Lixing Yuan

List of Publications by Year
in descending order

98 papers	8,073 citations	66343 42 h-index	51608 86 g-index
99 all docs	99 docs citations	99 times ranked	7837 citing authors

#	Article	IF	Citations
1	Phosphorus Dynamics: From Soil to Plant. Plant Physiology, 2011, 156, 997-1005.	4.8	1,127
2	NRT1.1B is associated with root microbiota composition and nitrogen use in field-grown rice. Nature Biotechnology, 2019, 37, 676-684.	17.5	641
3	Improving crop productivity and resource use efficiency to ensure food security and environmental quality in China. Journal of Experimental Botany, 2012, 63, 13-24.	4.8	465
4	Endocytosis and degradation of BOR1, a boron transporter of Arabidopsis thaliana, regulated by boron availability. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 12276-12281.	7.1	378
5	The Organization of High-Affinity Ammonium Uptake in <i>Arabidopsis</i> Roots Depends on the Spatial Arrangement and Biochemical Properties of AMT1-Type Transporters. Plant Cell, 2007, 19, 2636-2652.	6.6	330
6	Tonoplast Intrinsic Proteins AtTIP2;1 and AtTIP2;3 Facilitate NH3 Transport into the Vacuole. Plant Physiology, 2005, 137, 671-680.	4.8	297
7	Integrated soil and plant phosphorus management for crop and environment in China. A review. Plant and Soil, 2011, 349, 157-167.	3.7	248
8	Maximizing root/rhizosphere efficiency to improve crop productivity and nutrient use efficiency in intensive agriculture of China. Journal of Experimental Botany, 2013, 64, 1181-1192.	4.8	245
9	Additive contribution of AMT1;1 and AMT1;3 to high-affinity ammonium uptake across the plasma membrane of nitrogen-deficient Arabidopsis roots. Plant Journal, 2006, 48, 522-534.	5.7	199
10	Feedback Inhibition of Ammonium Uptake by a Phospho-Dependent Allosteric Mechanism in<i>Arabidopsis</i>Â. Plant Cell, 2009, 21, 3610-3622.	6.6	181
11	Modern maize hybrids in <scp>N</scp>ortheast <scp>C</scp>hina exhibit increased yield potential and resource use efficiency despite adverse climate change. Global Change Biology, 2013, 19, 923-936.	9.5	143
12	Characterization of AMT-Mediated High-Affinity Ammonium Uptake in Roots of Maize (Zea mays L.). Plant and Cell Physiology, 2013, 54, 1515-1524.	3.1	136
13	A genetic relationship between nitrogen use efficiency and seedling root traits in maize as revealed by QTL analysis. Journal of Experimental Botany, 2015, 66, 3175-3188.	4.8	135
14	Effects of nitrogen application rate on grain yield and grain nitrogen concentration in two maize hybrids with contrasting nitrogen remobilization efficiency. European Journal of Agronomy, 2015, 62, 79-89.	4.1	133
15	Ideotype root architecture for efficient nitrogen acquisition by maize in intensive cropping systems. Science China Life Sciences, 2010, 53, 1369-1373.	4.9	131
16	Potassium nutrition of crops under varied regimes of nitrogen supply. Plant and Soil, 2010, 335, 21-34.	3.7	116
17	AtDUR3 represents the major transporter for highâ€affinity urea transport across the plasma membrane of nitrogenâ€deficient Arabidopsis roots. Plant Journal, 2007, 52, 30-40.	5.7	114
18	Within-Leaf Nitrogen Allocation in Adaptation to Low Nitrogen Supply in Maize during Grain-Filling Stage. Frontiers in Plant Science, 2016, 7, 699.	3.6	114

