

# Paul D Hallett

## List of Publications by Year in descending order

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Version: 2024-02-01

164  
papers

9,632  
citations

36303

51  
h-index

42399

92  
g-index

183  
all docs

183  
docs citations

183  
times ranked

9097  
citing authors

| #  | ARTICLE                                                                                                                                                                             | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 1  | Improving intercropping: a synthesis of research in agronomy, plant physiology and ecology. <i>New Phytologist</i> , 2015, 206, 107-117.                                            | 7.3 | 805       |
| 2  | Root elongation, water stress, and mechanical impedance: a review of limiting stresses and beneficial root tip traits. <i>Journal of Experimental Botany</i> , 2011, 62, 59-68.     | 4.8 | 766       |
| 3  | Modeling Soil Processes: Review, Key Challenges, and New Perspectives. <i>Vadose Zone Journal</i> , 2016, 15, 1-57.                                                                 | 2.2 | 445       |
| 4  | Root- and microbial-derived mucilages affect soil structure and water transport. <i>European Journal of Soil Science</i> , 2000, 51, 435-443.                                       | 3.9 | 340       |
| 5  | Changes to water repellence of soil aggregates caused by substrate-induced microbial activity. <i>European Journal of Soil Science</i> , 1999, 50, 35-40.                           | 3.9 | 252       |
| 6  | Matching roots to their environment. <i>Annals of Botany</i> , 2013, 112, 207-222.                                                                                                  | 2.9 | 247       |
| 7  | Three-dimensional Microorganization of the Soil-Root-Microbe System. <i>Microbial Ecology</i> , 2006, 52, 151-158.                                                                  | 2.8 | 227       |
| 8  | Root hairs improve root penetration, root-soil contact, and phosphorus acquisition in soils of different strength. <i>Journal of Experimental Botany</i> , 2013, 64, 3711-3721.     | 4.8 | 215       |
| 9  | Subcritical Water Repellency of Aggregates from a Range of Soil Management Practices. <i>Soil Science Society of America Journal</i> , 2001, 65, 184-190.                           | 2.2 | 172       |
| 10 | Disentangling the impact of AM fungi versus roots on soil structure and water transport. <i>Plant and Soil</i> , 2009, 314, 183-196.                                                | 3.7 | 159       |
| 11 | Planting density influence on fibrous root reinforcement of soils. <i>Ecological Engineering</i> , 2010, 36, 276-284.                                                               | 3.6 | 156       |
| 12 | Plant exudates may stabilize or weaken soil depending on species, origin and time. <i>European Journal of Soil Science</i> , 2017, 68, 806-816.                                     | 3.9 | 144       |
| 13 | Soil strength and macropore volume limit root elongation rates in many UK agricultural soils. <i>Annals of Botany</i> , 2012, 110, 259-270.                                         | 2.9 | 138       |
| 14 | Mechanical Reinforcement of Soil by Willow Roots: Impacts of Root Properties and Root Failure Mechanism. <i>Soil Science Society of America Journal</i> , 2009, 73, 1276-1285.      | 2.2 | 128       |
| 15 | High-resolution synchrotron imaging shows that root hairs influence rhizosphere soil structure formation. <i>New Phytologist</i> , 2017, 216, 124-135.                              | 7.3 | 116       |
| 16 | Calculation of the compression index and precompression stress from soil compression test data. <i>Soil and Tillage Research</i> , 2006, 89, 45-57.                                 | 5.6 | 113       |
| 17 | Mitigating arable soil compaction: A review and analysis of available cost and benefit data. <i>Soil and Tillage Research</i> , 2015, 146, 10-25.                                   | 5.6 | 112       |
| 18 | Material stiffness, branching pattern and soil matric potential affect the pullout resistance of model root systems. <i>European Journal of Soil Science</i> , 2007, 58, 1471-1481. | 3.9 | 110       |

