Harry Vereecken

List of Publications by Year
in descending order

674	26,950	8159 76	15218 126
papers	citations	h-index	g-index

752	752	752	18550
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	ESTIMATING THE SOIL MOISTURE RETENTION CHARACTERISTIC FROM TEXTURE, BULK DENSITY, AND CARBON CONTENT. Soil Science, 1989, 148, 389-403.	0.9	606
2	On the value of soil moisture measurements in vadose zone hydrology: A review. Water Resources Research, 2008, 44, .	1.7	530
3	Modeling Soil Processes: Review, Key Challenges, and New Perspectives. Vadose Zone Journal, 2016, 15, 1-57.	1.3	445
4	A Network of Terrestrial Environmental Observatories in Germany. Vadose Zone Journal, 2011, 10, 955-973.	1.3	401
5	On the spatio-temporal dynamics of soil moisture at the field scale. Journal of Hydrology, 2014, 516, 76-96.	2.3	369
6	Imaging and characterisation of subsurface solute transport using electrical resistivity tomography (ERT) and equivalent transport models. Journal of Hydrology, 2002, 267, 125-146.	2.3	352
7	Using Pedotransfer Functions to Estimate the van Genuchtenâ€"Mualem Soil Hydraulic Properties: A Review. Vadose Zone Journal, 2010, 9, 795-820.	1.3	344
8	Use of a Threeâ€Dimensional Detailed Modeling Approach for Predicting Root Water Uptake. Vadose Zone Journal, 2008, 7, 1079-1088.	1.3	320
9	Mobility and leaching of glyphosate: a review. Pest Management Science, 2005, 61, 1139-1151.	1.7	316
10	Pedotransfer Functions in Earth System Science: Challenges and Perspectives. Reviews of Geophysics, 2017, 55, 1199-1256.	9.0	316
11	Ground, Proximal, and Satellite Remote Sensing of Soil Moisture. Reviews of Geophysics, 2019, 57, 530-616.	9.0	307
12	Potential of Wireless Sensor Networks for Measuring Soil Water Content Variability. Vadose Zone Journal, 2010, 9, 1002-1013.	1.3	300
13	Evaluation of a low-cost soil water content sensor for wireless network applications. Journal of Hydrology, 2007, 344, 32-42.	2.3	293
14	Hydraulic parameter estimation by remotely-sensed top soil moisture observations with the particle filter. Journal of Hydrology, 2011, 399, 410-421.	2.3	282
15	Imaging and characterisation of subsurface solute transport using electrical resistivity tomography (ERT) and equivalent transport models. Journal of Hydrology, 2002, 267, 125-146.	2.3	249
16	Effect of gammaâ€sterilization and autoclaving on soil organic matter structure as studied by solid state NMR, UV and fluorescence spectroscopy. European Journal of Soil Science, 2008, 59, 540-550.	1.8	248
17	Review of Dispersivities for Transport Modeling in Soils. Vadose Zone Journal, 2007, 6, 29-52.	1.3	246
18	Seasonal and event dynamics of spatial soil moisture patterns at the small catchment scale. Water Resources Research, 2012, 48, .	1.7	235

#	ARTICLE	IF	CITATIONS
19	Stimulation of N$_2$O emission by manure application to agricultural soils may largely offset carbon benefits: a global metaâ€analysis. Global Change Biology, 2017, 23, 4068-4083.	4.2	222
20	ESTIMATING UNSATURATED HYDRAULIC CONDUCTIVITY FROM EASILY MEASURED SOIL PROPERTIES. Soil Science, 1990, 149, 1-12.	0.9	218
21	Upscaling Hydraulic Properties and Soil Water Flow Processes in Heterogeneous Soils: A Review. Vadose Zone Journal, 2007, 6, 1-28.	1.3	215
22	A review of chemical reactions of nitrification intermediates and their role in nitrogen cycling and nitrogen trace gas formation in soil. European Journal of Soil Science, 2016, 67, 23-39.	1.8	197
23	Mapping the spatial variation of soil water content at the field scale with different ground penetrating radar techniques. Journal of Hydrology, 2007, 340, 205-216.	2.3	185
24	SMOS soil moisture assimilation for improved hydrologic simulation in the Murray Darling Basin, Australia. Remote Sensing of Environment, 2015, 168, 146-162.	4.6	180
25	Proof of concept of regional scale hydrologic simulations at hydrologic resolution utilizing massively parallel computer resources. Water Resources Research, 2010, 46, .	1.7	178
26	Explaining soil moisture variability as a function of mean soil moisture: A stochastic unsaturated flow perspective. Geophysical Research Letters, 2007, 34, .	1.5	177
27	Sensitivity of the transport and retention of stabilized silver nanoparticles to physicochemical factors. Water Research, 2013, 47, 2572-2582.	5.3	177
28	Accuracy of the cosmic-ray soil water content probe in humid forest ecosystems: The worst case scenario. Water Resources Research, 2013, 49, 5778-5791.	1.7	164
29	Transport and retention of multi-walled carbon nanotubes in saturated porous media: Effects of input concentration and grain size. Water Research, 2013, 47, 933-944.	5.3	160
30	Temporal Stability of Soil Water Contents: A Review of Data and Analyses. Vadose Zone Journal, 2012, 11, vzj2011.0178.	1.3	159
31	Revisiting Vereecken Pedotransfer Functions: Introducing a Closedâ€Form Hydraulic Model. Vadose Zone Journal, 2009, 8, 86-95.	1.3	158
32	Soil hydrology: Recent methodological advances, challenges, and perspectives. Water Resources Research, 2015, 51, 2616-2633.	1.7	149
33	A metaâ€analysis of soil salinization effects on nitrogen pools, cycles and fluxes in coastal ecosystems. Global Change Biology, 2017, 23, 1338-1352.	4.2	148
34	Analysis of air-launched ground-penetrating radar techniques to measure the soil surface water content. Water Resources Research, 2006, 42, .	1.7	147
35	Impact of sulfadiazine and chlorotetracycline on soil bacterial community structure and respiratory activity. Soil Biology and Biochemistry, 2006, 38, 2372-2380.	4.2	143
36	Soil structureÂis an important omission in Earth System Models. Nature Communications, 2020, 11, 522.	5.8	138

#	Article	IF	Citations
37	20 years of long-term atrazine monitoring in a shallow aquifer in western Germany. Water Research, 2014, 50, 294-306.	5.3	137
38	Quantitative imaging of solute transport in an unsaturated and undisturbed soil monolith with 3â€D ERT and TDR. Water Resources Research, 2008, 44, .	1.7	133
39	Actual evapotranspiration and precipitation measured by lysimeters: a comparison with eddy covariance and tipping bucket. Hydrology and Earth System Sciences, 2015, 19, 2145-2161.	1.9	130
40	Root Water Uptake: From Threeâ€Dimensional Biophysical Processes to Macroscopic Modeling Approaches. Vadose Zone Journal, 2013, 12, 1-16.	1.3	128
41	Spatio-temporal soil moisture patterns â€" A meta-analysis using plot to catchment scale data. Journal of Hydrology, 2015, 520, 326-341.	2.3	124
42	CRootBox: a structuralâ€"functional modelling framework for root systems. Annals of Botany, 2018, 121, 1033-1053.	1.4	123
43	On the Definition of the Natural Capital of Soils: A Framework for Description, Evaluation, and Monitoring. Soil Science Society of America Journal, 2009, 73, 1904-1911.	1.2	118
44	Retention and Remobilization of Stabilized Silver Nanoparticles in an Undisturbed Loamy Sand Soil. Environmental Science & Technology, 2013, 47, 12229-12237.	4.6	118
45	Spatial and temporal occurrence of preferential flow in a forested headwater catchment. Journal of Hydrology, 2016, 534, 139-149.	2.3	114
46	Threeâ€dimensional imaging of subsurface structural patterns using quantitative largeâ€scale multiconfiguration electromagnetic induction data. Water Resources Research, 2014, 50, 2732-2748.	1.7	113
47	An empirical vegetation correction for soil water content quantification using cosmic ray probes. Water Resources Research, 2015, 51, 2030-2046.	1.7	112
48	Bacteria transport and deposition under unsaturated conditions: The role of the matrix grain size and the bacteria surface protein. Journal of Contaminant Hydrology, 2007, 92, 255-273.	1.6	109
49	Sensitivity of simulated soil heterotrophic respiration to temperature and moisture reduction functions. Geoderma, 2008, 145, 17-27.	2.3	109
50	Sensor-to-Sensor Variability of the ECHO EC-5, TE, and 5TE Sensors in Dielectric Liquids. Vadose Zone Journal, 2010, 9, 181.	1.3	103
51	Site-specific 15N isotopic signatures of abiotically produced N2O. Geochimica Et Cosmochimica Acta, 2014, 139, 72-82.	1.6	103
52	Threeâ€Dimensional Electrical Resistivity Tomography to Monitor Root Zone Water Dynamics. Vadose Zone Journal, 2011, 10, 412-424.	1.3	102
53	A global data set of soil hydraulic properties and sub-grid variability of soil water retention and hydraulicÂconductivity curves. Earth System Science Data, 2017, 9, 529-543.	3.7	99
54	Bacteria Transport and Deposition under Unsaturated Flow Conditions: The Role of Water Content and Bacteria Surface Hydrophobicity. Vadose Zone Journal, 2008, 7, 406-419.	1.3	98

#	Article	IF	Citations
55	Quantitative conductivity and permittivity estimation using full-waveform inversion of on-ground GPR data. Geophysics, 2012, 77, H79-H91.	1.4	98
56	Abiotic nitrous oxide production from hydroxylamine in soils and their dependence on soil properties. Soil Biology and Biochemistry, 2015, 84, 107-115.	4.2	98
57	Functional Evaluation of Pedotransfer Functions for the Estimation of Soil Hydraulic Properties. Soil Science Society of America Journal, 1992, 56, 1371-1378.	1.2	94
58	Inverse modelling of in situ soil water dynamics: investigating the effect of different prior distributions of the soil hydraulic parameters. Hydrology and Earth System Sciences, 2011, 15, 3043-3059.	1.9	94
59	Electromagnetic induction calibration using apparent electrical conductivity modelling based on electrical resistivity tomography. Near Surface Geophysics, 2010, 8, 553-561.	0.6	93
60	Analysis of solute transport in a heterogeneous aquifer: the Krauthausen field experiment. Journal of Contaminant Hydrology, 2000, 45, 329-358.	1.6	92
61	Induced Polarization of Unsaturated Sands Determined through Time Domain Measurements. Vadose Zone Journal, 2004, 3, 1160-1168.	1.3	92
62	Transport of sulfadiazine in soil columns â€" Experiments and modelling approaches. Journal of Contaminant Hydrology, 2007, 89, 107-135.	1.6	91
63	High-resolution imaging of a vineyard in south of France using ground-penetrating radar, electromagnetic induction and electrical resistivity tomography. Journal of Applied Geophysics, 2012, 78, 113-122.	0.9	90
64	Monitoring water stable isotopic composition in soils using gas-permeable tubing and infrared laser absorption spectroscopy. Water Resources Research, 2013, 49, 3747-3755.	1.7	90
65	Calibration of a catchment scale cosmic-ray probe network: A comparison of three parameterization methods. Journal of Hydrology, 2014, 516, 231-244.	2.3	90
66	Potential of electrical resistivity tomography to infer aquifer transport characteristics from tracer studies: A synthetic case study. Water Resources Research, 2005, 41, .	1.7	89
67	Hydraulic properties of a model dike from coupled Bayesian and multi-criteria hydrogeophysical inversion. Journal of Hydrology, 2010, 380, 62-73.	2.3	88
68	Imaging and characterization of solute transport during two tracer tests in a shallow aquifer using electrical resistivity tomography and multilevel groundwater samplers. Water Resources Research, 2010, 46, .	1.7	88
69	Spatiotemporal relations between water budget components and soil water content in a forested tributary catchment. Water Resources Research, 2014, 50, 4837-4857.	1.7	88
70	Soil moisture and soil properties estimation in the Community Land Model with synthetic brightness temperature observations. Water Resources Research, 2014, 50, 6081-6105.	1.7	87
71	Validation of Spaceborne and Modelled Surface Soil Moisture Products with Cosmic-Ray Neutron Probes. Remote Sensing, 2017, 9, 103.	1.8	87
72	Emerging methods for noninvasive sensing of soil moisture dynamics from field to catchment scale: a review. Wiley Interdisciplinary Reviews: Water, 2015, 2, 635-647.	2.8	86