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19	Characterization of the plant traits contributed to high grain yield and high grain nitrogen concentration in maize. Field Crops Research, 2014, 159, 1-9.	5.1	113
20	Grain production versus resource and environmental costs: towards increasing sustainability of nutrient use in China. Journal of Experimental Botany, 2016, 67, 4935-4949.	4.8	111
21	Nitrogen-Dependent Posttranscriptional Regulation of the Ammonium Transporter AtAMT1;1. Plant Physiology, 2007, 143, 732-744.	4.8	106
22	Transporter-Mediated Nuclear Entry ofÂJasmonoyl-Isoleucine Is Essential forÂJasmonate Signaling. Molecular Plant, 2017, 10, 695-708.	8.3	104
23	A comprehensive analysis of root morphological changes and nitrogen allocation in maize in response to low nitrogen stress. Plant, Cell and Environment, 2015, 38, 740-750.	5.7	103
24	Allosteric Regulation of Transport Activity by Heterotrimerization of <i>Arabidopsis</i> Ammonium Transporter Complexes in Vivo Â Â. Plant Cell, 2013, 25, 974-984.	6.6	96
25	Mapping QTLs for root system architecture of maize (Zea mays L.) in the field at different developmental stages. Theoretical and Applied Genetics, 2012, 125, 1313-1324.	3.6	94
26	Ammonium Inhibits Primary Root Growth by Reducing the Length of Meristem and Elongation Zone and Decreasing Elemental Expansion Rate in the Root Apex in Arabidopsis thaliana. PLoS ONE, 2013, 8, e61031.	2.5	92
27	AtAMT1;4, a Pollen-Specific High-Affinity Ammonium Transporter of the Plasma Membrane in Arabidopsis. Plant and Cell Physiology, 2009, 50, 13-25.	3.1	91
28	Genetic improvement of root growth increases maize yield via enhanced post-silking nitrogen uptake. European Journal of Agronomy, 2015, 63, 55-61.	4.1	83
29	The physiological mechanism underlying root elongation in response to nitrogen deficiency in crop plants. Planta, 2020, 251, 84.	3.2	67
30	A Critical Role of AMT2;1 in Root-To-Shoot Translocation of Ammonium in Arabidopsis. Molecular Plant, 2017, 10, 1449-1460.	8.3	66
31	Ideotype Root System Architecture for Maize to Achieve High Yield and Resource Use Efficiency in Intensive Cropping Systems. Advances in Agronomy, 2016, , 73-97.	5.2	63
32	Identification of QTLs for plant height, ear height and grain yield in maize (<i>Zea mays</i> L.) in response to nitrogen and phosphorus supply. Plant Breeding, 2012, 131, 502-510.	1.9	58
33	Auxin transport in maize roots in response to localized nitrate supply. Annals of Botany, 2010, 106, 1019-1026.	2.9	57
34	<i><scp>TOND1</scp></i> confers tolerance to nitrogen deficiency in rice. Plant Journal, 2015, 81, 367-376.	5.7	57
35	Dynamic change of mineral nutrient content in different plant organs during the grain filling stage in maize grown under contrasting nitrogen supply. European Journal of Agronomy, 2016, 80, 137-153.	4.1	57
36	Identification of quantitative trait loci for leaf area and chlorophyll content in maize (Zea mays) under low nitrogen and low phosphorus supply. Molecular Breeding, 2012, 30, 251-266.	2.1	55

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37	Changes in root size and distribution in relation to nitrogen accumulation during maize breeding in China. Plant and Soil, 2014, 374, 121-130.	3.7	55
38	Isolation and characterization of three maize aquaporin genes, ZmNIP2;1, ZmNIP2;4 and ZmTIP4;4 involved in urea transport. BMB Reports, 2012, 45, 96-101.	2.4	54
39	Comprehensive phenotypic analysis and quantitative trait locus identification for grain mineral concentration, content, and yield in maize (Zea mays L.). Theoretical and Applied Genetics, 2015, 128, 1777-1789.	3.6	52
40	Soil plant-available phosphorus levels and maize genotypes determine the phosphorus acquisition efficiency and contribution of mycorrhizal pathway. Plant and Soil, 2020, 449, 357-371.	3.7	52
41	Comparative Expression and Phylogenetic Analysis of Maize Cytokinin Dehydrogenase/Oxidase (CKX) Gene Family. Journal of Plant Growth Regulation, 2010, 29, 428-440.	5.1	49
42	A novel morphological response of maize (<i>Zea mays</i>) adult roots to heterogeneous nitrate supply revealed by a splitâ€root experiment. Physiologia Plantarum, 2014, 150, 133-144.	5.2	49
43	Enhancing phosphorus uptake efficiency through QTL-based selection for root system architecture in maize. Journal of Genetics and Genomics, 2016, 43, 663-672.	3.9	48
44	Evaluation of the yield and nitrogen use efficiency of the dominant maize hybrids grown in North and Northeast China. Science China Life Sciences, 2013, 56, 552-560.	4.9	47
45	A RNA-Seq Analysis of the Response of Photosynthetic System to Low Nitrogen Supply in Maize Leaf. International Journal of Molecular Sciences, 2017, 18, 2624.	4.1	47
46	Increased biomass accumulation in maize grown in mixed nitrogen supply is mediated by auxin synthesis. Journal of Experimental Botany, 2019, 70, 1859-1873.	4.8	46
47	Comparative Analysis of Root Traits and the Associated QTLs for Maize Seedlings Grown in Paper Roll, Hydroponics and Vermiculite Culture System. Frontiers in Plant Science, 2017, 8, 436.	3.6	44
48	Evolving technologies for growing, imaging and analyzing 3D root system architecture of crop plants. Journal of Integrative Plant Biology, 2016, 58, 230-241.	8.5	43
49	Ammonium and nitrate regulate NH4+ uptake activity of Arabidopsis ammonium transporter AtAMT1;3 via phosphorylation at multiple C-terminal sites. Journal of Experimental Botany, 2019, 70, 4919-4930.	4.8	41
50	The ironâ€regulated transporter 1 plays an essential role in uptake, translocation and grainâ€loading of manganese, but not iron, in barley. New Phytologist, 2018, 217, 1640-1653.	7.3	37
51	Use of genotypeâ€environment interactions to elucidate the pattern of maize root plasticity to nitrogen deficiency. Journal of Integrative Plant Biology, 2016, 58, 242-253.	8.5	36
52	Interaction effect of nitrogen form and planting density on plant growth and nutrient uptake in maize seedlings. Journal of Integrative Agriculture, 2019, 18, 1120-1129.	3.5	36
53	Gibberellins synthesis is involved in the reduction of cell flux and elemental growth rate in maize leaf under low nitrogen supply. Environmental and Experimental Botany, 2018, 150, 198-208.	4.2	34
54	Genetic analysis of vertical root pulling resistance (VRPR) in maize using two genetic populations. Molecular Breeding, 2011, 28, 463-474.	2.1	31