| #  | ARTICLE                                                                                                                                                                                                         | IF  | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Investigating the effects of anaerobic and aerobic post-treatment on quality and stability of organic fraction of municipal solid waste as soil amendment. <i>Bioresource Technology</i> , 2008, 99, 8631-8636. | 9.6 | 110       |
| 20 | Plant influence on rhizosphere hydraulic properties: direct measurements using a miniaturized infiltrometer. <i>New Phytologist</i> , 2003, 157, 597-603.                                                       | 7.3 | 108       |
| 21 | The effect of long-term soil management on the physical and biological resilience of a range of arable and grassland soils in England. <i>Geoderma</i> , 2009, 153, 172-185.                                    | 5.1 | 108       |
| 22 | Mechanical Resilience of Degraded Soil Amended with Organic Matter. <i>Soil Science Society of America Journal</i> , 2005, 69, 864-871.                                                                         | 2.2 | 104       |
| 23 | Arable plant communities as indicators of farming practice. <i>Agriculture, Ecosystems and Environment</i> , 2010, 138, 17-26.                                                                                  | 5.3 | 100       |
| 24 | Millimeter-scale Spatial Variability in Soil Water Sorptivity. <i>Soil Science Society of America Journal</i> , 2004, 68, 352-358.                                                                              | 2.2 | 96        |
| 25 | Describing soil crack formation using elastic-plastic fracture mechanics. <i>European Journal of Soil Science</i> , 2005, 56, 31-38.                                                                            | 3.9 | 94        |
| 26 | Algae influence the hydrophysical parameters of a sandy soil. <i>Catena</i> , 2013, 108, 58-68.                                                                                                                 | 5.0 | 93        |
| 27 | Water repellency and distribution of hydrophilic and hydrophobic compounds in soil aggregates from different tillage systems. <i>Geoderma</i> , 2007, 140, 147-155.                                             | 5.1 | 86        |
| 28 | Characterization of a novel air-liquid interface biofilm of <i>Pseudomonas fluorescens</i> SBW25. <i>Microbiology (United Kingdom)</i> , 2009, 155, 1397-1406.                                                  | 1.8 | 86        |
| 29 | Deep rooting and drought screening of cereal crops: A novel field-based method and its application. <i>Field Crops Research</i> , 2009, 112, 165-171.                                                           | 5.1 | 85        |
| 30 | Physical resilience of soil to field compaction and the interactions with plant growth and microbial community structure. <i>European Journal of Soil Science</i> , 2007, 58, 1221-1232.                        | 3.9 | 84        |
| 31 | Field measurement of soil water repellency and its impact on water flow under different vegetation. <i>Biologia (Poland)</i> , 2007, 62, 537-541.                                                               | 1.5 | 82        |
| 32 | Combined turnover of carbon and soil aggregates using rare earth oxides and isotopically labelled carbon as tracers. <i>Soil Biology and Biochemistry</i> , 2017, 109, 81-94.                                   | 8.8 | 81        |
| 33 | Functional resilience of soil microbial communities depends on both soil structure and microbial community composition. <i>Biology and Fertility of Soils</i> , 2008, 44, 745-754.                              | 4.3 | 80        |
| 34 | Physical protection by soil aggregates stabilizes soil organic carbon under simulated N deposition in a subtropical forest of China. <i>Geoderma</i> , 2017, 285, 323-332.                                      | 5.1 | 80        |
| 35 | The biological and physical stability and resilience of a selection of Scottish soils to stresses. <i>European Journal of Soil Science</i> , 2007, 58, 811-821.                                                 | 3.9 | 79        |
| 36 | Integrating soil quality changes to arable agricultural systems following organic matter addition, or adoption of a ley-arable rotation. <i>Applied Soil Ecology</i> , 2010, 46, 43-53.                         | 4.3 | 76        |