#	Article	IF	Citations
73	Development and analysis of the Soil Water Infiltration Global database. Earth System Science Data, 2018, 10, 1237-1263.	3.7	85
74	Multivariate and Multiscale Data Assimilation in Terrestrial Systems: A Review. Sensors, 2012, 12, 16291-16333.	2.1	82
75	Persistence of the Fluoroquinolone Antibiotic Difloxacin in Soil and Lacking Effects on Nitrogen Turnover. Journal of Environmental Quality, 2012, 41, 1275-1283.	1.0	82
76	Three-Dimensional Geostatistical Inversion of Flowmeter and Pumping Test Data. Ground Water, 2008, 46, 193-201.	0.7	81
77	The TERENO-Rur Hydrological Observatory: A Multiscale Multi-Compartment Research Platform for the Advancement of Hydrological Science. Vadose Zone Journal, 2018, 17, 1-22.	1.3	81
78	Monitoring and Modeling the Terrestrial System from Pores to Catchments: The Transregional Collaborative Research Center on Patterns in the Soil–Vegetation–Atmosphere System. Bulletin of the American Meteorological Society, 2015, 96, 1765-1787.	1.7	80
79	Dissipation and Sequestration of the Veterinary Antibiotic Sulfadiazine and Its Metabolites under Field Conditions. Environmental Science & Technology, 2011, 45, 5216-5222.	4.6	79
80	Geostatistical co-regionalization of soil hydraulic properties in a micro-scale catchment using terrain attributes. Geoderma, 2006, 132, 206-221.	2.3	78
81	Water Retention and Pore Size Distribution of a Biopolymeric-Amended Loam Soil. Vadose Zone Journal, 2019, 18, 1.	1.3	78
82	Remote Estimation of the Hydraulic Properties of a Sand Using Full-Waveform Integrated Hydrogeophysical Inversion of Time-Lapse, Off-Ground GPR Data. Vadose Zone Journal, 2009, 8, 743-754.	1.3	77
83	Determination of pore size distribution and hydraulic properties using nuclear magnetic resonance relaxometry: A comparative study of laboratory methods. Water Resources Research, 2010, 46, .	1.7	77
84	Changes in Soil Water Content Resulting from *Ricinus* Root Uptake Monitored by Magnetic Resonance Imaging. Vadose Zone Journal, 2008, 7, 1010-1017.	1.3	76
85	3-D characterization of high-permeability zones in a gravel aquifer using 2-D crosshole GPR full-waveform inversion and waveguide detection. Geophysical Journal International, 2013, 195, 932-944.	1.0	76
86	A framework for modelling soil structure dynamics induced by biological activity. Global Change Biology, 2020, 26, 5382-5403.	4.2	75
87	Correction of Temperature and Electrical Conductivity Effects on Dielectric Permittivity Measurements with ECH$_2$O Sensors. Vadose Zone Journal, 2011, 10, 582-593.	1.3	73
88	Spatiotemporal analysis of soil moisture observations within a Tibetan mesoscale area and its implication to regional soil moisture measurements. Journal of Hydrology, 2013, 482, 92-104.	2.3	73
89	Linking satellite derived LAI patterns with subsoil heterogeneity using large-scale ground-based electromagnetic induction measurements. Geoderma, 2015, 241-242, 262-271.	2.3	73
90	TERENO-SOILCan: a lysimeter-network in Germany observing soil processes and plant diversity influenced by climate change. Environmental Earth Sciences, 2016, 75, 1.	1.3	73

#	Article	IF	Citations
91	Estimating the unsaturated hydraulic conductivity from theoretical models using simple soil properties. Geoderma, 1995, 65, 81-92.	2.3	72
92	Effective Calibration of Low-Cost Soil Water Content Sensors. Sensors, 2017, 17, 208.	2.1	72
93	Two-dimensional characterization of hydraulic heterogeneity by multiple pumping tests. Water Resources Research, 2007, 43, .	1.7	71
94	Fast evaluation of zero–offset Green's function for layered media with application to ground–penetrating radar. Geophysical Research Letters, 2007, 34, .	1.5	71
95	EIT measurement system with high phase accuracy for the imaging of spectral induced polarization properties of soils and sediments. Measurement Science and Technology, 2008, 19, 094010.	1.4	71
96	Closed loop GPR data inversion for soil hydraulic and electric property determination. Geophysical Research Letters, 2006, 33, .	1.5	69
97	Quantitative Two–Layer Conductivity Inversion of Multi–Configuration Electromagnetic Induction Measurements. Vadose Zone Journal, 2011, 10, 1319-1330.	1.3	69
98	Particle size distribution models, their characteristics and fitting capability. Journal of Hydrology, 2015, 529, 872-889.	2.3	69
99	Measurement depth effects on the apparent temperature sensitivity of soil respiration in field studies. Biogeosciences, 2008, 5, 1175-1188.	1.3	68
100	Speciation and distribution of P associated with Fe and Al oxides in aggregate-sized fraction of an arable soil. Biogeosciences, 2015, 12, 6443-6452.	1.3	68
101	Long-term and high-frequency non-destructive monitoring of water stable isotope profiles in an evaporating soil column. Hydrology and Earth System Sciences, 2015, 19, 4067-4080.	1.9	67
102	Assimilation of SMOS soil moisture and brightness temperature products into a land surface model. Remote Sensing of Environment, 2016, 180, 292-304.	4.6	67
103	Multiyear heterotrophic soil respiration: Evaluation of a coupled CO_2 transport and carbon turnover model. Ecological Modelling, 2008, 214, 271-283.	1.2	64
104	Spectral induced polarization measurements on variably saturated sand–clay mixtures. Near Surface Geophysics, 2012, 10, 479-489.	0.6	62
105	Limited transport of functionalized multi-walled carbon nanotubes in two natural soils. Environmental Pollution, 2013, 180, 152-158.	3.7	62
106	Atrazine Soil Core Residue Analysis from an Agricultural Field 21 Years after Its Ban. Journal of Environmental Quality, 2014, 43, 1450-1459.	1.0	62
107	Value of sun-induced chlorophyll fluorescence for quantifying hydrological states and fluxes: Current status and challenges. Agricultural and Forest Meteorology, 2020, 291, 108088.	1.9	62
108	Measuring soil surface water content in irrigated areas of southern Tunisia using full–waveform inversion of proximal GPR data. Near Surface Geophysics, 2008, 6, 403-410.	0.6	61

#	Article	IF	Citations
109	Brightness Temperature and Soil Moisture Validation at Different Scales During the SMOS Validation Campaign in the Rur and Erft Catchments, Germany. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 1728-1743.	2.7	61
110	Phosphorus Containing Water Dispersible Nanoparticles in Arable Soil. Journal of Environmental Quality, 2015, 44, 1772-1781.	1.0	61
111	Large-scale soil mapping using multi-configuration EMI and supervised image classification. Geoderma, 2019, 335, 133-148.	2.3	60
112	Transport and transformation of sulfadiazine in soil columns packed with a silty loam and a loamy sand. Journal of Contaminant Hydrology, 2009, 103, 38-47.	1.6	59
113	Catchment scale validation of SMOS and ASCAT soil moisture products using hydrological modeling and temporal stability analysis. Journal of Hydrology, 2014, 519, 934-946.	2.3	59
114	Distribution of Phosphorusâ€Containing Fine Colloids and Nanoparticles in Stream Water of a Forest Catchment. Vadose Zone Journal, 2014, 13, 1-11.	1.3	59
115	Efficient random walk particle tracking algorithm for advectiveâ€dispersive transport in media with discontinuous dispersion coefficients and water contents. Water Resources Research, 2011, 47, .	1.7	58
116	Investigation of SMAP Fusion Algorithms With Airborne Active and Passive L-Band Microwave Remote Sensing. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 3878-3889.	2.7	58
117	Inverse Estimation of Soil Hydraulic and Transport Parameters of Layered Soils from Water Stable Isotope and Lysimeter Data. Vadose Zone Journal, 2018, 17, 1-19.	1.3	57
118	Predicting subgrid variability of soil water content from basic soil information. Geophysical Research Letters, 2015, 42, 789-796.	1.5	56
119	Infiltration from the Pedon to Global Grid Scales: An Overview and Outlook for Land Surface Modeling. Vadose Zone Journal, 2019, 18, 1-53.	1.3	56
120	ON THE CHARACTERIZATION OF PROPERTIES OF AN UNRIPE MARINE CLAY SOIL. Soil Science, 1992, 153, 471-481.	0.9	55
121	Mapping Field-Scale Soil Moisture With L-Band Radiometer and Ground-Penetrating Radar Over Bare Soil. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 2863-2875.	2.7	55
122	Crosshole GPR full-waveform inversion of waveguides acting as preferential flow paths within aquifer systems. Geophysics, 2012, 77, H57-H62.	1.4	55
123	Modeling local control effects on the temporal stability of soil water content. Journal of Hydrology, 2013, 481, 106-118.	2.3	54
124	Calibration of a Novel Lowâ€Cost Soil Water Content Sensor Based on a Ring Oscillator. Vadose Zone Journal, 2013, 12, 1-10.	1.3	54
125	Improved Characterization of Fine-Texture Soils Using On-Ground GPR Full-Waveform Inversion. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 3947-3958.	2.7	54
126	A Comparative Study of Multiple Approaches for Predicting the Soil-Water Retention Curve: Hyperspectral Information vs. Basic Soil Properties. Soil Science Society of America Journal, 2015, 79, 1043-1058.	1.2	54

#	Article	IF	Citations
127	TerrSysMPâ€"PDAF (version 1.0): a modular high-performance data assimilation framework for an integrated land surfaceâ€"subsurface model. Geoscientific Model Development, 2016, 9, 1341-1360.	1.3	54
128	Tracer sampling frequency influences estimates of young water fraction and streamwater transit time distribution. Journal of Hydrology, 2016, 541, 952-964.	2.3	54
129	Phosphorus Binding to Nanoparticles and Colloids in Forest Stream Waters. Vadose Zone Journal, 2017, 16, 1-12.	1.3	54
130	Cosmic Ray Neutron Sensing for Simultaneous Soil Water Content and Biomass Quantification in Drought Conditions. Water Resources Research, 2018, 54, 7383-7402.	1.7	54
131	Towards a network of observatories in terrestrial environmental research. Advances in Geosciences, 0, 9, 109-114.	12.0	54
132	Generalized random walk algorithm for the numerical modeling of complex diffusion processes. Journal of Computational Physics, 2003, 186, 527-544.	1.9	53
133	Modelling the water balance of a mesoscale catchment basin using remotely sensed land cover data. Journal of Hydrology, 2008, 353, 322-334.	2.3	53
134	Imaging and characterization of facies heterogeneity in an alluvial aquifer using GPR full-waveform inversion and cone penetration tests. Journal of Hydrology, 2015, 524, 680-695.	2.3	53
135	Integrating hydrological modelling, data assimilation and cloud computing for real-time management of water resources. Environmental Modelling and Software, 2017, 93, 418-435.	1.9	53
136	Renormalization group analysis of macrodispersion in a directed random flow. Water Resources Research, 1997, 33, 2287-2299.	1.7	52
137	Characterization of unsaturated porous media by highâ€field and lowâ€field NMR relaxometry. Water Resources Research, 2009, 45, .	1.7	52
138	Sorptionâ€"desorption behaviour of bentazone, boscalid and pyrimethanil in biochar and digestate based soil mixtures for biopurification systems. Science of the Total Environment, 2016, 559, 63-73.	3.9	52
139	Review of crosshole ground-penetrating radar full-waveform inversion of experimental data: Recent developments, challenges, and pitfalls. Geophysics, 2019, 84, H13-H28.	1.4	52
140	A STATISTICAL ANALYSIS OF SIX HYSTERESIS MODELS FOR THE MOISTURE RETENTION CHARACTERISTIC. Soil Science, 1994, 157, 345-355.	0.9	51
141	Determining dew and hoar frost formation for a low mountain range and alpine grassland site by weighable lysimeter. Journal of Hydrology, 2018, 563, 372-381.	2.3	51
142	A terrestrial observatory approach to the integrated investigation of the effects of deforestation on water, energy, and matter fluxes. Science China Earth Sciences, 2015, 58, 61-75.	2.3	50
143	Comparison of Heterogeneous Transport Processes Observed with Electrical Resistivity Tomography in Two Soils. Vadose Zone Journal, 2010, 9, 336-349.	1.3	49
144	Joint assimilation of piezometric heads and groundwater temperatures for improved modeling of river-aquifer interactions. Water Resources Research, 2014, 50, 1665-1688.	1.7	49

