Larry M York

List of Publications by Year
in descending order

40 papers	3,092 citations	279798 23 h-index	289244 40 g-index
57 all docs	57 docs citations	57 times ranked	3106 citing authors

#	Article	IF	Citations
1	The fungal collaboration gradient dominates the root economics space in plants. Science Advances, 2020, 6, .	10.3	377
2	Root traits as drivers of plant and ecosystem functioning: current understanding, pitfalls and future research needs. New Phytologist, 2021, 232, 1123-1158.	7.3	277
3	Image-Based High-Throughput Field Phenotyping of Crop Roots. Plant Physiology, 2014, 166, 470-486.	4.8	239
4	A starting guide to root ecology: strengthening ecological concepts and standardising root classification, sampling, processing and trait measurements. New Phytologist, 2021, 232, 973-1122.	7.3	216
5	The holistic rhizosphere: integrating zones, processes, and semantics in the soil influenced by roots. Journal of Experimental Botany, 2016, 67, 3629-3643.	4.8	204
6	Integration of root phenes for soil resource acquisition. Frontiers in Plant Science, 2013, 4, 355.	3.6	203
7	Evolution of US maize (Zea mays L.) root architectural and anatomical phenes over the past 100 years corresponds to increased tolerance of nitrogen stress. Journal of Experimental Botany, 2015, 66, 2347-2358.	4.8	153
8	An integrated framework of plant form and function: the belowground perspective. New Phytologist, 2021, 232, 42-59.	7.3	153
9	Next generation shovelomics: set up a tent and REST. Plant and Soil, 2015, 388, 1-20.	3.7	112
10	RhizoVision Explorer: open-source software for root image analysis and measurement standardization. AoB PLANTS, 2021, 13, plab056.	2.3	97
11	Global root traits (GRooT) database. Global Ecology and Biogeography, 2021, 30, 25-37.	5.8	90
12	Intensive field phenotyping of maize (Zea mays L.) root crowns identifies phenes and phene integration associated with plant growth and nitrogen acquisition. Journal of Experimental Botany, 2015, 66, 5493-5505.	4.8	88
13	Root foraging elicits niche complementarity-dependent yield advantage in the ancient â€˜three sistersâ€™ (maize/bean/squash) polyculture. Annals of Botany, 2014, 114, 1719-1733.	2.9	87
14	Functional phenomics: an emerging field integrating high-throughput phenotyping, physiology, and bioinformatics. Journal of Experimental Botany, 2019, 70, 379-386.	4.8	80
15	RhizoVision Crown: An Integrated Hardware and Software Platform for Root Crown Phenotyping. Plant Phenomics, 2020, 2020, 3074916.	5.9	74
16	Rice actin binding protein RMD controls crown root angle in response to external phosphate. Nature Communications, 2018, 9, 2346.	12.8	66
17	Root traits explain plant species distributions along climatic gradients yet challenge the nature of ecological trade-offs. Nature Ecology and Evolution, 2021, 5, 1123-1134.	7.8	62
18	Targeting Root Ion Uptake Kinetics to Increase Plant Productivity and Nutrient Use Efficiency. Plant Physiology, 2020, 182, 1854-1868.	4.8	53

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19	A Research Road Map for Responsible Use of Agricultural Nitrogen. Frontiers in Sustainable Food Systems, 2021, 5, .	3.9	48
20	Maize with fewer nodal roots allocates mass to more lateral and deep roots that improve nitrogen uptake and shoot growth. Journal of Experimental Botany, 2019, 70, 5299-5309.	4.8	43
21	Spatiotemporal variation of nitrate uptake kinetics within the maize (Zea maysL.) root system is associated with greater nitrate uptake and interactions with architectural phenes. Journal of Experimental Botany, 2016, 67, 3763-3775.	4.8	42
22	Root system architecture in cereals: progress, challenges and perspective. Plant Journal, 2022, 110, 23-42.	5.7	38
23	A multiple ion-uptake phenotyping platform reveals shared mechanisms affecting nutrient uptake by roots. Plant Physiology, 2021, 185, 781-795.	4.8	27
24	Functional phenomics and genetics of the root economics space in winter wheat using highâ€throughput phenotyping of respiration and architecture. New Phytologist, 2021, 232, 98-112.	7.3	26
25	Phenotyping Crop Root Crowns: General Guidance and Specific Protocols for Maize, Wheat, and Soybean. Methods in Molecular Biology, 2018, 1761, 23-32.	0.9	16
26	Can smart nutrient applications optimize the plant's hidden half to improve drought resistance?. Physiologia Plantarum, 2021, 172, 1007-1015.	5.2	15
27	Digital Imaging to Evaluate Root System Architectural Changes Associated with Soil Biotic Factors. Phytobiomes Journal, 2019, 3, 102-111.	2.7	13
28	Shovelomics root traits assessed on the EURoot maize panel are highly heritable across environments but show low genotype-by-nitrogen interaction. Euphytica, 2019, 215, 1.	1.2	13
29	Ironâ€“Sulfur Cluster Protein NITROGEN FIXATION S-LIKE1 and Its Interactor FRATAXIN Function in Plant Immunity. Plant Physiology, 2020, 184, 1532-1548.	4.8	13
30	Xâ€ray CT reveals 4D root system development and lateral root responses to nitrate in soil. The Plant Phenome Journal, 2022, 5, .	2.0	13
31	Objective Phenotyping of Root System Architecture Using Image Augmentation and Machine Learning in Alfalfa (Medicago sativa L.). Plant Phenomics, 2022, 2022, 9879610.	5.9	13
32	Interactions among rooting traits for deep water and nitrogen uptake in upland and lowland ecotypes of switchgrass (Panicum virgatum L.). Journal of Experimental Botany, 2022, 73, 967-979.	4.8	11
33	Application of Synthetic Peptide CEP1 Increases Nutrient Uptake Rates Along Plant Roots. Frontiers in Plant Science, 2021, 12, 793145.	3.6	9
34	Bioenergy Underground: Challenges and opportunities for phenotyping roots and the microbiome for sustainable bioenergy crop production. The Plant Phenome Journal, 2022, 5, .	2.0	9
35	An Analysis of Soil Coring Strategies to Estimate Root Depth in Maize (Zea mays) and Common Bean (Phaseolus vulgaris). Plant Phenomics, 2020, 2020, 3252703.	5.9	8
36	Genome-Wide Association Study of Topsoil Root System Architecture in Field-Grown Soybean [Glycine max (L.) Merr.]. Frontiers in Plant Science, 2020, 11, 590179.	3.6	7

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37	Intraspecific Variation for Leaf Physiological and Root Morphological Adaptation to Drought Stress in Alfalfa (Medicago sativa L.). Frontiers in Plant Science, 2022, 13, .	3.6	7
38	Whole-plant phenotypic engineering: moving beyond ratios for multi-objective optimization of nutrient use efficiency. Current Opinion in Biotechnology, 2022, 75, 102682.	6.6	5
39	Phenotyping Root System Architecture, Anatomy, and Physiology to Understand Soil Foraging. Concepts and Strategies in Plant Sciences, 2021, , 209-221.	0.5	2
40	Dark Respiration Measurement from Arabidopsis Shoots. Bio-protocol, 2021, 11, e4181.	0.4	1