| #  | ARTICLE                                                                                                                                                                                                              | IF  | CITATIONS |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | A framework for modelling soil structure dynamics induced by biological activity. <i>Global Change Biology</i> , 2020, 26, 5382-5403.                                                                                | 9.5 | 75        |
| 38 | Are the links between soil aggregate size class, soil organic matter and respiration rate artefacts of the fractionation procedure?. <i>Soil Biology and Biochemistry</i> , 2003, 35, 435-444.                       | 8.8 | 74        |
| 39 | A brief overview of the causes, impacts and amelioration of soil water repellency - a review. <i>Soil and Water Research</i> , 2008, 3, S21-S29.                                                                     | 1.7 | 72        |
| 40 | Distribution of soil carbon and microbial biomass in arable soils under different tillage regimes. <i>Plant and Soil</i> , 2011, 338, 17-25.                                                                         | 3.7 | 72        |
| 41 | Improved soil fertility from compost amendment increases root growth and reinforcement of surface soil on slopes. <i>Ecological Engineering</i> , 2014, 71, 458-465.                                                 | 3.6 | 71        |
| 42 | Adapting crops and cropping systems to future climates to ensure food security: The role of crop modelling. <i>Global Food Security</i> , 2013, 2, 24-28.                                                            | 8.1 | 70        |
| 43 | Scaling of the reinforcement of soil slopes by living plants in a geotechnical centrifuge. <i>Ecological Engineering</i> , 2017, 109, 207-227.                                                                       | 3.6 | 70        |
| 44 | Early changes in root characteristics of maize ( <i>Zea mays</i> ) following seed inoculation with the PGPR <i>Azospirillum lipoferum</i> CRT1. <i>Plant and Soil</i> , 2007, 291, 109-118.                          | 3.7 | 69        |
| 45 | Factors controlling the spatial patterns of soil moisture in a grazed semi-arid steppe investigated by multivariate geostatistics. <i>Ecohydrology</i> , 2011, 4, 36-48.                                             | 2.4 | 68        |
| 46 | Impact of fungal and bacterial biocides on microbial induced water repellency in arable soil. <i>Geoderma</i> , 2006, 135, 72-80.                                                                                    | 5.1 | 66        |
| 47 | Significance of root hairs for plant performance under contrasting field conditions and water deficit. <i>Annals of Botany</i> , 2021, 128, 1-16.                                                                    | 2.9 | 66        |
| 48 | Does microbial habitat or community structure drive the functional stability of microbes to stresses following re-vegetation of a severely degraded soil?. <i>Soil Biology and Biochemistry</i> , 2010, 42, 850-859. | 8.8 | 60        |
| 49 | Priming of soil organic matter mineralisation is intrinsically insensitive to temperature. <i>Soil Biology and Biochemistry</i> , 2013, 66, 20-28.                                                                   | 8.8 | 58        |
| 50 | Biomechanics of nodal, seminal and lateral roots of barley: effects of diameter, waterlogging and mechanical impedance. <i>Plant and Soil</i> , 2013, 370, 407-418.                                                  | 3.7 | 57        |
| 51 | Biological and physical resilience of soil amended with heavy metal-contaminated sewage sludge. <i>European Journal of Soil Science</i> , 2005, 56, 197-206.                                                         | 3.9 | 55        |
| 52 | Rheological stabilization of wet soils by model root and fungal exudates depends on clay mineralogy. <i>European Journal of Soil Science</i> , 2009, 60, 525-538.                                                    | 3.9 | 55        |
| 53 | Soil structure and its functions in ecosystems: Phase matter & scale matter. <i>Soil and Tillage Research</i> , 2015, 146, 1-3.                                                                                      | 5.6 | 53        |
| 54 | Surface tension, rheology and hydrophobicity of rhizodeposits and seed mucilage influence soil water retention and hysteresis. <i>Plant and Soil</i> , 2019, 437, 65-81.                                             | 3.7 | 53        |