#	Article	IF	Citations
145	Spatio-temporal validation of long-term 3D hydrological simulations of a forested catchment using empirical orthogonal functions and wavelet coherence analysis. Journal of Hydrology, 2015, 529, 1754-1767.	2.3	49
146	Roles of cation valance and exchange on the retention and colloid-facilitated transport of functionalized multi-walled carbon nanotubes in a natural soil. Water Research, 2017, 109, 358-366.	5.3	49
147	Effect of Local Soil Hydraulic Conductivity Drop Using a Three-Dimensional Root Water Uptake Model. Vadose Zone Journal, 2008, 7, 1089-1098.	1.3	48
148	Implementation of a Microscopic Soil–Root Hydraulic Conductivity Drop Function in a Three-Dimensional Soil–Root Architecture Water Transfer Model. Vadose Zone Journal, 2009, 8, 783-792.	1.3	48
149	Coupled hydrogeophysical inversion of time-lapse surface GPR data to estimate hydraulic properties of a layered subsurface. Water Resources Research, 2013, 49, 8480-8494.	1.7	48
150	Elemental Composition of Natural Nanoparticles and Fine Colloids in European Forest Stream Waters and Their Role as Phosphorus Carriers. Global Biogeochemical Cycles, 2017, 31, 1592-1607.	1.9	48
151	Title is missing!. Transport in Porous Media, 2001, 43, 265-287.	1.2	47
152	Patterns in Soil–Vegetation–Atmosphere Systems: Monitoring, Modeling, and Data Assimilation. Vadose Zone Journal, 2010, 9, 821-827.	1.3	47
153	Characterization of tillage effects on the spatial variation of soil properties using ground-penetrating radar and electromagnetic induction. Geoderma, 2013, 207-208, 310-322.	2.3	47
154	Do Goethite Surfaces Really Control the Transport and Retention of Multi-Walled Carbon Nanotubes in Chemically Heterogeneous Porous Media?. Environmental Science & Technology, 2016, 50, 12713-12721.	4.6	47
155	State and parameter estimation of two land surface models using the ensemble Kalman filter and the particle filter. Hydrology and Earth System Sciences, 2017, 21, 4927-4958.	1.9	47
156	Parameterization of Root Water Uptake Models Considering Dynamic Root Distributions and Water Uptake Compensation. Vadose Zone Journal, 2018, 17, 1-21.	1.3	47
157	Estimation of Radiative Transfer Parameters from L-Band Passive Microwave Brightness Temperatures Using Advanced Data Assimilation. Vadose Zone Journal, 2013, 12, 1-17.	1.3	46
158	Soil moisture retrieval from airborne L-band passive microwave using high resolution multispectral data. ISPRS Journal of Photogrammetry and Remote Sensing, 2014, 91, 59-71.	4.9	46
159	How to Control the Lysimeter Bottom Boundary to Investigate the Effect of Climate Change on Soil Processes?. Vadose Zone Journal, 2016, 15, 1-15.	1.3	46
160	Dissipation of bentazone, pyrimethanil and boscalid in biochar and digestate based soil mixtures for biopurification systems. Science of the Total Environment, 2016, 544, 192-202.	3.9	46
161	A Set of Analytical Benchmarks to Test Numerical Models of Flow and Transport in Soils. Vadose Zone Journal, 2005, 4, 206.	1.3	45
162	Transport and Deposition of Metabolically Active and Stationary PhaseDeinococcus radioduransin Unsaturated Porous Media. Environmental Science & Technology, 2007, 41, 1265-1271.	4.6	45

#	Article	IF	Citations
163	In Situ Visualization and Quantification of Three‐Dimensional Root System Architecture and Growth Using X‐Ray Computed Tomography. Vadose Zone Journal, 2014, 13, 1-10.	1.3	45
164	Seasonal soil moisture patterns: Controlling transit time distributions in a forested headwater catchment. Water Resources Research, 2014, 50, 5270-5289.	1.7	45
165	A New Soil Moisture Downscaling Approach for SMAP, SMOS, and ASCAT by Predicting Sub-Grid Variability. Remote Sensing, 2018, 10, 427.	1.8	45
166	Uniqueness and stability analysis of hydrogeophysical inversion for time‐lapse ground‐penetrating radar estimates of shallow soil hydraulic properties. Water Resources Research, 2008, 44, .	1.7	44
167	Bayesian model averaging using particle filtering and Gaussian mixture modeling: Theory, concepts, and simulation experiments. Water Resources Research, 2012, 48, .	1.7	44
168	Effect of soil hydraulic properties on the relationship between the spatial mean and variability of soil moisture. Journal of Hydrology, 2014, 516, 154-160.	2.3	44
169	Root growth, water uptake, and sap flow of winter wheat in response to different soil water conditions. Hydrology and Earth System Sciences, 2018, 22, 2449-2470.	1.9	44
170	Simple pedotransfer functions to initialize reactive carbon pools of the <scp>RothC</scp> model. European Journal of Soil Science, 2013, 64, 567-575.	1.8	43
171	Construction of Minirhizotron Facilities for Investigating Root Zone Processes. Vadose Zone Journal, 2016, 15, 1-13.	1.3	43
172	Soil Water Extraction with a Suction Cup: Results of Numerical Simulations. Vadose Zone Journal, 2005, 4, 899-907.	1.3	42
173	Investigating Preferential Flow Processes in a Forest Soil Using Time Domain Reflectometry and Electrical Resistivity Tomography. Vadose Zone Journal, 2010, 9, 350-361.	1.3	42
174	Transformation and Sorption of the Veterinary Antibiotic Sulfadiazine in Two Soils: A Short-Term Batch Study. Environmental Science & Technology, 2010, 44, 4651-4657.	4.6	42
175	A highly sensitive method for the determination of hydroxylamine in soils. Geoderma, 2014, 232-234, 117-122.	2.3	42
176	Simulating water and nitrogen behaviour in soils cropped with winter wheat. Fertilizer Research, 1991, 27, 233-243.	0.5	41
177	Dispersion inversion of electromagnetic pulse propagation within freezing and thawing soil waveguides. Geophysical Research Letters, 2009, 36, .	1.5	41
178	Characterization of Crop Canopies and Water Stress Related Phenomena using Microwave Remote Sensing Methods: A Review. Vadose Zone Journal, 2012, 11, vzj2011.0138ra.	1.3	41
179	Detection of spatially limited high‐porosity layers using crosshole GPR signal analysis and full‐waveform inversion. Water Resources Research, 2014, 50, 6966-6985.	1.7	41
180	Towards Retrieving Soil Hydraulic Properties by Hyperspectral Remote Sensing. Vadose Zone Journal, 2015, 14, 1-17.	1.3	41

#	Article	IF	Citations
181	Estimation and Validation of RapidEye-Based Time-Series of Leaf Area Index for Winter Wheat in the Rur Catchment (Germany). Remote Sensing, 2015, 7, 2808-2831.	1.8	41
182	Uncertainty analysis of eddy covariance CO_2 flux measurements for different EC tower distances using an extended two-tower approach. Biogeosciences, 2015, 12, 1205-1221.	1.3	41
183	Analysis of steady state chloride transport through two heterogeneous field soils. Water Resources Research, 1998, 34, 2539-2550.	1.7	40
184	A Set of Analytical Benchmarks to Test Numerical Models of Flow and Transport in Soils. Vadose Zone Journal, 2005, 4, 206-221.	1.3	40
185	Noninvasive 3-D Transport Characterization in a Sandy Soil Using ERT: 1. Investigating the Validity of ERT-derived Transport Parameters. Vadose Zone Journal, 2009, 8, 711-722.	1.3	40
186	Coupled hydrogeophysical parameter estimation using a sequential Bayesian approach. Hydrology and Earth System Sciences, 2010, 14, 545-556.	1.9	40
187	Joint Measurement Setup for Determining Spectral Induced Polarization and Soil Hydraulic Properties. Vadose Zone Journal, 2011, 10, 716-726.	1.3	40
188	Kirkham's Legacy and Contemporary Challenges in Soil Physics Research. Soil Science Society of America Journal, 2011, 75, 1589-1601.	1.2	40
189	Estimation of Soil Hydraulic Parameters in the Field by Integrated Hydrogeophysical Inversion of Time-Lapse Ground-Penetrating Radar Data. Vadose Zone Journal, 2012, 11, vzj2011.0177.	1.3	40
190	Accuracy of Bulk Electrical Conductivity Measurements with Time Domain Reflectometry. Vadose Zone Journal, 2008, 7, 426-433.	1.3	39
191	Transport of Manure-Based Applied Sulfadiazine and Its Main Transformation Products in Soil Columns. Vadose Zone Journal, 2009, 8, 677-689.	1.3	39
192	Inverse determination of heterotrophic soil respiration response to temperature and water content under field conditions. Biogeochemistry, 2012, 108, 119-134.	1.7	39
193	On the role of patterns in understanding the functioning of soil-vegetation-atmosphere systems. Journal of Hydrology, 2016, 542, 63-86.	2.3	39
194	Microbial respiration of biochar- and digestate-based mixtures. Biology and Fertility of Soils, 2016, 52, 151-164.	2.3	39
195	High resolution aquifer characterization using crosshole <scp>GPR</scp> full-waveform tomography: Comparison with direct-push and tracer test data. Water Resources Research, 2017, 53, 49-72.	1.7	39
196	Identifying a rainfall event threshold triggering herbicide leaching by preferential flow. Water Resources Research, 2010, 46, .	1.7	38
197	In Situ Root System Architecture Extraction from Magnetic Resonance Imaging for Water Uptake Modeling. Vadose Zone Journal, 2013, 12, 1-9.	1.3	38
198	Quantification and Prediction of Nighttime Evapotranspiration for Two Distinct Grassland Ecosystems. Water Resources Research, 2019, 55, 2961-2975.	1.7	38

#	Article	IF	Citations
199	Stochastic Continuum Transport Equations for Field-Scale Solute Transport: Overview of Theoretical and Experimental Results. Vadose Zone Journal, 2006, 5, 184-203.	1.3	37
200	Distributed modelling of mean annual soil erosion and sediment delivery rates to surface waters. Catena, 2013, 102, 13-20.	2.2	37
201	Estimating random errors of eddy covariance data: An extended two-tower approach. Agricultural and Forest Meteorology, 2013, 171-172, 203-219.	1.9	37
202	Optimization of acquisition setup for cross€hole: GPR full€waveform inversion using checkerboard analysis. Near Surface Geophysics, 2013, 11, 197-209.	0.6	37
203	Estimation of Hydraulic Properties of a Sandy Soil Using Ground-Based Active and Passive Microwave Remote Sensing. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 3095-3109.	2.7	37
204	Changes in measured spatiotemporal patterns of hydrological response after partial deforestation in a headwater catchment. Journal of Hydrology, 2016, 542, 648-661.	2.3	37
205	N2O and NOx emissions by reactions of nitrite with soil organic matter of a Norway spruce forest. Biogeochemistry, 2017, 132, 325-342.	1.7	37
206	CPlantBox, a whole-plant modelling framework for the simulation of water- and carbon-related processes. In Silico Plants, 2020, 2, .	0.8	37
207	An experimental and numerical study on flow and transport in a field soil using zero-tension lysimeters and suction plates. European Journal of Soil Science, 2007, 58, 632-645.	1.8	36
208	Properties of precipitation-induced multilayer surface waveguides derived from inversion of dispersive TE and TM GPR data. Geophysics, 2010, 75, WA263-WA273.	1.4	36
209	Colloidal properties and potential release of water-dispersible colloids in an agricultural soil depth profile. Geoderma, 2013, 193-194, 94-101.	2.3	36
210	Mapping peat layer properties with multi-coil offset electromagnetic induction and laser scanning elevation data. Geoderma, 2016, 261, 178-189.	2.3	36
211	The influence of riverbed heterogeneity patterns on river-aquifer exchange fluxes under different connection regimes. Journal of Hydrology, 2017, 554, 383-396.	2.3	36
212	Modeling the Impact of Biopores on Root Growth and Root Water Uptake. Vadose Zone Journal, 2019, 18, 1-20.	1.3	36
213	Growth-inhibitory effects of sulfonamides at different pH: Dissimilar susceptibility patterns of a soil bacterium and a test bacterium used for antibiotic assays. Chemosphere, 2008, 72, 836-843.	4.2	35
214	Estimating Soil Hydraulic Properties from Infrared Measurements of Soil Surface Temperatures and TDR Data. Vadose Zone Journal, 2010, 9, 910-924.	1.3	35
215	Spatial horizontal correlation characteristics in the land data assimilation of soil moisture. Hydrology and Earth System Sciences, 2012, 16, 1349-1363.	1.9	35
216	Joint Assimilation of Surface Temperature and L€Band Microwave Brightness Temperature in Land Data Assimilation. Vadose Zone Journal, 2013, 12, 1-16.	1.3	35