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55	Importers Drive Leaf-to-Leaf Jasmonic Acid Transmission in Wound-Induced Systemic Immunity. Molecular Plant, 2020, 13, 1485-1498.	8.3	31
56	Low nitrogen induces root elongation via auxin-induced acid growth and auxin-regulated target of rapamycin (TOR) pathway in maize. Journal of Plant Physiology, 2020, 254, 153281.	3.5	30
57	Phylogenetic, expression and functional characterizations of the maize <i>NLP</i> transcription factor family reveal a role in nitrate assimilation and signaling. Physiologia Plantarum, 2018, 163, 269-281.	5.2	29
58	ZmRAP2.7, an AP2 Transcription Factor, Is Involved in Maize Brace Roots Development. Frontiers in Plant Science, 2019, 10, 820.	3.6	29
59	Root growth in response to nitrogen supply in Chinese maize hybrids released between 1973 and 2009. Science China Life Sciences, 2011, 54, 642-650.	4.9	27
60	Dynamic remobilization of leaf nitrogen components in relation to photosynthetic rate during grain filling in maize. Plant Physiology and Biochemistry, 2018, 129, 27-34.	5.8	27
61	Evaluation of maize root growth and genome-wide association studies of root traits in response to low nitrogen supply at seedling emergence. Crop Journal, 2021, 9, 794-804.	5.2	26
62	Nitrogen allocation and remobilization contributing to low-nitrogen tolerance in stay-green maize. Field Crops Research, 2021, 263, 108078.	5.1	25
63	Vertical Distribution of Photosynthetic Nitrogen Use Efficiency and Its Response to Nitrogen in Fieldâ€Grown Maize. Crop Science, 2016, 56, 397-407.	1.8	24
64	Effects of Nitrogen Application on Postâ€Silking Root Senescence and Yield of Maize. Agronomy Journal, 2015, 107, 835-842.	1.8	23
65	CALCIUM-DEPENDENT PROTEIN KINASE 32-mediated phosphorylation is essential for the ammonium transport activity of AMT1;1 in Arabidopsis roots. Journal of Experimental Botany, 2020, 71, 5087-5097.	4.8	21
66	Use of the Stable Nitrogen Isotope to Reveal the Source-Sink Regulation of Nitrogen Uptake and Remobilization during Grain Filling Phase in Maize. PLoS ONE, 2016, 11, e0162201.	2.5	20
67	Physiological and genetic analysis for maize root characters and yield in response to low phosphorus stress. Breeding Science, 2018, 68, 268-277.	1.9	20
68	Root morphological and proteomic responses to growth restriction in maize plants supplied with sufficient N. Journal of Plant Physiology, 2011, 168, 1067-1075.	3.5	19
69	Improving the efficiency and effectiveness of global phosphorus use: focus on root and rhizosphere levels in the agronomic system. Frontiers of Agricultural Science and Engineering, 2019, 6, 357.	1.4	19
70	N-terminal cysteines affect oligomer stability of the allosterically regulated ammonium transporter LeAMT1;1. Journal of Experimental Botany, 2011, 62, 1361-1373.	4.8	18
71	Involvement of a truncated MADS-box transcription factor ZmTMM1 in root nitrate foraging. Journal of Experimental Botany, 2020, 71, 4547-4561.	4.8	18
72	Overexpression of the maize ZmAMT1;1a gene enhances root ammonium uptake efficiency under low ammonium nutrition. Plant Biotechnology Reports, 2018, 12, 47-56.	1.5	17