| #  | ARTICLE                                                                                                                                                                                             | IF   | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 55 | Brachiaria species influence nitrate transport in soil by modifying soil structure with their root system. <i>Scientific Reports</i> , 2020, 10, 5072.                                              | 3.3  | 53        |
| 56 | Centrifuge modelling of soil slopes reinforced with vegetation. <i>Canadian Geotechnical Journal</i> , 2010, 47, 1415-1430.                                                                         | 2.8  | 51        |
| 57 | Imaging microstructure of the barley rhizosphere: particle packing and root hair influences. <i>New Phytologist</i> , 2019, 221, 1878-1889.                                                         | 7.3  | 51        |
| 58 | Changes to water repellence of soil caused by the growth of white-rot fungi: studies using a novel microcosm system. <i>FEMS Microbiology Letters</i> , 2000, 184, 73-77.                           | 1.8  | 50        |
| 59 | Application of Bayesian Belief Networks to quantify and map areas at risk to soil threats: Using soil compaction as an example. <i>Soil and Tillage Research</i> , 2013, 132, 56-68.                | 5.6  | 50        |
| 60 | The application of fracture mechanics to crack propagation in dry soil. <i>European Journal of Soil Science</i> , 1995, 46, 591-599.                                                                | 3.9  | 49        |
| 61 | Plant exudates improve the mechanical conditions for root penetration through compacted soils. <i>Plant and Soil</i> , 2017, 421, 19-30.                                                            | 3.7  | 49        |
| 62 | Biophysics of the Vadose Zone: From Reality to Model Systems and Back Again. <i>Vadose Zone Journal</i> , 2013, 12, 1-17.                                                                           | 2.2  | 47        |
| 63 | Physical response of rigid and non-rigid soils to analogues of biological exudates. <i>European Journal of Soil Science</i> , 2011, 62, 676-684.                                                    | 3.9  | 46        |
| 64 | Accumulation of nitrate and dissolved organic nitrogen at depth in a red soil Critical Zone. <i>Geoderma</i> , 2019, 337, 1175-1185.                                                                | 5.1  | 45        |
| 65 | Sustainable use of organic resources for bioenergy, food and water provision in rural Sub-Saharan Africa. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 50, 903-917.                      | 16.4 | 44        |
| 66 | Extent and persistence of soil water repellency induced by pines in different geographic regions. <i>Journal of Hydrology and Hydromechanics</i> , 2018, 66, 360-368.                               | 2.0  | 43        |
| 67 | Impact of soil tillage on the robustness of the genetic component of variation in phosphorus (P) use efficiency in barley ( <i>Hordeum vulgare</i> L.). <i>Plant and Soil</i> , 2011, 339, 113-123. | 3.7  | 42        |
| 68 | Significance of root hairs at the field scale – modelling root water and phosphorus uptake under different field conditions. <i>Plant and Soil</i> , 2020, 447, 281-304.                            | 3.7  | 42        |
| 69 | Below-ground herbivory and root toughness: a potential model system using lignin-modified tobacco. <i>Physiological Entomology</i> , 2010, 35, 186-191.                                             | 1.5  | 41        |
| 70 | Seasonal nitrous oxide emissions from field soils under reduced tillage, compost application or organic farming. <i>Agriculture, Ecosystems and Environment</i> , 2014, 189, 171-180.               | 5.3  | 41        |
| 71 | Rhizosphere-scale Quantification of Hydraulic and Mechanical Properties of Soil Impacted by Root and Seed Exudates. <i>Vadose Zone Journal</i> , 2018, 17, 1-12.                                    | 2.2  | 41        |
| 72 | A simple fracture mechanics approach for assessing ductile crack growth in soil. <i>Soil Science Society of America Journal</i> , 2001, 65, 1083-1088.                                              | 2.2  | 40        |