#	ARTICLE	IF	CITATIONS
217	Towards an unbiased filter routine to determine precipitation and evapotranspiration from high precision lysimeter measurements. Journal of Hydrology, 2017, 549, 731-740.	2.3	35
218	Continuum multiscale model of root water and nutrient uptake from soil with explicit consideration of the 3D root architecture and the rhizosphere gradients. Plant and Soil, 2019, 439, 273-292.	1.8	35
219	Altered energy partitioning across terrestrial ecosystems in the European drought year 2018. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190524.	1.8	35
220	Asymptotic analysis of nonlinear equilibrium solute transport in porous media. Water Resources Research, 1996, 32, 3093-3098.	1.7	34
221	Validation of the pesticide leaching model PELMO using lysimeter studies performed for registration. Chemosphere, 1997, 35, 2563-2587.	4.2	34
222	Degradation and humification of maize straw in soil microcosms inoculated with simple and complex microbial communities. European Journal of Soil Science, 2007, 58, 141-151.	1.8	34
223	Improvements in crosshole GPR full-waveform inversion and application on data measured at the Boise Hydrogeophysics Research Site. Journal of Applied Geophysics, 2013, 99, 114-124.	0.9	34
224	Modelling the impact of heterogeneous rootzone water distribution on the regulation of transpiration by hormone transport and/or hydraulic pressures. Plant and Soil, 2014, 384, 93-112.	1.8	34
225	Role of rain intensity and soil colloids in the retention of surfactant-stabilized silver nanoparticles in soil. Environmental Pollution, 2018, 238, 1027-1034.	3.7	34
226	Analyses of locally measured bromide breakthrough curves from a natural gradient tracer experiment at Krauthausen. Journal of Contaminant Hydrology, 2001, 48, 23-43.	1.6	33
227	Intercomparison of Flow and Transport Models Applied to Vertical Drainage in Cropped Lysimeters. Vadose Zone Journal, 2005, 4, 354-359.	1.3	33
228	Field study on colloid transport using fluorescent microspheres. European Journal of Soil Science, 2008, 59, 82-93.	1.8	33
229	Joint full-waveform analysis of off-ground zero-offset ground penetrating radar and electromagnetic induction synthetic data for estimating soil electrical properties. Geophysical Journal International, 2010, 182, 1267-1278.	1.0	33
230	Analysis of Horn Antenna Transfer Functions and Phase-Center Position for Modeling Off-Ground GPR. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 1649-1662.	2.7	33
231	Rock Fragments Control Size and Saturation of Organic Carbon Pools in Agricultural Topsoil. Soil Science Society of America Journal, 2011, 75, 1898-1907.	1.2	33
232	Accounting for soil surface roughness in the inversion of ultrawideband off-ground GPR signal for soil moisture retrieval. Geophysics, 2012, 77, H1-H7.	1.4	33
233	Simultaneous estimation of model state variables and observation and forecast biases using a two-stage hybrid Kalman filter. Hydrology and Earth System Sciences, 2013, 17, 3499-3521.	1.9	33
234	Effects of Soil Hydraulic Properties on the Spatial Variability of Soil Water Content: Evidence from Sensor Network Data and Inverse Modeling. Vadose Zone Journal, 2014, 13, vzj2014.07.0099.	1.3	33

#	Article	IF	Citations
235	Determination of spatially differentiated water balance components including groundwater recharge on the Federal State level â€" A case study using the mGROWA model in North Rhine-Westphalia (Germany). Journal of Hydrology: Regional Studies, 2015, 4, 294-312.	1.0	33
236	Fate of the antibiotic sulfadiazine in natural soils: Experimental and numerical investigations. Journal of Contaminant Hydrology, 2015, 177-178, 30-42.	1.6	33
237	Evaluation of a cosmic-ray neutron sensor network for improved land surface model prediction. Hydrology and Earth System Sciences, 2017, 21, 2509-2530.	1.9	33
238	Colloid-bound and dissolved phosphorus species in topsoil water extracts along a grassland transect from Cambisol to Stagnosol. Biogeosciences, 2017, 14, 1153-1164.	1.3	33
239	Monitoring Hydrological Processes for Land and Water Resources Management in a Mediterranean Ecosystem: The Alento River Catchment Observatory. Vadose Zone Journal, 2018, 17, 1-12.	1.3	33
240	Error Estimation for Soil Moisture Measurements With Cosmic Ray Neutron Sensing and Implications for Rover Surveys. Frontiers in Water, 2020, 2, .	1.0	33
241	COSMOS-Europe: a European network of cosmic-ray neutron soil moisture sensors. Earth System Science Data, 2022, 14, 1125-1151.	3.7	33
242	Spatial variability of atrazine sorption parameters and other soil properties in a podzoluvisol. Journal of Contaminant Hydrology, 1999, 36, 31-52.	1.6	32
243	PARSWMS: A Parallelized Model for Simulating Three-Dimensional Water Flow and Solute Transport in Variably Saturated Soils. Vadose Zone Journal, 2007, 6, 255-259.	1.3	32
244	Characterization of subsoil heterogeneity, estimation of grain size distribution and hydraulic conductivity at the Krauthausen test site using Cone Penetration Test. Journal of Contaminant Hydrology, 2008, 95, 57-75.	1.6	32
245	Information content of incubation experiments for inverse estimation of pools in the Rothamsted carbon model: a Bayesian perspective. Biogeosciences, 2010, 7, 763-776.	1.3	32
246	Temporal stability of soil water content as affected by climate and soil hydraulic properties: a simulation study. Hydrological Processes, 2014, 28, 1899-1915.	1.1	32
247	Spatio-temporal variability of global soil moisture products. Journal of Hydrology, 2015, 522, 187-202.	2.3	32
248	A new model for root growth in soil with macropores. Plant and Soil, 2017, 415, 99-116.	1.8	32
249	Characterization of Field Tracer Transport Using High-Resolution Images. Vadose Zone Journal, 2005, 4, 101.	1.3	31
250	On the physical meaning of retardation factor and velocity of a nonlinearly sorbing solute. Journal of Hydrology, 2005, 302, 127-136.	2.3	31
251	Multispectral remotely sensed data in modelling the annual variability of nitrate concentrations in the leachate. Environmental Modelling and Software, 2008, 23, 1070-1081.	1.9	31
252	Longâ€Term Sorption and Desorption of Sulfadiazine in Soil: Experiments and Modeling. Journal of Environmental Quality, 2010, 39, 654-666.	1.0	31

#	Article	IF	Citations
253	Effects of inorganic and organic anions on the stability of illite and quartz soil colloids in Na-, Ca- and mixed Naâ€"Ca systems. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2012, 415, 134-141.	2.3	31
254	Intercomparison of Methods for the Simultaneous Estimation of Zero-Plane Displacement and Aerodynamic Roughness Length from Single-Level Eddy-Covariance Data. Boundary-Layer Meteorology, 2014, 151, 373-387.	1.2	31
255	Estimation of Community Land Model parameters for an improved assessment of net carbon fluxes at European sites. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 661-689.	1.3	31
256	Co-transport of chlordecone and sulfadiazine in the presence of functionalized multi-walled carbon nanotubes in soils. Environmental Pollution, 2017, 221, 470-479.	3.7	31
257	A numerical approach for determination of sources in transport equations. Computers and Mathematics With Applications, 1996, 32, 31-42.	1.4	30
258	Sorption study of 2,4-dichlorophenol on organoclays constructed for soil bioremediation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 265, 81-87.	2.3	30
259	Numerical investigations on ergodicity of solute transport in heterogeneous aquifers. Water Resources Research, 2006, 42, .	1.7	30
260	A Generalized Frequency Domain Reflectometry Modeling Technique for Soil Electrical Properties Determination. Vadose Zone Journal, 2010, 9, 1063-1072.	1.3	30
261	Coupled Hydrogeophysical Inversion of Streaming Potential Signals for Unsaturated Soil Hydraulic Properties. Vadose Zone Journal, 2012, 11, vzj2011.0115.	1.3	30
262	Moisture profiles of the upper soil layer during evaporation monitored by NMR. Water Resources Research, 2014, 50, 5184-5195.	1.7	30
263	On the spatial variation of soil rhizospheric and heterotrophic respiration in a winter wheat stand. Agricultural and Forest Meteorology, 2014, 195-196, 24-31.	1.9	30
264	Characterisation of riverâ€"aquifer exchange fluxes: The role of spatial patterns of riverbed hydraulic conductivities. Journal of Hydrology, 2015, 531, 111-123.	2.3	30
265	The impact of sieving on heterotrophic respiration response to water content in loamy and sandy topsoils. Geoderma, 2016, 272, 73-82.	2.3	30
266	Potential of catchment-wide soil water content prediction using electromagnetic induction in a forest ecosystem. Environmental Earth Sciences, 2017, 76, 1.	1.3	30
267	Comparative Study of Statistical, Numerical and Machine Learning-based Pedotransfer Functions of Water Retention Curve with Particle Size Distribution Data. Eurasian Soil Science, 2019, 52, 1555-1571.	0.5	30
268	Pesticide Volatilization from Soil. Journal of Environmental Quality, 2003, 32, 1183-1193.	1.0	29
269	Quantifying fieldâ€"scale surface soil water content from proximal GPR signal inversion in the time domain. Near Surface Geophysics, 2010, 8, 483-491.	0.6	29
270	Do Lab-Derived Distribution Coefficient Values of Pesticides Match Distribution Coefficient Values Determined from Column and Field-Scale Experiments? A Critical Analysis of Relevant Literature. Journal of Environmental Quality, 2011, 40, 879-898.	1.0	29

