Mary Lou Guerinot

List of Publications by Year
in descending order

83 papers	19,097 citations	20817 60 h-index	58581 82 g-index
89 all docs	89 docs citations	89 times ranked	12374 citing authors

#	Article	IF	Citations
1	IRT1, an Arabidopsis Transporter Essential for Iron Uptake from the Soil and for Plant Growth. Plant Cell, 2002, 14, 1223-1233.	6.6	1,464
2	A ferric-chelate reductase for iron uptake from soils. Nature, 1999, 397, 694-697.	27.8	1,161
3	Phylogenetic Relationships within Cation Transporter Families of Arabidopsis. Plant Physiology, 2001, 126, 1646-1667.	4.8	1,110
4	The ZIP family of metal transporters. Biochimica Et Biophysica Acta - Biomembranes, 2000, 1465, 190-198.	2.6	972
5	The Essential Basic Helix-Loop-Helix Protein FIT1 Is Required for the Iron Deficiency Response. Plant Cell, 2004, 16, 3400-3412.	6.6	702
6	The IRT1 protein from Arabidopsis thaliana is a metal transporter with a broad substrate range. Plant Molecular Biology, 1999, 40, 37-44.	3.9	699
7	Expression of the IRT1 Metal Transporter Is Controlled by Metals at the Levels of Transcript and Protein Accumulation. Plant Cell, 2002, 14, 1347-1357.	6.6	684
8	Localization of Iron in Arabidopsis Seed Requires the Vacuolar Membrane Transporter VIT1. Science, 2006, 314, 1295-1298.	12.6	614
9	Microbial Iron Transport. Annual Review of Microbiology, 1994, 48, 743-772.	7.3	592
10	Iron Uptake and Transport in Plants: The Good, the Bad, and the Ionome. Chemical Reviews, 2009, 109, 4553-4567.	47.7	546
11	Facing the challenges of Cu, Fe and Zn homeostasis in plants. Nature Chemical Biology, 2009, 5, 333-340.	8.0	506
12	Using membrane transporters to improve crops for sustainable food production. Nature, 2013, 497, 60-66.	27.8	440
13	Mining iron: Iron uptake and transport in plants. FEBS Letters, 2007, 581, 2273-2280.	2.8	416
14	Overexpression of the FRO2 Ferric Chelate Reductase Confers Tolerance to Growth on Low Iron and Uncovers Posttranscriptional Control. Plant Physiology, 2003, 133, 1102-1110.	4.8	403
15	Molecular aspects of Cu, Fe and Zn homeostasis in plants. Biochimica Et Biophysica Acta - Molecular Cell Research, 2006, 1763, 595-608.	4.1	382
16	Put the metal to the petal: metal uptake and transport throughout plants. Current Opinion in Plant Biology, 2006, 9, 322-330.	7.1	346
17	Genetic evidence that induction of root Fe(III) chelate reductase activity is necessary for iron uptake under iron deficiency+. Plant Journal, 1996, 10, 835-844.	5.7	323
18	Disruption of <i>OsYSL15</i> Leads to Iron Inefficiency in Rice Plants Â Â Â. Plant Physiology, 2009, 150, 786-800.	4.8	312

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19	FRD3, a Member of the Multidrug and Toxin Efflux Family, Controls Iron Deficiency Responses in Arabidopsis. Plant Cell, 2002, 14, 1787-1799.	6.6	311
20	The Ferroportin Metal Efflux Proteins Function in Iron and Cobalt Homeostasis in <i>Arabidopsis</i> Â Â. Plant Cell, 2009, 21, 3326-3338.	6.6	290
21	The leaf ionome as a multivariable system to detect a plant's physiological status. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 12081-12086.	7.1	288
22	MOLECULAR BIOLOGY OF CATION TRANSPORT IN PLANTS. Annual Review of Plant Biology, 1998, 49, 669-696.	14.3	274
23	Dirigent domain-containing protein is part of the machinery required for formation of the lignin-based Casparian strip in the root. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 14498-14503.	7.1	269
24	Homing in on iron homeostasis in plants. Trends in Plant Science, 2009, 14, 280-285.	8.8	255
25	Variation in Molybdenum Content Across Broadly Distributed Populations of Arabidopsis thaliana Is Controlled by a Mitochondrial Molybdenum Transporter (MOT1). PLoS Genetics, 2008, 4, e1000004.	3.5	233
26	Mn-euvering manganese: the role of transporter gene family members in manganese uptake and mobilization in plants. Frontiers in Plant Science, 2014, 5, 106.	3.6	228
27	Genome Wide Association Mapping of Grain Arsenic, Copper, Molybdenum and Zinc in Rice (Oryza) Tj ETQq1 1 0.784314 rgBT /Overlo	2.5	228
28	OPT3 Is a Phloem-Specific Iron Transporter That Is Essential for Systemic Iron Signaling and Redistribution of Iron and Cadmium in<i>Arabidopsis</i>Â Â. Plant Cell, 2014, 26, 2249-2264.	6.6	215
29	Getting a sense for signals: Regulation of the plant iron deficiency response. Biochimica Et Biophysica Acta - Molecular Cell Research, 2012, 1823, 1521-1530.	4.1	214
30	Mapping and validation of quantitative trait loci associated with concentrations of 16 elements in unmilled rice grain. Theoretical and Applied Genetics, 2014, 127, 137-165.	3.6	202
31	OsZIP5 is a plasma membrane zinc transporter in rice. Plant Molecular Biology, 2010, 73, 507-517.	3.9	201
32	MYB10 and MYB72 Are Required for Growth under Iron-Limiting Conditions. PLoS Genetics, 2013, 9, e1003953.	3.5	194
33	Understanding arsenic dynamics in agronomic systems to predict and prevent uptake by crop plants. Science of the Total Environment, 2017, 581-582, 209-220.	8.0	185
34	A heavy metal P-type ATPase OsHMA4 prevents copper accumulation in rice grain. Nature Communications, 2016, 7, 12138.	12.8	178
35	Phloem transport of arsenic species from flag leaf to grain during grain filling. New Phytologist, 2011, 192, 87-98.	7.3	170
36	Chloroplast Fe(III) chelate reductase activity is essential for seedling viability under iron limiting conditions. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 10619-10624.	7.1	166