| #  | ARTICLE                                                                                                                                                                                                                                         | IF   | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 73 | Influence of types of restorative vegetation on the wetting properties of aggregates in a severely degraded clayey Ultisol in subtropical China. <i>Geoderma</i> , 2003, 115, 313-324.                                                          | 5.1  | 40        |
| 74 | Centrifuge modelling of soil slopes containing model plant roots. <i>Canadian Geotechnical Journal</i> , 2012, 49, 1-17.                                                                                                                        | 2.8  | 40        |
| 75 | Deep Nitrate Accumulation in a Highly Weathered Subtropical Critical Zone Depends on the Regolith Structure and Planting Year. <i>Environmental Science &amp; Technology</i> , 2020, 54, 13739-13747.                                           | 10.0 | 40        |
| 76 | Root moisture content influence on root tensile tests of herbaceous plants. <i>Catena</i> , 2019, 172, 140-147.                                                                                                                                 | 5.0  | 39        |
| 77 | Root:soil adhesion in the maize rhizosphere: the rheological approach. <i>Plant and Soil</i> , 1999, 211, 69-86.                                                                                                                                | 3.7  | 38        |
| 78 | Evaluation of spot and passive sampling for monitoring, flux estimation and risk assessment of pesticides within the constraints of a typical regulatory monitoring scheme. <i>Science of the Total Environment</i> , 2016, 569-570, 1369-1379. | 8.0  | 38        |
| 79 | Identification of pre-existing cracks on soil fracture surfaces using dye. <i>Soil and Tillage Research</i> , 1995, 33, 163-184.                                                                                                                | 5.6  | 36        |
| 80 | Vegetation impact on the hydrology of an aeolian sandy soil in a continental climate. <i>Ecohydrology</i> , 2010, 3, 413-420.                                                                                                                   | 2.4  | 36        |
| 81 | Resistance of simple plant root systems to uplift loads. <i>Canadian Geotechnical Journal</i> , 2010, 47, 78-95.                                                                                                                                | 2.8  | 36        |
| 82 | Do different methods for measuring the hydrophobicity of soil aggregates give the same trends in soil amended with residue?. <i>Geoderma</i> , 2010, 159, 221-227.                                                                              | 5.1  | 35        |
| 83 | Effect of root age on the biomechanics of seminal and nodal roots of barley ( <i>Hordeum vulgare</i> L.) in contrasting soil environments. <i>Plant and Soil</i> , 2015, 395, 253-261.                                                          | 3.7  | 35        |
| 84 | Soil stabilisation by water repellency under no-till management for soils with contrasting mineralogy and carbon quality. <i>Geoderma</i> , 2019, 355, 113902.                                                                                  | 5.1  | 35        |
| 85 | Soil tillage effects on the efficacy of cultivars and their mixtures in winter barley. <i>Field Crops Research</i> , 2012, 128, 91-100.                                                                                                         | 5.1  | 34        |
| 86 | Increase in the fracture toughness and bond energy of clay by a root exudate. <i>European Journal of Soil Science</i> , 2008, 59, 855-862.                                                                                                      | 3.9  | 33        |
| 87 | Impact of hydraulic suction history on crack growth mechanics in soil. <i>Water Resources Research</i> , 2008, 44, .                                                                                                                            | 4.2  | 30        |
| 88 | Does the presence of glomalin relate to reduced water infiltration through hydrophobicity?. <i>Canadian Journal of Soil Science</i> , 2004, 84, 365-372.                                                                                        | 1.2  | 29        |
| 89 | Comparing capillary rise contact angles of soil aggregates and homogenized soil. <i>Geoderma</i> , 2008, 146, 336-343.                                                                                                                          | 5.1  | 29        |
| 90 | Mapping and expression of genes associated with raspberry fruit ripening and softening. <i>Theoretical and Applied Genetics</i> , 2017, 130, 557-572.                                                                                           | 3.6  | 29        |