#	Article	IF	Citations
271	Identification of time‐variant river bed properties with the ensemble Kalman filter. Water Resources Research, 2012, 48, .	1.7	29
272	Effect of Root Water and Solute Uptake on Apparent Soil Dispersivity: A Simulation Study. Vadose Zone Journal, 2012, 11, vzj2012.0009.	1.3	29
273	Model Based Assessment of Nitrate Pollution of Water Resources on a Federal State Level for the Dimensioning of Agro-environmental Reduction Strategies. Water Resources Management, 2013, 27, 885-909.	1.9	29
274	Linking transpiration reduction to rhizosphere salinity using a 3D coupled soil-plant model. Plant and Soil, 2014, 377, 277-293.	1.8	29
275	Interception effects on stable isotope driven streamwater transit time estimates. Geophysical Research Letters, 2015, 42, 5299-5308.	1.5	29
276	Optimization of a Radiative Transfer Forward Operator for Simulating SMOS Brightness Temperatures over the Upper Mississippi Basin. Journal of Hydrometeorology, 2015, 16, 1109-1134.	0.7	29
277	Understanding Soil and Plant Interaction by Combining Ground‐Based Quantitative Electromagnetic Induction and Airborne Hyperspectral Data. Geophysical Research Letters, 2018, 45, 7571-7579.	1.5	29
278	On the Information Content of Cosmic‐Ray Neutron Data in the Inverse Estimation of Soil Hydraulic Properties. Vadose Zone Journal, 2019, 18, 1-24.	1.3	29
279	Simulation of spatial variability in crop leaf area index and yield using agroecosystem modeling and geophysics‐based quantitative soil information. Vadose Zone Journal, 2020, 19, e20009.	1.3	29
280	Organoclays for soil remediation: Adsorption of 2,4-dichlorophenol on organoclay/aquifer material mixtures studied under static and flow conditions. Applied Clay Science, 2006, 32, 179-189.	2.6	28
281	Noninvasive 3‐D Transport Characterization in a Sandy Soil Using ERT: 2. Transport Process Inference. Vadose Zone Journal, 2009, 8, 723-734.	1.3	28
282	TEODOOR: a distributed geodata infrastructure for terrestrial observation data. Environmental Earth Sciences, 2013, 69, 507-521.	1.3	28
283	Evaluation of a novel correction procedure to remove electrode impedance effects from broadband SIP measurements. Journal of Applied Geophysics, 2016, 135, 466-473.	0.9	28
284	Steering operational synergies in terrestrial observation networks: opportunity for advancing Earth system dynamics modelling. Earth System Dynamics, 2018, 9, 593-609.	2.7	28
285	First real-time isotopic characterisation of N2O from chemodenitrification. Geochimica Et Cosmochimica Acta, 2019, 267, 17-32.	1.6	28
286	Incorporating a root water uptake model based on the hydraulic architecture approach in terrestrial systems simulations. Agricultural and Forest Meteorology, 2019, 269-270, 28-45.	1.9	28
287	In-situ monitoring of soil water isotopic composition for partitioning of evapotranspiration during one growing season of sugar beet (Beta vulgaris). Agricultural and Forest Meteorology, 2019, 266-267, 53-64.	1.9	28
288	Co-transport of multi-walled carbon nanotubes and sodium dodecylbenzenesulfonate in chemically heterogeneous porous media. Environmental Pollution, 2019, 247, 907-916.	3.7	28

#	Article	IF	Citations
289	Simulation of water and solute transport in field soils with the LEACHP model. Agricultural Water Management, 2000, 44, 225-245.	2.4	27
290	A geostatistical approach to the field-scale pattern of heterotrophic soil CO2 emission using covariates. Biogeochemistry, 2012, 111, 377-392.	1.7	27
291	Surface-associated metal catalyst enhances the sorption of perfluorooctanoic acid to multi-walled carbon nanotubes. Journal of Colloid and Interface Science, 2012, 377, 342-346.	5.0	27
292	Effect of metal oxide on surface area and pore size of water-dispersible colloids from three German silt loam topsoils. Geoderma, 2014, 235-236, 260-270.	2.3	27
293	Simulating Flood‐Induced Riverbed Transience Using Unmanned Aerial Vehicles, Physically Based Hydrological Modeling, and the Ensemble Kalman Filter. Water Resources Research, 2018, 54, 9342-9363.	1.7	27
294	Radius estimation of subsurface cylindrical objects from ground-penetrating-radar data using full-waveform inversion. Geophysics, 2018, 83, H43-H54.	1.4	27
295	Calibration, Conversion, and Quantitative Multi-Layer Inversion of Multi-Coil Rigid-Boom Electromagnetic Induction Data. Sensors, 2019, 19, 4753.	2.1	27
296	CO2 fluxes before and after partial deforestation of a Central European spruce forest. Agricultural and Forest Meteorology, 2019, 274, 61-74.	1.9	27
297	Investigating the root plasticity response of <i>Centaurea jacea</i> to soil water availability changes from isotopic analysis. New Phytologist, 2020, 226, 98-110.	3.5	27
298	Near-surface solute redistribution during evaporation. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	26
299	Coupled hydrogeophysical inversion of electrical resistances and inflow measurements for topsoil hydraulic properties under constant head infiltration. Near Surface Geophysics, 2012, 10, 413-426.	0.6	26
300	Three-dimensional imaging of pore water diffusion and motion in porous media by nuclear magnetic resonance imaging. Journal of Hydrology, 2002, 267, 244-257.	2.3	25
301	Imaging Brilliant Blue Stained Soil by Means of Electrical Resistivity Tomography. Vadose Zone Journal, 2009, 8, 963-975.	1.3	25
302	Boundedness of Turbulent Temperature Probability Distributions, and their Relation to the Vertical Profile in the Convective Boundary Layer. Boundary-Layer Meteorology, 2010, 134, 459-486.	1.2	25
303	Is high-resolution inverse characterization of heterogeneous river bed hydraulic conductivities needed and possible?. Hydrology and Earth System Sciences, 2013, 17, 3795-3813.	1.9	25
304	Correction of systematic model forcing bias of CLM using assimilation of cosmic-ray Neutrons and land surface temperature: a study in the Heihe Catchment, China. Hydrology and Earth System Sciences, 2015, 19, 615-629.	1.9	25
305	Return of crop residues to arable land stimulates N2O emission but mitigates NO3⁻ leaching: a meta-analysis. Agronomy for Sustainable Development, 2021, 41, 1.	2.2	25
306	Temperature response of wheat decomposition is more complex than the common approaches of most multi-pool models. Soil Biology and Biochemistry, 2008, 40, 2780-2786.	4.2	24

#	Article	IF	Citations
307	Re-evaluation of the conformational structure of sulfadiazine species using NMR and ab initio DFT studies and its implication on sorption and degradation. Chemosphere, 2008, 72, 1448-1454.	4.2	24
308	Sorption of a branched nonylphenol and perfluorooctanoic acid on Yangtze River sediments and their model components. Journal of Environmental Monitoring, 2012, 14, 2653.	2.1	24
309	Measurement and Simulation of Topographic Effects on Passive Microwave Remote Sensing Over Mountain Areas: A Case Study From the Tibetan Plateau. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 1489-1501.	2.7	24
310	Unraveling the hydrodynamics of split root water uptake experiments using CT scanned root architectures and three dimensional flow simulations. Frontiers in Plant Science, 2015, 6, 370.	1.7	24
311	Monitoring Soil Water Content Using Time‐Lapse Horizontal Borehole GPR Data at the Field‐Plot Scale. Vadose Zone Journal, 2019, 18, 190044.	1.3	24
312	Reanalysis in Earth System Science: Toward Terrestrial Ecosystem Reanalysis. Reviews of Geophysics, 2021, 59, e2020RG000715.	9.0	24
313	EVALUATION OF THE MULTISTEP OUTFLOW METHOD FOR THE DETERMINATION OF UNSATURATED HYDRAULIC PROPERTIES OF SOILS. Soil Science, 1997, 162, 618-631.	0.9	24
314	Miscible Displacement, Sorption and Desorption of Atrazine in a Brazilian Oxisol. Vadose Zone Journal, 2003, 2, 728-738.	1.3	23
315	The influence of maize residues on the mobility and binding of benazolin: Investigating physically extracted soil fractions. Environmental Pollution, 2007, 147, 4-13.	3.7	23
316	Effect of organic carbon and mineral surface on the pyrene sorption and distribution in Yangtze River sediments. Chemosphere, 2010, 80, 1321-1327.	4.2	23
317	Spatio-temporal drivers of soil and ecosystem carbon fluxes at field scale in an upland grassland in Germany. Agriculture, Ecosystems and Environment, 2015, 211, 84-93.	2.5	23
318	Soil moisture prediction of bare soil profiles using diffuse spectral reflectance information and vadose zone flow modeling. Remote Sensing of Environment, 2016, 187, 218-229.	4.6	23
319	Multi-site calibration and validation of a net ecosystem carbon exchange model for croplands. Ecological Modelling, 2017, 363, 137-156.	1.2	23
320	Comparison of different assimilation methodologies of groundwater levels to improve predictions of root zone soil moisture with an integrated terrestrial system model. Advances in Water Resources, 2018, 111, 224-238.	1.7	23
321	Evaluation of pesticide dynamics of the WAVE-model. Agricultural Water Management, 2000, 44, 371-388.	2.4	22
322	Estimation of local scale dispersion from local breakthrough curves during a tracer test in a heterogeneous aquifer: the Lagrangian approach. Journal of Contaminant Hydrology, 2002, 54, 141-171.	1.6	22
323	Field experiment on spray drift: Deposition and airborne drift during application to a winter wheat crop. Science of the Total Environment, 2008, 405, 269-277.	3.9	22
324	Within‐Field Variability of Bare Soil Evaporation Derived from Eddy Covariance Measurements. Vadose Zone Journal, 2010, 9, 943-954.	1.3	22

#	Article	IF	Citations
325	Parameterizing a Dynamic Architectural Model of the Root System of Spring Barley from Minirhizotron Data. Vadose Zone Journal, 2012, 11, vzj2011.0179.	1.3	22
326	A New Method for In Situ Measurements of Oxygen Isotopologues of Soil Water and Carbon Dioxide with High Time Resolution. Vadose Zone Journal, 2015, 14, 1-14.	1.3	22
327	A novel isolated Terrabacter-like bacterium can mineralize 2-aminopyrimidine, the principal metabolite of microbial sulfadiazine degradation. Biodegradation, 2015, 26, 139-150.	1.5	22
328	Interactive effects of MnO2, organic matter and pH on abiotic formation of N2O from hydroxylamine in artificial soil mixtures. Scientific Reports, 2017, 7, 39590.	1.6	22
329	Accounting for seasonal isotopic patterns of forest canopy intercepted precipitation in streamflow modeling. Journal of Hydrology, 2017, 555, 31-40.	2.3	22
330	Passive L-Band Microwave Remote Sensing of Organic Soil Surface Layers: A Tower-Based Experiment. Remote Sensing, 2018, 10, 304.	1.8	22
331	Can Drip Irrigation be Scheduled with Cosmic€Ray Neutron Sensing?. Vadose Zone Journal, 2019, 18, 190053.	1.3	22
332	Time variability and uncertainty in the fraction of young water in a small headwater catchment. Hydrology and Earth System Sciences, 2019, 23, 4333-4347.	1.9	22
333	Responses of soil water storage and crop water use efficiency to changing climatic conditions: a lysimeter-based space-for-time approach. Hydrology and Earth System Sciences, 2020, 24, 1211-1225.	1.9	22
334	Choice of Pedotransfer Functions Matters when Simulating Soil Water Balance Fluxes. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002404.	1.3	22
335	Binding of 13C-labelled 2-aminobenzothiazoles to humic acid as derived from 13C NMR spectroscopy. Organic Geochemistry, 1998, 29, 1829-1835.	0.9	21
336	A grid refinement approach for a three€dimensional soil€root water transfer model. Water Resources Research, 2009, 45, .	1.7	21
337	Do Chernobyl-like contaminations with 137Cs and 90Sr affect the microbial community, the fungal biomass and the composition of soil organic matter in soil?. Journal of Environmental Radioactivity, 2013, 118, 21-29.	0.9	21
338	Soil Hydraulic Parameters and Surface Soil Moisture of a Tilled Bare Soil Plot Inversely Derived from L€Band Brightness Temperatures. Vadose Zone Journal, 2014, 13, 1-18.	1.3	21
339	Simultaneous soil moisture and properties estimation for a drip irrigated field by assimilating cosmic-ray neutron intensity. Journal of Hydrology, 2016, 539, 611-624.	2.3	21
340	Isotopic composition of plant water sources. Nature, 2016, 536, E1-E3.	13.7	21
341	Measuring root system traits of wheat in 2D images to parameterize 3D root architecture models. Plant and Soil, 2018, 425, 457-477.	1.8	21
342	Relation of SIP Relaxation Time of Sands to Salinity, Grain Size and Hydraulic Conductivity. , 2005, , .		21

