Lawrie Brown

List of Publications by Year
in descending order

34 papers	2,254 citations	236925 25 h-index	377865 34 g-index
34 all docs	34 docs citations	34 times ranked	2353 citing authors

#	Article	IF	Citations
1	Significance of root hairs for plant performance under contrasting field conditions and water deficit. Annals of Botany, 2021, 128, 1-16.	2.9	66
2	Significance of root hairs at the field scale â€“ modelling root water and phosphorus uptake under different field conditions. Plant and Soil, 2020, 447, 281-304.	3.7	42
3	Is Bere barley specifically adapted to fertilisation with seaweed as a nutrient source?. Nutrient Cycling in Agroecosystems, 2020, 118, 149-163.	2.2	5
4	Carbon addition reduces labile soil phosphorus by increasing microbial biomass phosphorus in intensive agricultural systems. Soil Use and Management, 2020, 36, 536-546.	4.9	17
5	Ancient barley landraces adapted to marginal soils demonstrate exceptional tolerance to manganese limitation. Annals of Botany, 2019, 123, 831-843.	2.9	29
6	Interaction between root hairs and soil phosphorus on rhizosphere priming of soil organic matter. Soil Biology and Biochemistry, 2019, 135, 264-266.	8.8	14
7	Simultaneous Quantification of Soil Phosphorus Labile Pool and Desorption Kinetics Using DGTs and 3D-DIFS. Environmental Science & Technology, 2019, 53, 6718-6728.	10.0	23
8	Surface tension, rheology and hydrophobicity of rhizodeposits and seed mucilage influence soil water retention and hysteresis. Plant and Soil, 2019, 437, 65-81.	3.7	53
9	Is Green Manure from Riparian Buffer Strip Species an Effective Nutrient Source for Crops?. Journal of Environmental Quality, 2019, 48, 385-393.	2.0	4
10	Imaging microstructure of the barley rhizosphere: particle packing and root hair influences. New Phytologist, 2019, 221, 1878-1889.	7.3	51
11	Phosphorus acquisition by citrateâ€•and phytaseâ€•exuding <scp><i>Nicotiana tabacum</i></scp> plant mixtures depends on soil phosphorus availability and root intermingling. Physiologia Plantarum, 2018, 163, 356-371.	5.2	35
12	Differences in nutrient foraging among Trifolium subterraneum cultivars deliver improved P-acquisition efficiency. Plant and Soil, 2018, 424, 539-554.	3.7	34
13	Root development impacts on the distribution of phosphatase activity: Improvements in quantification using soil zymography. Soil Biology and Biochemistry, 2018, 116, 158-166.	8.8	40
14	Opportunities for mobilizing recalcitrant phosphorus from agricultural soils: a review. Plant and Soil, 2018, 427, 5-16.	3.7	191
15	Inter- and intra-species intercropping of barley cultivars and legume species, as affected by soil phosphorus availability. Plant and Soil, 2018, 427, 125-138.	3.7	46
16	Juvenile root vigour improves phosphorus use efficiency of potato. Plant and Soil, 2018, 432, 45-63.	3.7	27
17	Does the combination of citrate and phytase exudation in Nicotiana tabacum promote the acquisition of endogenous soil organic phosphorus?. Plant and Soil, 2017, 412, 43-59.	3.7	25
18	The rhizosheath â€“ a potential trait for future agricultural sustainability occurs in orders throughout the angiosperms. Plant and Soil, 2017, 418, 115-128.	3.7	92

#	Article	IF	Citations
19	Linking the depletion of rhizosphere phosphorus to the heterologous expression of a fungal phytase in Nicotiana tabacum as revealed by enzyme-labile P and solution 31P NMR spectroscopy. Rhizosphere, 2017, 3, 82-91.	3.0	12
20	Highâ€resolution synchrotron imaging shows that root hairs influence rhizosphere soil structure formation. New Phytologist, 2017, 216, 124-135.	7.3	116
21	Plant exudates may stabilize or weaken soil depending on species, origin and time. European Journal of Soil Science, 2017, 68, 806-816.	3.9	144
22	Response-based selection of barley cultivars and legume species for complementarity: Root morphology and exudation in relation to nutrient source. Plant Science, 2017, 255, 12-28.	3.6	41
23	Organic Acids Regulation of Chemicalâ€"Microbial Phosphorus Transformations in Soils. Environmental Science & Technology, 2016, 50, 11521-11531.	10.0	102
24	A Holistic Approach to Understanding the Desorption of Phosphorus in Soils. Environmental Science & Technology, 2016, 50, 3371-3381.	10.0	71
25	Genotypic variation in the ability of landraces and commercial cereal varieties to avoid manganese deficiency in soils with limited manganese availability: is there a role for rootâ€exuded phytases?. Physiologia Plantarum, 2014, 151, 243-256.	5.2	46
26	Root hair length and rhizosheath mass depend on soil porosity, strength and water content in barley genotypes. Planta, 2014, 239, 643-651.	3.2	101
27	Field phenotyping of potato to assess root and shoot characteristics associated with drought tolerance. Plant and Soil, 2014, 378, 351-363.	3.7	43
28	Understanding the genetic control and physiological traits associated with rhizosheath production by barley (<i><scp>H</scp>ordeum vulgare</i>). New Phytologist, 2014, 203, 195-205.	7.3	105
29	Interactions between root hair length and arbuscular mycorrhizal colonisation in phosphorus deficient barley (Hordeum vulgare). Plant and Soil, 2013, 372, 195-205.	3.7	55
30	Measuring variation in potato roots in both field and glasshouse: the search for useful yield predictors and a simple screen for root traits. Plant and Soil, 2013, 368, 231-249.	3.7	74
31	Root hairs improve root penetration, rootâ€"soil contact, and phosphorus acquisition in soils of different strength. Journal of Experimental Botany, 2013, 64, 3711-3721.	4.8	215
32	A conceptual model of root hair ideotypes for future agricultural environments: what combination of traits should be targeted to cope with limited P availability?. Annals of Botany, 2013, 112, 317-330.	2.9	118
33	What are the implications of variation in root hair length on tolerance to phosphorus deficiency in combination with water stress in barley (Hordeum vulgare)?. Annals of Botany, 2012, 110, 319-328.	2.9	175
34	Impact of soil tillage on the robustness of the genetic component of variation in phosphorus (P) use efficiency in barley (Hordeum vulgare L.). Plant and Soil, 2011, 339, 113-123.	3.7	42