	Potential preadaptation to anthropogenic pollution: evidence from a common quantitative trait locus for zinc and cadmium tolerance in metallicolous and nonmetallicolous accessions of <i>Arabidopsis halleri</i>. New Phytologist, 2016, 212, 934-943.	7.3	60
46	Comparative cDNA-AFLP analysis of Cd-tolerant and -sensitive genotypes derived from crosses between the Cd hyperaccumulator Arabidopsis halleri and Arabidopsis lyrata ssp. petraea. Journal of Experimental Botany, 2006, 57, 2967-2983.	4.8	51
47	Copper tolerance in the cuprophyte Haumaniastrum katangense (S. Moore) P.A. Duvign. & Plancke. Plant and Soil, 2010, 328, 235-244.	3.7	50
48	Soil influence on Cu and Co uptake and plant size in the cuprophytes Crepidorhopalon perennis and C. tenuis (Scrophulariaceae) in SC Africa. Plant and Soil, 2009, 317, 201-212.	3.7	43
49	CAX1 suppresses Cdâ€induced generation of reactive oxygen species in <i>Arabidopsis halleri</i>. Plant, Cell and Environment, 2018, 41, 2435-2448.	5.7	39
50	Altered levels of proline dehydrogenase cause hypersensitivity to proline and its analogs in Arabidopsis. Plant Physiology, 2002, 128, 73-83.	4.8	38
51	Isolation and characterization of Arabidopsis halleri and Thlaspi caerulescens phytochelatin synthases. Planta, 2011, 234, 83-95.	3.2	36
52	Copper tolerance and accumulation in two cuprophytes of South Central Africa: Crepidorhopalon perennis and C. tenuis (Linderniaceae). Environmental and Experimental Botany, 2012, 84, 11-16.	4.2	34
53	A more complete picture of metal hyperaccumulation through next-generation sequencing technologies. Frontiers in Plant Science, 2013, 4, 388.	3.6	29
54	Dissecting the Role of CHITINASE-LIKE1 in Nitrate-Dependent Changes in Root Architecture Â Â. Plant Physiology, 2011, 157, 1313-1326.	4.8	28

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55	Gene expression profiling of a Zn-tolerant and a Zn-sensitive Suillus luteus isolate exposed to increased external zinc concentrations. Mycorrhiza, 2007, 17, 571-580.	2.8	26
56	Tolerance and accumulation of cobalt in three species of Haumaniastrum and the influence of copper. Environmental and Experimental Botany, 2018, 149, 27-33.	4.2	24
57	Transcriptome analysis by cDNA-AFLP of Suillus luteus Cd-tolerant and Cd-sensitive isolates. Mycorrhiza, 2011, 21, 145-154.	2.8	22
58	Magnesium maintains the length of the circadian period in Arabidopsis. Plant Physiology, 2021, 185, 519-532.	4.8	22
59	Arabidopsis <i><scp>COPPER MODIFIED RESISTANCE</scp>1/<scp>PATRONUS</scp>1</i> is essential for growth adaptation to stress and required for mitotic onset control. New Phytologist, 2016, 209, 177-191.	7.3	19
60	Modeling the photoperiodic entrainment of the plant circadian clock. Journal of Theoretical Biology, 2017, 420, 220-231.	1.7	19
61	Transcriptomic analysis supports the role of CATION EXCHANGER 1 in cellular homeostasis and oxidative stress limitation during cadmium stress. Plant Signaling and Behavior, 2016, 11, e1183861.	2.4	18
62	Metal binding properties and structure of a type III metallothionein from the metal hyperaccumulator plant Noccaea caerulescens. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2012, 1824, 1016-1023.	2.3	17
63	Adaptation of <i>Arabidopsis halleri</i> to extreme metal pollution through limited metal accumulation involves changes in cell wall composition and metal homeostasis. New Phytologist, 2021, 230, 669-682.	7.3	17
64	Different strategies of Cd tolerance and accumulation in <i>Arabidopsis halleri</i> and <scp><i>Arabidopsis arenosa</i></scp>. Plant, Cell and Environment, 2020, 43, 3002-3019.	5.7	16
65	Diversity of endophytic bacteria from the cuprophytes Haumaniastrum katangense and Crepidorhopalon tenuis. Plant and Soil, 2010, 334, 461-474.	3.7	12
66	Towards the discovery of novel genetic component involved in stress resistance in A rabidopsis thaliana. New Phytologist, 2014, 201, 810-824.	7.3	12
67	Natural genetic variation of Arabidopsis thaliana root morphological response to magnesium supply. Crop and Pasture Science, 2015, 66, 1249.	1.5	12
68	Synthesis of the proline analogue [2,3-3H]azetidine-2-carboxylic acid Uptake and incorporation inArabidopsis thalianaandEscherichia coli. FEBS Letters, 1992, 308, 261-263.	2.8	10
69	Specialized edaphic niches of threatened copper endemic plant species in the D.R. Congo: implications for ex situ conservation. Plant and Soil, 2017, 413, 261-273.	3.7	10
70	A Comparative Study of Ethylene Emanation upon Nitrogen Deficiency in Natural Accessions of Arabidopsis thaliana. Frontiers in Plant Science, 2016, 7, 70.	3.6	9
71	Characterization and functional investigation of an Arabidopsis cDNA encoding a homologue to the d-PGMase superfamily. Journal of Experimental Botany, 2005, 56, 1129-1142.	4.8	8
72	Variation in copper and cobalt tolerance and accumulation among six populations of the facultative metallophyte Anisopappus chinensis (Asteraceae). Environmental and Experimental Botany, 2018, 153, 1-9.	4.2	8

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73	Exploiting Genomic Features to Improve the Prediction of Transcription Factor-Binding Sites in Plants. Plant and Cell Physiology, 2022, 63, 1457-1473.	3.1	7
74	Adaptative Evolution of Metallothionein 3 in the Cd/Zn Hyperaccumulator Thlaspi caerulescens. Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 2005, 60, 224-228.	1.4	6
75	Response to Andrews et al.: correlations and causality. Trends in Plant Science, 2007, 12, 532-533.	8.8	6
76	Protein lysine methylation contributes to modulating the response of sensitive and tolerant Arabidopsis species to cadmium stress. Plant, Cell and Environment, 2020, 43, 760-774.	5.7	6
77	Essential trace metals in plant responses to heat stress. Journal of Experimental Botany, 2022, 73, 1775-1788.	4.8	6
78	A 69 bp fragment in the pyrroline-5-carboxylate reductase promoter ofArabidopsis thalianaactivates minimal CaMV 35S promoter in a tissue-specific manner. FEBS Letters, 1999, 458, 193-196.	2.8	5
79	Impact of postâ€flowering nitrate availability on nitrogen remobilization inÂhydroponically grown durum wheat. Journal of Plant Nutrition and Soil Science, 2017, 180, 273-278.	1.9	5
80	Mg deficiency interacts with the circadian clock and phytochromes pathways in Arabidopsis. Annals of Applied Biology, 2021, 178, 387-399.	2.5	5
81	Essential trace metals: micronutrients with large impact. Journal of Experimental Botany, 2022, 73, 1685-1687.	4.8	4
82	Magnesium in Plants. , 2013, , 1269-1276.		1