| #   | ARTICLE                                                                                                                                                                                                                  | IF  | CITATIONS |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 91  | Interaction between contrasting rice genotypes and soil physical conditions induced by hydraulic stresses typical of alternate wetting and drying irrigation of soil. <i>Plant and Soil</i> , 2018, 430, 233-243.        | 3.7 | 27        |
| 92  | How do enzymes catalysing soil nitrogen transformations respond to changing temperatures?. <i>Biology and Fertility of Soils</i> , 2013, 49, 99-103.                                                                     | 4.3 | 25        |
| 93  | The effect of natural seed coatings of <i>Capsella bursa-pastoris</i> L. Medik. (shepherd's purse) on soil-water retention, stability and hydraulic conductivity. <i>Plant and Soil</i> , 2015, 387, 167-176.            | 3.7 | 25        |
| 94  | Relating soil organic matter composition to soil water repellency for soil biopore surfaces different in history from two Bt horizons of a Haplic Luvisol. <i>Ecohydrology</i> , 2018, 11, e1949.                        | 2.4 | 25        |
| 95  | Building soil sustainability from root-soil interface traits. <i>Trends in Plant Science</i> , 2022, 27, 688-698.                                                                                                        | 8.8 | 24        |
| 96  | Centrifuge modelling of climatic effects on clay embankments. <i>Proceedings of the Institution of Civil Engineers: Engineering Sustainability</i> , 2009, 162, 91-100.                                                  | 0.7 | 23        |
| 97  | Earthworms bring compacted and loose soil to a similar mechanical state. <i>Soil Biology and Biochemistry</i> , 2009, 41, 656-658.                                                                                       | 8.8 | 22        |
| 98  | Variable responses of maize root architecture in elite cultivars due to soil compaction and moisture. <i>Plant and Soil</i> , 2020, 455, 79-91.                                                                          | 3.7 | 22        |
| 99  | Soil water dynamics and availability for citrus and peanut along a hillslope at the Sunjia Red Soil Critical Zone Observatory (CZO). <i>Soil and Tillage Research</i> , 2016, 163, 110-118.                              | 5.6 | 21        |
| 100 | Impact of soil puddling intensity on the root system architecture of rice ( <i>Oryza sativa</i> L.) seedlings. <i>Soil and Tillage Research</i> , 2019, 193, 1-7.                                                        | 5.6 | 21        |
| 101 | Eluviation of dissolved organic carbon under wetting and drying and its influence on water infiltration in degraded soils restored with vegetation. <i>European Journal of Soil Science</i> , 2004, 55, 725-737.         | 3.9 | 20        |
| 102 | Imparting water repellency in completely decomposed granite with Tung oil. <i>Journal of Cleaner Production</i> , 2019, 230, 1316-1328.                                                                                  | 9.3 | 20        |
| 103 | Biomechanics of Plant Roots: estimating Localised Deformation with Particle Image Velocimetry. <i>Biosystems Engineering</i> , 2006, 94, 119-132.                                                                        | 4.3 | 19        |
| 104 | Residues with varying decomposability interact differently with seed or root exudate compounds to affect the biophysical behaviour of soil. <i>Geoderma</i> , 2019, 343, 50-59.                                          | 5.1 | 18        |
| 105 | Impact of basidiomycete fungi on the wettability of soil contaminated with a hydrophobic polycyclic aromatic hydrocarbon. <i>Biologia (Poland)</i> , 2006, 61, S334-S338.                                                | 1.5 | 17        |
| 106 | Evaluating soil stabilisation by biological processes using step-wise aggregate fractionation. <i>Soil and Tillage Research</i> , 2009, 102, 209-215.                                                                    | 5.6 | 17        |
| 107 | Fluid flow in porous media using image-based modelling to parametrize Richards' equation. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20170178.              | 2.1 | 17        |
| 108 | Transport, retention, and release of <i>Escherichia coli</i> and <i>Rhodococcus erythropolis</i> through dry natural soils as affected by water repellency. <i>Science of the Total Environment</i> , 2019, 694, 133666. | 8.0 | 17        |