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37	Zinc deficiency-inducible OsZIP8 encodes a plasma membrane-localized zinc transporter in rice. Molecules and Cells, 2010, 29, 551-558.	2.6	166
38	Worldwide Genetic Diversity for Mineral Element Concentrations in Rice Grain. Crop Science, 2015, 55, 294-311.	1.8	159
39	FIT, the FER-LIKE IRON DEFICIENCY INDUCED TRANSCRIPTION FACTOR in Arabidopsis. Plant Physiology and Biochemistry, 2007, 45, 260-261.	5.8	150
40	Fortified Foods and Phytoremediation. Two Sides of the Same Coin: Fig. 1.. Plant Physiology, 2001, 125, 164-167.	4.8	143
41	GmZIP1 Encodes a Symbiosis-specific Zinc Transporter in Soybean. Journal of Biological Chemistry, 2002, 277, 4738-4746.	3.4	140
42	BRUTUS and its paralogs, BTS LIKE1 and BTS LIKE2, encode important negative regulators of the iron deficiency response in Arabidopsis thaliana. Metallomics, 2017, 9, 876-890.	2.4	136
43	Variation in grain arsenic assessed in a diverse panel of rice (<i>Oryza sativa</i>) grown in multiple sites. New Phytologist, 2012, 193, 650-664.	7.3	126
44	Zeroing in on zinc uptake in yeast and plants. Current Opinion in Plant Biology, 1999, 2, 244-249.	7.1	120
45	The iron deficiency response in <i>Arabidopsis thaliana</i> requires the phosphorylated transcription factor URI. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24933-24942.	7.1	120
46	Sphingolipids in the Root Play an Important Role in Regulating the Leaf Ionome in<i>Arabidopsis thaliana</i>Â Â. Plant Cell, 2011, 23, 1061-1081.	6.6	111
47	Using synchrotron X-ray fluorescence microprobes in the study of metal homeostasis in plants. Annals of Botany, 2009, 103, 665-672.	2.9	109
48	Genome-resolved metagenomics reveals role of iron metabolism in drought-induced rhizosphere microbiome dynamics. Nature Communications, 2021, 12, 3209.	12.8	93
49	Structure of the Bradyrhizobium japonicum gene hemA encoding 5-aminolevulinic acid synthase. Gene, 1987, 54, 133-139.	2.2	88
50	Reciprocal Interaction of the Circadian Clock with the Iron Homeostasis Network in Arabidopsis Â Â. Plant Physiology, 2013, 161, 893-903.	4.8	85
51	All together now: regulation of the iron deficiency response. Journal of Experimental Botany, 2021, 72, 2045-2055.	4.8	81
52	Improving rice yieldsâ€"ironing out the details. Nature Biotechnology, 2001, 19, 417-418.	17.5	80
53	A review of recent developments in the speciation and location of arsenic and selenium in rice grain. Analytical and Bioanalytical Chemistry, 2012, 402, 3275-3286.	3.7	79
54	Natural Genetic Variation in Selected Populations of Arabidopsis thaliana Is Associated with Ionomic Differences. PLoS ONE, 2010, 5, e11081.	2.5	78