#	Article	IF	Citations
343	KEYLINK: towards a more integrative soil representation for inclusion in ecosystem scale models. I. review and model concept. PeerJ, 2020, 8, e9750.	0.9	21
344	Prediction of velocity statistics in three-dimensional multi-Gaussian hydraulic conductivity fields. Water Resources Research, 2006, 42, .	1.7	20
345	Soil Heterogeneity Effects on Solute Breakthrough Sampled with Suction Cups: Numerical Simulations. Vadose Zone Journal, 2006, 5, 886-893.	1.3	20
346	One-Dimensional Modeling of Transport in Soils with Depth-Dependent Dispersion, Sorption and Decay. Vadose Zone Journal, 2007, 6, 140-148.	1.3	20
347	Characterization of bimodal facies distributions using effective anisotropic complex resistivity: A 2D numerical study based on Cole-Cole models. Geophysics, 2009, 74, A19-A22.	1.4	20
348	Inversion of dispersive GPR pulse propagation in waveguides with heterogeneities and rough and dipping interfaces. Journal of Applied Geophysics, 2012, 81, 88-96.	0.9	20
349	Analyzing spatiotemporal variability of heterotrophic soil respiration at the field scale using orthogonal functions. Geoderma, 2012, 181-182, 91-101.	2.3	20
350	Scale dependent parameterization of soil hydraulic conductivity in 3D simulation of hydrological processes in a forested headwater catchment. Journal of Hydrology, 2016, 536, 365-375.	2.3	20
351	Spatiotemporal Analysis of Dissolved Organic Carbon and Nitrate in Waters of a Forested Catchment Using Wavelet Analysis. Vadose Zone Journal, 2017, 16, 1-14.	1.3	20
352	Pesticide contamination of the upper Elbe River and an adjacent floodplain area. Journal of Soils and Sediments, 2020, 20, 2067-2081.	1.5	20
353	The integrated water balance and soil data set of the Rollesbroich hydrological observatory. Earth System Science Data, 2016, 8, 517-529.	3.7	20
354	Solute transport analysis of bromide, uranin and LiCl using breakthrough curves from aquifer sediment. Journal of Contaminant Hydrology, 1999, 39, 7-34.	1.6	19
355	Pesticide Volatilization from Plants:Â Improvement of the PEC Model PELMO Based on a Boundary-Layer Concept. Environmental Science & Technology, 2004, 38, 2885-2893.	4.6	19
356	Efficient loop antenna modeling for zero-offset, off-ground electromagnetic induction in multilayered media. Geophysics, 2010, 75, WA125-WA134.	1.4	19
357	Effect of structural composition of humic acids on the sorption of a branched nonylphenol isomer. Chemosphere, 2011, 84, 409-414.	4.2	19
358	Effect of antennaâ€medium coupling in the analysis of groundâ€penetrating radar data. Near Surface Geophysics, 2012, 10, 631-639.	0.6	19
359	Electromagnetic induction antenna modelling using a linear system of complex antenna transfer functions. Near Surface Geophysics, 2012, 10, 237-247.	0.6	19
360	Simulation of future groundwater recharge using a climate model ensemble and SAR-image based soil parameter distributions â€" A case study in an intensively-used Mediterranean catchment. Science of the Total Environment, 2016, 543, 889-905.	3.9	19

#	Article	IF	Citations
361	Large variability in CO_2 and N_2O emissions and in ^{15}N site preference of N_2O from reactions of nitrite with lignin and its derivatives at different pH. Rapid Communications in Mass Spectrometry, 2017, 31, 1333-1343.	0.7	19
362	Investigation of Kinetic Isotopic Fractionation of Water During Bare Soil Evaporation. Water Resources Research, 2018, 54, 6909-6928.	1.7	19
363	Effect of solute concentration on the spectral induced polarization response of calcite precipitation. Geophysical Journal International, 2020, 220, 1187-1196.	1.0	19
364	Simultaneous multichannel multi-offset ground-penetrating radar measurements for soil characterization. Vadose Zone Journal, 2020, 19, e20017.	1.3	19
365	Effects of Deforestation on Water Flow in the Vadose Zone. Water (Switzerland), 2020, 12, 35.	1.2	19
366	Hydrogeophysics: An Introduction from the Guest Editors. Vadose Zone Journal, 2004, 3, 1060-1062.	1.3	18
367	Organoclays for Aquifer Bioremediation: Adsorption of Chlorobenzene on Organoclays and its Degradation by RHODOCOCCUS B528. Water, Air and Soil Pollution, 2006, 6, 317-329.	0.8	18
368	Identifying dispersive GPR signals and inverting for surface wave-guide properties. The Leading Edge, 2009, 28, 1234-1239.	0.4	18
369	Imaging water fluxes in porous media by magnetic resonance imaging using D2O as a tracer. Magnetic Resonance Imaging, 2009, 27, 285-292.	1.0	18
370	Organic-carbon fractions in an agricultural topsoil assessed by the determination of the soil mineral surface area. Journal of Plant Nutrition and Soil Science, 2010, 173, 699-705.	1.1	18
371	Multivariate conditional stochastic simulation of soil heterotrophic respiration at plot scale. Geoderma, 2010, 160, 74-82.	2.3	18
372	Effect of pesticide fate parameters and their uncertainty on the selection of 'worst-case' scenarios of pesticide leaching to groundwater. Pest Management Science, 2011, 67, 294-306.	1.7	18
373	Integrated analysis of waveguide dispersed GPR pulses using deterministic and Bayesian inversion methods. Near Surface Geophysics, 2012, 10, 641-652.	0.6	18
374	Upward Transport in a Three-Dimensional Heterogeneous Laboratory Soil under Evaporation Conditions. Vadose Zone Journal, 2012, 11, vzj2011.0066.	1.3	18
375	Effects of Near Surface Soil Moisture Profiles During Evaporation on Far-Field Ground-Penetrating Radar Data: A Numerical Study. Vadose Zone Journal, 2013, 12, 1-11.	1.3	18
376	Evaluation and uncertainty analysis of regional-scale CLM4.5 net carbon flux estimates. Biogeosciences, 2018, 15, 187-208.	1.3	18
377	Hydroxylamine Contributes More to Abiotic N2O Production in Soils Than Nitrite. Frontiers in Environmental Science, 2019, 7, .	1.5	18
378	Geophysical imaging of regolith in landscapes along a climate and vegetation gradient in the Chilean coastal cordillera. Catena, 2019, 180, 146-159.	2.2	18

#	Article	IF	Citations
379	Modelling groundwater evapotranspiration in a shallow aquifer in a semi-arid environment. Journal of Hydrology, 2020, 587, 124967.	2.3	18
380	Pedotransfer Function for the Brunswick Soil Hydraulic Property Model and Comparison to the van Genuchten–Mualem Model. Water Resources Research, 2020, 56, e2019WR026820.	1.7	18
381	Call for Participation: Collaborative Benchmarking of Functional-Structural Root Architecture Models. The Case of Root Water Uptake. Frontiers in Plant Science, 2020, 11, 316.	1.7	18
382	Improving the representation of cropland sites in the Community Land Model (CLM) version 5.0. Geoscientific Model Development, 2021, 14, 573-601.	1.3	18
383	Dynamics of transformation of the veterinary antibiotic sulfadiazine in two soils. Chemosphere, 2014, 95, 470-477.	4.2	17
384	Quantitative multi-layer electromagnetic induction inversion and full-waveform inversion of crosshole ground penetrating radar data. Journal of Earth Science (Wuhan, China), 2015, 26, 844-850.	1.1	17
385	The contribution of hydroxylamine content to spatial variability of N2O formation in soil of a Norway spruce forest. Geochimica Et Cosmochimica Acta, 2016, 178, 76-86.	1.6	17
386	A Three–Dimensional View on Soil Biogeochemistry: A Dataset for a Forested Headwater Catchment. Journal of Environmental Quality, 2017, 46, 210-218.	1.0	17
387	High resolution modelling of soil moisture patterns with TerrSysMP: A comparison with sensor network data. Journal of Hydrology, 2017, 547, 309-331.	2.3	17
388	Vegetation Optical Depth and Soil Moisture Retrieved from L-Band Radiometry over the Growth Cycle of a Winter Wheat. Remote Sensing, 2018, 10, 1637.	1.8	17
389	Characterizing Redox Potential Effects on Greenhouse Gas Emissions Induced by Water–Level Changes. Vadose Zone Journal, 2018, 17, 1-13.	1.3	17
390	Source partitioning of H<sub>2</sub>O and CO<sub>2</sub> fluxes based on high-frequency eddy covariance data: a comparison between study sites. Biogeosciences, 2019, 16, 1111-1132.	1.3	17
391	Crop growth and soil water fluxes at erosion–affected arable sites: Using weighing lysimeter data for model intercomparison. Vadose Zone Journal, 2020, 19, e20058.	1.3	17
392	Soil hydraulic properties estimation from one–dimensional infiltration experiments using characteristic time concept. Vadose Zone Journal, 2020, 19, e20068.	1.3	17
393	On the impact of increasing drought on the relationship between soil water content and evapotranspiration of a grassland. Vadose Zone Journal, 2020, 19, e20029.	1.3	17
394	Simple Linear Model for Calibration of Time Domain Reflectometry Measurements on Solute Concentration. Soil Science Society of America Journal, 1998, 62, 83-89.	1.2	16
395	Pesticide fate at regional scale: Development of an integrated model approach and application. Physics and Chemistry of the Earth, 2005, 30, 542-549.	1.2	16
396	Memory effects induced by dependence on initial conditions and ergodicity of transport in heterogeneous media. Water Resources Research, 2008, 44, .	1.7	16

#	Article	IF	Citations
397	Modelling phosphorus inputs from agricultural sources and urban areas in river basins. Environmental Geology, 2009, 57, 183-193.	1.2	16
398	Feasibility of Sequential and Coupled Inversion of Time Domain Reflectometry Data to Infer Soil Hydraulic Parameters under Falling Head Infiltration. Soil Science Society of America Journal, 2011, 75, 775-786.	1.2	16
399	Validation of a minimum microclimate disturbance chamber for net ecosystem flux measurements. Agricultural and Forest Meteorology, 2013, 174-175, 1-14.	1.9	16
400	Projected impact of climate change on irrigation needs and groundwater resources in the metropolitan area of Hamburg (Germany). Environmental Earth Sciences, 2016, 75, 1.	1.3	16
401	Evaluation of an operational real-time irrigation scheduling scheme for drip irrigated citrus fields in Picassent, Spain. Agricultural Water Management, 2018, 208, 465-477.	2.4	16
402	Sorption Characteristics of Chlordecone and Cadusafos in Tropical Agricultural Soils. Current Organic Chemistry, 2013, 17, 2976-2984.	0.9	16
403	COMPARISON OF MULTIDISCIPLINARY APPROACHES AND UNIFICATION OF CONCEPTS ON THE MOVEMENT OF WATER AND SOIL IN DEFORMABLE POROUS MEDIA. Soil Science, 1993, 156, 141-148.	0.9	15
404	Aerial photograph-based delineation of artificially drained areas as a basis for water balance and phosphorus modelling in large river basins. Physics and Chemistry of the Earth, 2009, 34, 552-564.	1.2	15
405	Temporal Downscaling of Soil Carbon Dioxide Efflux Measurements Based on Time-Stable Spatial Patterns. Vadose Zone Journal, 2011, 10, 239-251.	1.3	15
406	Comment on â€œGlobal Convergence in the Temperature Sensitivity of Respiration at Ecosystem Levelâ€. Science, 2011, 331, 1265-1265.	6.0	15
407	In situ determination of surface relaxivities for unconsolidated sediments. Water Resources Research, 2015, 51, 6549-6563.	1.7	15
408	Temporal Monitoring of the Soil Freeze-Thaw Cycles over a Snow-Covered Surface by Using Air-Launched Ground-Penetrating Radar. Remote Sensing, 2015, 7, 12041-12056.	1.8	15
409	Simulating transpiration and leaf water relations in response to heterogeneous soil moisture and different stomatal control mechanisms. Plant and Soil, 2015, 394, 109-126.	1.8	15
410	Soil apparent conductivity measurements for planning and analysis of agricultural experiments: A case study from Western-Thailand. Geoderma, 2016, 267, 220-229.	2.3	15
411	Toward operational validation systems for global satellite-based terrestrial essential climate variables. International Journal of Applied Earth Observation and Geoinformation, 2021, 95, 102240.	1.4	15
412	Statistical Exploration of SENTINEL-1 Data, Terrain Parameters, and in-situ Data for Estimating the Near-Surface Soil Moisture in a Mediterranean Agroecosystem. Frontiers in Water, 2021, 3, .	1.0	15
413	Pore-Scale Mechanisms for Spectral Induced Polarization of Calcite Precipitation Inferred from Geo-Electrical Millifluidics. Environmental Science & Technology, 2022, 56, 4998-5008.	4.6	15
414	Microbial community changes during humification of 14 C-labelled maize straw in heat-treated and native Orthic Luvisol. European Journal of Soil Science, 2006, 57, 446-455.	1.8	14