| #   | ARTICLE                                                                                                                                                                                       | IF  | CITATIONS |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 109 | Rare earth oxides for labelling soil aggregate turnover: Impacts of soil properties, labelling method and aggregate structure. <i>Geoderma</i> , 2019, 351, 36-48.                            | 5.1 | 17        |
| 110 | Field Phenotyping and Long-Term Platforms to Characterise How Crop Genotypes Interact with Soil Processes and the Environment. <i>Agronomy</i> , 2014, 4, 242-278.                            | 3.0 | 16        |
| 111 | Surface Tension of Aqueous Solutions of Small-Chain Amino and Organic Acids. <i>Journal of Chemical &amp; Engineering Data</i> , 2019, 64, 5049-5056.                                         | 1.9 | 16        |
| 112 | Microbial properties and nitrogen contents of arable soils under different tillage regimes. <i>Soil Use and Management</i> , 2014, 30, 152-159.                                               | 4.9 | 15        |
| 113 | Analysing and simulating spatial patterns of crop yield in Guizhou Province based on artificial neural networks. <i>Progress in Physical Geography</i> , 2021, 45, 33-52.                     | 3.2 | 14        |
| 114 | Pore shape and organic compounds drive major changes in the hydrological characteristics of agricultural soils. <i>European Journal of Soil Science</i> , 2013, 64, 334-344.                  | 3.9 | 14        |
| 115 | Potential of multi-objective models for risk-based mapping of the resilience characteristics of soils: demonstration at a national level. <i>Soil Use and Management</i> , 2009, 25, 66-77.   | 4.9 | 13        |
| 116 | The rheological properties of the seed coat mucilage of <i>Capsella bursa-pastoris</i> L. Medik. (shepherd's) Tj ETQq0 0 0 rgBT /Overlock 10 Tff                                              | 0.4 | 13        |
| 117 | Temporal dynamics and vertical distribution of newly-derived carbon from a C3/C4 conversion in an Ultisol after 30-yr fertilization. <i>Geoderma</i> , 2019, 337, 1077-1085.                  | 5.1 | 12        |
| 118 | Mechanics of root-pullout from soil: A novel image and stress analysis procedure. , 2007, , 213-221.                                                                                          |     | 12        |
| 119 | Development of $\delta^{15}\text{N}$ stratification of $\text{NO}_3^-$ in soil profiles. <i>Rapid Communications in Mass Spectrometry</i> , 2001, 15, 1274-1278.                              | 1.5 | 11        |
| 120 | Contrasting ability of deep and shallow rooting rice genotypes to grow through plough pans containing simulated biopores and cracks. <i>Plant and Soil</i> , 2021, 467, 515-530.              | 3.7 | 11        |
| 121 | Importance of short-term temporal variability in soil physical properties for soil water modelling under different tillage practices. <i>Soil and Tillage Research</i> , 2021, 213, 105132.   | 5.6 | 11        |
| 122 | Biohydrology: coupling biology and soil hydrology from pores to landscapes. <i>Ecohydrology</i> , 2010, 3, 379-381.                                                                           | 2.4 | 10        |
| 123 | The role of sampling strategy on apparent temporal stability of soil moisture under subtropical hydroclimatic conditions. <i>Journal of Hydrology and Hydromechanics</i> , 2019, 67, 260-270. | 2.0 | 10        |
| 124 | Restoration of Soil Physical and Biological Stability Are Not Coupled in Response to Plants and Earthworms. <i>Ecological Restoration</i> , 2008, 26, 102-104.                                | 0.5 | 10        |
| 125 | Residue-C effects on denitrification vary with soil depth. <i>Soil Biology and Biochemistry</i> , 2016, 103, 365-375.                                                                         | 8.8 | 9         |
| 126 | An automated microinfiltrometer to measure small-scale soil water infiltration properties. <i>Journal of Hydrology and Hydromechanics</i> , 2014, 62, 248-252.                                | 2.0 | 8         |



| #   | ARTICLE                                                                                                                                                                                                                         | IF  | CITATIONS |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 127 | The effect of root exudates on rhizosphere water dynamics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180149.                                                            | 2.1 | 8         |
| 128 | Variable impacts of reduced and zero tillage on soil carbon storage across 4–10 years of UK field experiments. Journal of Soils and Sediments, 2021, 21, 890-904.                                                               | 3.0 | 8         |
| 129 | Rhizosphere Engineering by Plants: Quantifying Soil-Root Interactions. Advances in Agricultural Systems Modeling, 0, , 1-30.                                                                                                    | 0.3 | 6         |
| 130 | Soil Physical Degradation: Threats and Opportunities to Food Security. Issues in Environmental Science and Technology, 2012, , 198-226.                                                                                         | 0.4 | 6         |
| 131 | Impact of root hairs on microscale soil physical properties in the field. Plant and Soil, 2022, 476, 491-509.                                                                                                                   | 3.7 | 6         |
| 132 | Effects of Mechanical Stresses and Strains on Soil Respiration. , 1999, , 305-316.                                                                                                                                              |     | 5         |
| 133 | A sterile environment for growing, and monitoring, micro-organisms under a range of soil matric potentials. Soil Biology and Biochemistry, 2001, 33, 689-691.                                                                   | 8.8 | 5         |
| 134 | Rise in CO2 affects soil water transport through repellency. Biologia (Poland), 2009, 64, 532-535.                                                                                                                              | 1.5 | 5         |
| 135 | Role of microbial communities in conferring resistance and resilience of soil carbon and nitrogen cycling following contrasting stresses. European Journal of Soil Biology, 2021, 104, 103308.                                  | 3.2 | 5         |
| 136 | Organic manure and lime change water vapour sorption of a red soil by altering water repellency and specific surface area. European Journal of Soil Science, 2022, 73, .                                                        | 3.9 | 5         |
| 137 | Desiccation of a sensitive clay: application of the model CRACK: Discussion. Canadian Geotechnical Journal, 1998, 35, 1109-1110.                                                                                                | 2.8 | 4         |
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