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55	Metal-Binding Thermodynamics of the Histidine-Rich Sequence from the Metal-Transport Protein IRT1 ofArabidopsisthaliana. Inorganic Chemistry, 2006, 45, 8500-8508.	4.0	73
56	The Arabidopsis MTP8 transporter determines the localization of manganese and iron in seeds. Scientific Reports, 2017, 7, 11024.	3.3	71
57	Siderophore Utilization by Bradyrhizobium japonicum. Applied and Environmental Microbiology, 1993, 59, 1688-1690.	3.1	69
58	Post-Translational Regulation of AtFER2 Ferritin in Response to Intracellular Iron Trafficking during Fruit Development in Arabidopsis. Molecular Plant, 2009, 2, 1095-1106.	8.3	64
59	The Role of CAX1 and CAX3 in Elemental Distribution and Abundance in Arabidopsis Seed Â Â. Plant Physiology, 2012, 158, 352-362.	4.8	64
60	Activation of Rice Yellow Stripe1-Like 16 (OsYSL16) Enhances Iron Efficiency. Molecules and Cells, 2012, 33, 117-126.	2.6	64
61	Bypassing Iron Storage in Endodermal Vacuoles Rescues the Iron Mobilization Defect in the <i>natural resistance associated-macrophage protein3natural resistance associated-macrophage protein4</i> Double Mutant. Plant Physiology, 2015, 169, 748-759.	4.8	61
62	Functional characterisation of metal(loid) processes in planta through the integration of synchrotron techniques and plant molecular biology. Analytical and Bioanalytical Chemistry, 2012, 402, 3287-3298.	3.7	60
63	Effects of the photobleaching herbicide, acifluorfen-methyl, on protoporphyrinogen oxidation in barley organelles, soybean root mitochondria, soybean root nodules, and bacteria. Archives of Biochemistry and Biophysics, 1990, 280, 369-375.	3.0	54
64	Enumeration, Isolation, and Characterization of N ₂ -Fixing Bacteria from Seawater. Applied and Environmental Microbiology, 1985, 50, 350-355.	3.1	54
65	Biofortified and bioavailable: The gold standard for plant-based diets. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1777-1778.	7.1	52
66	Natural variation in a molybdate transporter controls grain molybdenum concentration in rice. New Phytologist, 2019, 221, 1983-1997.	7.3	44
67	Limiting nutrients: an old problem with new solutions?. Current Opinion in Plant Biology, 2002, 5, 158-163.	7.1	43
68	It's elementary: Enhancing Fe3+ reduction improves rice yields: Fig. 1.. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 7311-7312.	7.1	43
69	Elemental Profiling of Rice FOX Lines Leads to Characterization of a New Zn Plasma Membrane Transporter, OsZIP7. Frontiers in Plant Science, 2018, 9, 865.	3.6	41
70	A transporter for delivering zinc to the developing tiller bud and panicle in rice. Plant Journal, 2021, 105, 786-799.	5.7	39
71	Opportunities and Challenges for Dietary Arsenic Intervention. Environmental Health Perspectives, 2018, 126, 84503.	6.0	32
72	An Iron Uptake Operon Required for Proper Nodule Development in the Bradyrhizobium japonicum-Soybean Symbiosis. Molecular Plant-Microbe Interactions, 2005, 18, 950-959.	2.6	30

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73	Photoprotection during iron deficiency is mediated by the bHLH transcription factors PYE and ILR3. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	27
74	Plant Calcium Content: Ready to Remodel. Nutrients, 2012, 4, 1120-1136.	4.1	25
75	Redundant roles of four ZIP family members in zinc homeostasis and seed development in <i>Arabidopsis thaliana</i>. Plant Journal, 2021, 108, 1162-1173.	5.7	24
76	Arabidopsis thaliana zinc accumulation in leaf trichomes is correlated with zinc concentration in leaves. Scientific Reports, 2021, 11, 5278.	3.3	21
77	Elemental Concentrations in the Seed of Mutants and Natural Variants of Arabidopsis thaliana Grown under Varying Soil Conditions. PLoS ONE, 2013, 8, e63014.	2.5	19
78	Targeted expression of the arsenate reductase HAC1 identifies cell type specificity of arsenic metabolism and transport in plant roots. Journal of Experimental Botany, 2021, 72, 415-425.	4.8	12
79	Univariate and Multivariate QTL Analyses Reveal Covariance Among Mineral Elements in the Rice Ionome. Frontiers in Genetics, 2021, 12, 638555.	2.3	10
80	The Role of ZIP Family Members in Iron Transport. , 2006, , 311-326.		8
81	Reduction and Uptake of Iron in Plants. , 1998, , 179-192.		7
82	Genome-wide association mapping for grain manganese in rice (Oryza sativa L.) using a multi-experiment approach. Heredity, 2021, 126, 505-520.	2.6	3
83	Physiology and metabolism. Current Opinion in Plant Biology, 2003, 6, 205-207.	7.1	0