#	Article	IF	Citations
415	Persistent memory of diffusing particles. Physical Review E, 2009, 80, 061134.	0.8	14
416	Transport of Sulfadiazine in Undisturbed Soil Columns: Effects of Flow Rate, Input Concentration and Pulse Duration. Journal of Environmental Quality, 2010, 39, 2147-2159.	1.0	14
417	NMR velocimetry with 13-interval stimulated echo multi-slice imaging in natural porous media under low flow rates. Journal of Magnetic Resonance, 2011, 212, 216-223.	1.2	14
418	Long‐Term Sorption and Sequestration Dynamics of the Antibiotic Sulfadiazine: A Batch Study. Journal of Environmental Quality, 2012, 41, 1497-1506.	1.0	14
419	Drying of a Natural Soil Under Evaporative Conditions: A Comparison of Different Magnetic Resonance Methods. Applied Magnetic Resonance, 2016, 47, 121-138.	0.6	14
420	The SARSense Campaign: Air- and Space-Borne C- and L-Band SAR for the Analysis of Soil and Plant Parameters in Agriculture. Remote Sensing, 2021, 13, 825.	1.8	14
421	The Footprint Characteristics of Cosmic Ray Thermal Neutrons. Geophysical Research Letters, 2021, 48, e2021GL094281.	1.5	14
422	From hydraulic root architecture models to macroscopic representations of root hydraulics in soil water flow and land surface models. Hydrology and Earth System Sciences, 2021, 25, 4835-4860.	1.9	14
423	Development and Validation of a Deep Learning Based Automated Minirhizotron Image Analysis Pipeline. Plant Phenomics, 2022, 2022, .	2.5	14
424	Modeling Sorption and Exchange Processes in Column Experiments and Large Scale Field Studies. Mine Water and the Environment, 2002, 21, 15-23.	0.9	13
425	Statistical regression. Developments in Soil Science, 2004, , 3-19.	0.5	13
426	Glyphosate behavior in a Rhodic Oxisol under no-till and conventional agricultural systems. Revista Brasileira De Ciencia Do Solo, 2005, 29, 61-69.	0.5	13
427	The 15N-CPMAS spectra of simazine and its metabolites: measurements and quantum chemical calculations. European Journal of Soil Science, 2007, 58, 882-888.	1.8	13
428	Geophysical Methods for Field-Scale Imaging of Root Zone Properties and Processes. SSSA Special Publication Series, 0, , 247-282.	0.2	13
429	Sensitivity analysis of a source partitioning method for H2O and CO2 fluxes based on high frequency eddy covariance data: Findings from field data and large eddy simulations. Agricultural and Forest Meteorology, 2019, 265, 152-170.	1.9	13
430	Sequential and coupled inversion of horizontal borehole ground penetrating radar data to estimate soil hydraulic properties at the field scale. Journal of Hydrology, 2021, 596, 126010.	2.3	13
431	Characterization of Field Tracer Transport Using High-Resolution Images. Vadose Zone Journal, 2005, 4, 101-111.	1.3	13
432	ON THE CHARACTERIZATION OF PROPERTIES OF AN UNRIPE MARINE CLAY SOIL II. A METHOD ON THE DETERMINATION OF HYDRAULIC PROPERTIES. Soil Science, 1992, 154, 59-72.	0.9	12

#	Article	IF	Citations
433	Analytical Solutions of Three-Dimensional Convection-Dispersion Problems with Time Dependent Coefficients. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 1999, 79, 411-421.	0.9	12
434	Induced Polarization of Unsaturated Sands Determined through Time Domain Measurements. Vadose Zone Journal, 2004, 3, 1160-1168.	1.3	12
435	On preconditioning for a parallel solution of the Richards equation. Computers and Geosciences, 2008, 34, 1958-1963.	2.0	12
436	Accurate Determination of the Bulk Electrical Conductivity with the TDR100 Cable Tester. Soil Science Society of America Journal, 2010, 74, 495-501.	1.2	12
437	Diffusionâ€controlled mobilization of waterâ€dispersible colloids from three <scp>G</scp>erman silt loam topsoils: effect of temperature. European Journal of Soil Science, 2013, 64, 777-786.	1.8	12
438	Estimation of the near surface soil water content during evaporation using airâ€launched groundâ€penetrating radar. Near Surface Geophysics, 2014, 12, 623-634.	0.6	12
439	Development and drift-analysis of a modular electromagnetic induction system for shallow ground conductivity measurements. Measurement Science and Technology, 2014, 25, 055801.	1.4	12
440	Spatioâ€temporal Variations of Dissolved Organic Matter in a German Forested Mountainous Headwater Catchment. Vadose Zone Journal, 2015, 14, 1-12.	1.3	12
441	Cross-disciplinary links in environmental systems science: Current state and claimed needs identified in a meta-review of process models. Science of the Total Environment, 2018, 622-623, 954-973.	3.9	12
442	Field evaluation of broadband spectral electrical imaging for soil and aquifer characterization. Journal of Applied Geophysics, 2018, 159, 484-496.	0.9	12
443	GPR full-waveform inversion of a variably saturated soil-aquifer system. Journal of Applied Geophysics, 2019, 170, 103823.	0.9	12
444	Modeling of Multilayered Media Greenâ€™s Functions With Rough Interfaces. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 7671-7681.	2.7	12
445	Simultaneous calibration and inversion algorithm for multiconfiguration electromagnetic induction data acquired at multiple elevations. Geophysics, 2019, 84, EN1-EN14.	1.4	12
446	Effect of fertilizers and irrigation on multiâ€configuration electromagnetic induction measurements. Soil Use and Management, 2020, 36, 104-116.	2.6	12
447	3D aquifer characterization of the Hermalle-sous-Argenteau test site using crosshole ground-penetrating radar amplitude analysis and full-waveform inversion. Geophysics, 2020, 85, H133-H148.	1.4	12
448	2.5D crosshole GPR full-waveform inversion with synthetic and measured data. Geophysics, 2020, 85, H71-H82.	1.4	12
449	Measuring vertical soil water content profiles by combining horizontal borehole and dispersive surface ground penetrating radar data. Near Surface Geophysics, 2020, 18, 275-294.	0.6	12
450	Root architecture development in stony soils. Vadose Zone Journal, 2021, 20, e20133.	1.3	12

#	Article	IF	Citations
451	Constraining water limitation of photosynthesis in a crop growth model with sun-induced chlorophyll fluorescence. Remote Sensing of Environment, 2021, 267, 112722.	4.6	12
452	Prediction of dynamic hydraulic properties in a ripening soil. Geoderma, 1993, 57, 231-246.	2.3	11
453	Magnetometric Resistivity (MMR) Imaging of Subsurface Solute Flow: Inversion Framework and Laboratory Tests. Journal of Environmental and Engineering Geophysics, 2002, 7, 111-118.	1.0	11
454	Fate of Two Herbicides in Zero‐Tension Lysimeters and in Field Soil. Journal of Environmental Quality, 2010, 39, 1451-1466.	1.0	11
455	Pyrene and Phenanthrene Sorption to Model and Natural Geosorbents in Single- and Binary-Solute Systems. Environmental Science & Technology, 2010, 44, 8102-8107.	4.6	11
456	Soil Hydraulic Parameters of Bare Soil Plots with Different Soil Structure Inversely Derived from L‐Band Brightness Temperatures. Vadose Zone Journal, 2015, 14, 1-23.	1.3	11
457	Investigating the correlation between soil tensile strength curve and soil water retention curve via modeling. Soil and Tillage Research, 2017, 167, 9-29.	2.6	11
458	Estimation of subsurface cylindrical object properties from GPR full-waveform inversion. , 2017, , .		11
459	Problems associated to kinetic fitting of incubation data. Soil Biology and Biochemistry, 2018, 120, 260-271.	4.2	11
460	Numerical and Experimental Investigations of Cesium and Strontium Sorption and Transport in Agricultural Soils. Vadose Zone Journal, 2018, 17, 1-14.	1.3	11
461	Simulating rhizodeposition patterns around growing and exuding root systems. In Silico Plants, 2021, 3, .	0.8	11
462	SOLUTE TRANSPORT PROCESSES. , 2006, , 117-159.		11
463	Assimilation of Groundwater Level and Soil Moisture Data in an Integrated Land Surface‐Subsurface Model for Southwestern Germany. Water Resources Research, 2022, 58, .	1.7	11
464	The effect of soil heterogeneity and hysteresis on solute transport: a numerical experiment. Ecological Modelling, 1995, 77, 273-288.	1.2	10
465	Modeling Water Flow and Pesticide Transport at Lysimeter and Field Scale. ACS Symposium Series, 1998, , 189-202.	0.5	10
466	Three‐Dimensional Nickel Ion Transport through Porous Media Using Magnetic Resonance Imaging. Journal of Environmental Quality, 2002, 31, 506-514.	1.0	10
467	Hydrogeophysics: An Introduction from the Guest Editors. Vadose Zone Journal, 2004, 3, 1060-1062.	1.3	10
468	An Improved Description of Pesticide Volatilization. Journal of Environmental Quality, 2004, 33, 1629-1637.	1.0	10

#	Article	IF	Citations
469	The Effect of Bedrock Topography on Timing and Location of Landslide Initiation Using the Local Factor of Safety Concept. Water (Switzerland), 2018, 10, 1290.	1.2	10
470	Assimilation of Highâ€Resolution Soil Moisture Data Into an Integrated Terrestrial Model for a Smallâ€Scale Headâ€Water Catchment. Water Resources Research, 2019, 55, 10358-10385.	1.7	10
471	Estimating Gravimetric Water Content of a Winter Wheat Field from L-Band Vegetation Optical Depth. Remote Sensing, 2019, 11, 2353.	1.8	10
472	Prediction of soil evaporation measured with weighable lysimeters using the FAO Penmanâ€"Monteith method in combination with Richardsâ€™ equation. Vadose Zone Journal, 2021, 20, e20102.	1.3	10
473	Toward highâ€resolution agronomic soil information and management zones delineated by groundâ€based electromagnetic induction and aerial drone data. Vadose Zone Journal, 2021, 20, e20099.	1.3	10
474	Reviews and syntheses: Gaining insights into evapotranspiration partitioning with novel isotopic monitoring methods. Biogeosciences, 2021, 18, 3701-3732.	1.3	10
475	Sentinel-2 Analysis of Spruce Crown Transparency Levels and Their Environmental Drivers After Summer Drought in the Northern Eifel (Germany). Frontiers in Forests and Global Change, 2021, 4, .	1.0	10
476	Largeâ€scale detection and quantification of harmful soil compaction in a postâ€mining landscape using multiâ€configuration electromagnetic induction. Soil Use and Management, 2022, 38, 212-228.	2.6	10
477	Detection of Tracer Plumes Using Fullâ€Waveform Inversion of Timeâ€Lapse Ground Penetrating Radar Data: A Numerical Study in a Highâ€Resolution Aquifer Model. Water Resources Research, 2022, 58, .	1.7	10
478	Remote Sensing of Instantaneous Drought Stress at Canopy Level Using Sun-Induced Chlorophyll Fluorescence and Canopy Reflectance. Remote Sensing, 2022, 14, 2642.	1.8	10
479	Quantification of physical ripening in an unripe marine clay soil. Geoderma, 1993, 58, 67-77.	2.3	9
480	Comparison of three stream tube models predicting field-scale solute transport. Hydrology and Earth System Sciences, 1997, 1, 873-893.	1.9	9
481	Analysis of the long-term behavior of solute transport with nonlinear equilibrium sorption using breakthrough curves and temporal moments. Journal of Contaminant Hydrology, 2002, 56, 271-294.	1.6	9
482	Comment on â€œField observations of soil moisture variability across scalesâ€•by James S. Famiglietti et al.. Water Resources Research, 2008, 44, .	1.7	9
483	Full-waveform inversion of GPR data in frequency-domain. , 2012, , .		9
484	New <i>Vadose Zone Journal</i> Initiatives for 2016. Vadose Zone Journal, 2016, 15, 1-2.	1.3	9
485	Spectral induced polarization for the characterisation of biochar in sand. Near Surface Geophysics, 2017, 15, 645-656.	0.6	9
486	Parameter sensitivity analysis of a root system architecture model based on virtual field sampling. Plant and Soil, 2019, 438, 101-126.	1.8	9