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73	Enhanced crown root number and length confers potential for yield improvement and fertilizer reduction in nitrogen-efficient maize cultivars. Field Crops Research, 2019, 241, 107562.	5.1	17
74	Grain Mineral Accumulation Changes in Chinese Maize Cultivars Released in Different Decades and the Responses to Nitrogen Fertilizer. Frontiers in Plant Science, 2019, 10, 1662.	3.6	15
75	Breeding for high-yield and nitrogen use efficiency in maize: Lessons from comparison between Chinese and US cultivars. Advances in Agronomy, 2021, , 251-275.	5.2	15
76	Harnessing root-foraging capacity to improve nutrient-use efficiency for sustainable maize production. Field Crops Research, 2022, 279, 108462.	5.1	15
77	Effects of pollination-prevention on leaf senescence and post-silking nitrogen accumulation and remobilization in maize hybrids released in the past four decades in China. Field Crops Research, 2017, 203, 106-113.	5.1	14
78	Innovations of phosphorus sustainability: implications for the whole chain. Frontiers of Agricultural Science and Engineering, 2019, 6, 321.	1.4	14
79	The role of maize root size in phosphorus uptake and productivity of maize/faba bean and maize/wheat intercropping systems. Science China Life Sciences, 2012, 55, 993-1001.	4.9	13
80	Genetic Improvement of Root Growth Contributes to Efficient Phosphorus Acquisition in maize (Zea) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	3.5	12
81	Genetic Dissection of Phosphorus Use Efficiency in a Maize Association Population under Two P Levels in the Field. International Journal of Molecular Sciences, 2021, 22, 9311.	4.1	12
82	Combined physiological, transcriptome, and genetic analysis reveals a molecular network of nitrogen remobilization in maize. Journal of Experimental Botany, 2020, 71, 5061-5073.	4.8	11
83	Plasticity of root anatomy during domestication of a maize-teosinte derived population. Journal of Experimental Botany, 2022, 73, 139-153.	4.8	11
84	Targeted BSA mapping of Scmv1 and Scmv2 conferring resistance to SCMV using PstI/MseI compared with EcoRI/MseI AFLP markers. Plant Breeding, 2004, 123, 434-437.	1.9	10
85	Assessing the variation in traits for manganese deficiency tolerance among maize genotypes. Environmental and Experimental Botany, 2021, 183, 104344.	4.2	10
86	Efficient nitrogen allocation and reallocation into the ear in relation to the superior vascular system in low-nitrogen tolerant maize hybrid. Field Crops Research, 2022, 284, 108580.	5.1	10
87	Cell Production and Expansion in the Primary Root of Maize in Response to Low-Nitrogen Stress. Journal of Integrative Agriculture, 2014, 13, 2508-2517.	3.5	8
88	Transcriptional Regulation of Expression of the Maize Aldehyde Dehydrogenase 7 Gene (ZmALDH7B6) in Response to Abiotic Stresses. Journal of Integrative Agriculture, 2014, 13, 1900-1908.	3.5	8
89	Dissecting the phenotypic response of maize to low phosphorus soils by field screening of a large diversity panel. Euphytica, 2021, 217, 1.	1.2	8
90	Natural Genetic Variation of Seed Micronutrients of Arabidopsis thaliana Grown in Zinc-Deficient and Zinc-Amended Soil. Frontiers in Plant Science, 2016, 7, 1070.	3.6	7

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91	Phenotypic characterization and genetic mapping of the dwarf mutant m34 in maize. Journal of Integrative Agriculture, 2019, 18, 948-957.	3.5	7
92	High light intensity aggravates latent manganese deficiency in maize. Journal of Experimental Botany, 2020, 71, 6116-6127.	4.8	7
93	High responsiveness of maize grain yield to nitrogen supply is explained by high ear growth rate and efficient ear nitrogen allocation. Field Crops Research, 2022, 286, 108610.	5.1	7
94	Expression of genes related to nitrogen metabolism in maize grown under organic and inorganic nitrogen supplies. Soil Science and Plant Nutrition, 2015, 61, 275-280.	1.9	3
95	Distinct nonâ€coding RNAs confer rootâ€dependent sense transgeneâ€induced postâ€transcriptional gene silencing and nitrogenâ€dependent postâ€transcriptional regulation to AtAMT1;1 transcripts in Arabidopsis roots. Plant Journal, 2020, 102, 823-837.	5.7	3
96	Highlights of special issue on â€œSustainable Phosphorus Use in Agri-Food Systemâ€. Frontiers of Agricultural Science and Engineering, 2019, 6, 311.	1.4	3
97	A 40-bp A/T-rich repressor element involved in organ-dependent transcriptional regulation of ZmGLU1. Plant Cell, Tissue and Organ Culture, 2011, 105, 291-298.	2.3	2
98	Comparative genome analysis of cytokinin biosynthesis genes (IPTS) reveals conserved orthologs cross Poaceae crops. Research on Crops, 2014, 15, 38.	0.1	1