#	Article	IF	Citations
487	Soil Nitrogen Dynamics in a Managed Temperate Grassland Under Changed Climatic Conditions. Water (Switzerland), 2021, 13, 931.	1.2	9
488	Errors in Modeling Carbon Turnover Induced by Temporal Temperature Aggregation. Vadose Zone Journal, 2011, 10, 195-205.	1.3	9
489	A Schwarz domain decomposition method for solution of transient unsaturated water flow on parallel computers. Ecological Modelling, 1996, 93, 275-289.	1.2	8
490	Asymptotic Analysis of Solute Transport with Linear Nonequilibrium Sorption in Porous Media. Transport in Porous Media, 1999, 36, 189-210.	1.2	8
491	Comment on the paper, â€œEvaluation of pedo-transfer functions for unsaturated soil hydraulic conductivity using an independent data setâ€. Geoderma, 2002, 108, 145-147.	2.3	8
492	Study of enzyme-catalysed and noncatalysed interactions between soil humic acid and 13 C-labelled 2-aminobenzothiazole using solid-state 13 C NMR spectroscopy. Organic Geochemistry, 2002, 33, 1727-1735.	0.9	8
493	Three-Dimensional Nickel Ion Transport through Porous Media Using Magnetic Resonance Imaging. Journal of Environmental Quality, 2002, 31, 506.	1.0	8
494	Novel Chamber to Measure Equilibrium Soilâ€"Air Partitioning Coefficients of Low-Volatility Organic Chemicals under Conditions of Varying Temperature and Soil Moisture. Environmental Science & Technology, 2008, 42, 4870-4876.	4.6	8
495	On the role of metabolic activity on the transport und deposition of Pseudomonas fluorescens in saturated porous media. Water Research, 2010, 44, 1288-1296.	5.3	8
496	Uncertainty in Pesticide Monitoring Using Suction Cups: Evidence from Numerical Simulations. Vadose Zone Journal, 2011, 10, 1287-1298.	1.3	8
497	Relationship Between Vegetation Microwave Optical Depth and Cross-Polarized Backscatter From Multiyear Aquarius Observations. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 4493-4503.	2.3	8
498	Water Retention and Pore Size Distribution of a Biopolymericâ€Amended Loam Soil. Vadose Zone Journal, 2019, 18, 1-13.	1.3	8
499	Estimating the Number of Reference Sites Necessary for the Validation of Global Soil Moisture Products. IEEE Geoscience and Remote Sensing Letters, 2021, 18, 1530-1534.	1.4	8
500	Response of water fluxes and biomass production to climate change in permanent grassland soil ecosystems. Hydrology and Earth System Sciences, 2021, 25, 6087-6106.	1.9	8
501	Root System Scale Models Significantly Overestimate Root Water Uptake at Drying Soil Conditions. Frontiers in Plant Science, 2022, 13, 798741.	1.7	8
502	Coupled full-waveform inversion of horizontal borehole ground penetrating radar data to estimate soil hydraulic parameters: A synthetic study. Journal of Hydrology, 2022, 610, 127817.	2.3	8
503	Transport von gelÃ¶sten Stoffen im Grundwasser - Untersuchungen am Testfeld Krauthausen. Grundwasser, 2000, 5, 115-124.	1.4	7
504	A new tool for laboratory studies on volatilization: Extension of applicability of the photovolatility chamber. Environmental Toxicology and Chemistry, 2003, 22, 791-797.	2.2	7

#	Article	IF	Citations
505	Numerical Modeling of Large Scale Transport of Contminant Solutes Using the Global Random Walk Algorithm. Monte Carlo Methods and Applications, 2004, 10, 153-177.	0.3	7
506	Investigation of water content and dynamics of a Ricinus root system in unsaturated sand by means of SPRITE and CISS: correlation of root architecture and water content change. Magnetic Resonance Imaging, 2007, 25, 579-580.	1.0	7
507	Research at the Agrosphere Institute: From the Process Scale to the Catchment Scale. Vadose Zone Journal, 2009, 8, 664-669.	1.3	7
508	Effects of low-level radioactive soil contamination and sterilization on the degradation of radiolabeled wheat straw. Journal of Environmental Radioactivity, 2012, 109, 29-35.	0.9	7
509	Visualization of transport pathways for organic compounds in undisturbed soil monoliths. Geoderma, 2013, 195-196, 70-78.	2.3	7
510	Radiation-induced impacts on the degradation of 2,4-D and the microbial population in soil microcosms. Journal of Environmental Radioactivity, 2013, 115, 168-174.	0.9	7
511	A New TDR Multiplexing System for Reliable Electrical Conductivity and Soil Water Content Measurements. Vadose Zone Journal, 2013, 12, 1-11.	1.3	7
512	Magnetic Resonance Imaging Techniques for Visualization of Root Growth and Root Water Uptake Processes. SSSA Special Publication Series, 0, , 137-156.	0.2	7
513	Towards 3D full-waveform inversion of crosshole GPR data. , 2016, , .		7
514	Effect of magnetic pore surface coating on the NMR relaxation and diffusion signal in quartz sand. Magnetic Resonance in Chemistry, 2016, 54, 975-984.	1.1	7
515	Catchment tomography - An approach for spatial parameter estimation. Advances in Water Resources, 2017, 107, 147-159.	1.7	7
516	Magnetic Resonance Monitoring and Numerical Modeling of Soil Moisture during Evaporation. Vadose Zone Journal, 2018, 17, 1-15.	1.3	7
517	Assessment of the position accuracy of a single-frequency GPS receiver designed for electromagnetic induction surveys. Precision Agriculture, 2019, 20, 19-39.	3.1	7
518	Gas Permeability of Salt Crusts Formed by Evaporation from Porous Media. Geosciences (Switzerland), 2020, 10, 423.	1.0	7
519	Evaluation of different methods for gap filling of long€term actual evapotranspiration time series measured by lysimeters. Vadose Zone Journal, 2020, 19, e20020.	1.3	7
520	Improving crosshole ground€penetrating radar full€waveform inversion results by using progressively expanded bandwidths of the data. Near Surface Geophysics, 2021, 19, 465-487.	0.6	7
521	APPLIED HYDROGEOPHYSICS. , 2006, , 1-8.		7
522	Design and Importance of Multi-tiered Ecological Monitoring Networks. , 2010, , 355-374.		7

#	Article	IF	Citations
523	A calibration free radiation driven model for estimating actual evapotranspiration of mountain grasslands (CLIME-MG). Journal of Hydrology, 2022, 610, 127948.	2.3	7
524	Simulating water and nitrogen behaviour in soils cropped with winter wheat. , 1991, , 233-243.		6
525	Transport of solutes undergoing a Freundlich type nonlinear and nonequilibrium adsorption process. Physical Review E, 2002, 65, 041402.	0.8	6
526	A Lagrangian Stochastic Model for the Transport in Statistically Homogeneous Porous Media. Monte Carlo Methods and Applications, 2003, 9, .	0.3	6
527	Comment on â€œRoot Water Extraction and Limiting Soil Hydraulic Conditions Estimated by Numerical Simulationâ€. Vadose Zone Journal, 2007, 6, 524-526.	1.3	6
528	Fluorescence macrophotography as a tool to visualise and quantify spatial distribution of deposited colloid tracers in porous media. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 306, 118-125.	2.3	6
529	Solute Spreading under Transient Conditions in a Field Soil. Vadose Zone Journal, 2009, 8, 690-702.	1.3	6
530	Full-waveform inversion of multi-offset surface GPR data. , 2010, , .		6
531	Inversion and sensitivity analysis of GPR data with waveguide dispersion using Markov Chain Monte Carlo simulation. , 2010, , .		6
532	Transition of stage I to stage II evaporation regime in the topmost soil: High-resolution NMR imaging, profiling and numerical simulation. Microporous and Mesoporous Materials, 2015, 205, 3-6.	2.2	6
533	Quantitative imaging of spectral electrical properties of variably saturated soil columns. Journal of Applied Geophysics, 2015, 123, 333-344.	0.9	6
534	Effects of temperature and associated organic carbon on the fractionation of water-dispersible colloids from three silt loam topsoils under different land use. Geoderma, 2017, 299, 43-53.	2.3	6
535	A Dataset for Threeâ€Dimensional Distribution of 39 Elements Including Plant Nutrients and Other Metals and Metalloids in the Soils of a Forested Headwater Catchment. Journal of Environmental Quality, 2017, 46, 1510-1518.	1.0	6
536	Spectral Induced Polarization of Biochar in Variably Saturated Soil. Vadose Zone Journal, 2019, 18, 1-13.	1.3	6
537	Development and Uncertainty Assessment of Pedotransfer Functions for Predicting Water Contents at Specific Pressure Heads. Vadose Zone Journal, 2019, 18, 190063.	1.3	6
538	Quantification of water stress induced within-field variability of carbon dioxide fluxes in a sugar beet stand. Agricultural and Forest Meteorology, 2021, 297, 108242.	1.9	6
539	Added value of geophysics-based soil mapping in agro-ecosystem simulations. Soil, 2021, 7, 125-143.	2.2	6
540	KEYLINK: towards a more integrative soil representation for inclusion in ecosystem scale modelsâ€"II: model description, implementation and testing. PeerJ, 2021, 9, e10707.	0.9	6

#	Article	IF	Citations
541	Hydrogeophysical Techniques for Site Characterization and Monitoring: Recent Advances in Ground-penetrating Radar. NATO Science for Peace and Security Series C: Environmental Security, 2008, , 183-202.	0.1	6
542	Volatilization of [14C] fluoranthene and [14C] diflufenican after soil surface application under field-like conditions: measurement and comparison with different model approaches. Agronomy for Sustainable Development, 2002, 22, 337-350.	0.8	6
543	Coupling the Community Land Model version 5.0 to the parallel data assimilation framework PDAF: description and applications. Geoscientific Model Development, 2022, 15, 395-411.	1.3	6
544	Parasite inversion for determining the coefficients and timeâ€validity of Philip's twoâ€term infiltration equation. Vadose Zone Journal, 2022, 21, .	1.3	6
545	Direct determination of hydrophobic organic compounds in aqueous solution in the presence of dissolved organic carbon by high-performance liquid chromatography. Chemosphere, 1999, 39, 2365-2374.	4.2	5
546	Effects of mineral surface iron on the CPMAS13C-NMR spectroscopic detection of organic matter from soil fractions in an agricultural topsoil with different amendments. European Journal of Soil Science, 2008, 59, 592-599.	1.8	5
547	Simulating decomposition of ^{14}Câ€labelled fresh organic matter in bulk soil and soil particle fractions at various temperatures and moisture contents. European Journal of Soil Science, 2010, 61, 940-949.	1.8	5
548	Determination of the distribution of air and water in porous media by electrical impedance tomography and magneto-electrical imaging. Nuclear Engineering and Design, 2011, 241, 1959-1969.	0.8	5
549	Crosshole GPR full-waveform inversion and waveguide amplitude analysis: Recent developments and new challenges. , 2015, , .		5
550	Simultaneous multi-channel GPR measurements for soil characterization. , 2018, , .		5
551	Upscaling Issues in Ecohydrological Observations. Ecohydrology, 2019, , 435-454.	0.2	5
552	Accounting for Surface Roughness Scattering in the Characterization of Forest Litter with Ground-Penetrating Radar. Remote Sensing, 2019, 11, 828.	1.8	5
553	Invigorating Hydrological Research Through Journal Publications. Water Resources Research, 2020, 56, .	1.7	5
554	Bayesian inference of root architectural model parameters from synthetic field data. Plant and Soil, 2021, 467, 67-89.	1.8	5
555	Investigating Preferential Flow Processes in a Forest Soil Using Time Domain Reflectometry and Electrical Resistivity Tomography. Vadose Zone Journal, 2010, 9, 350-361.	1.3	5
556	Full-Waveform Modelling and Inversion of Ground-Penetrating Radar Data for Non-invasive Characterisation of Soil Hydrogeophysical Properties. , 2010, , 299-311.		5
557	Solute transport in aquifers with evolving scale heterogeneity. Analele Stiintifice Ale Universitatii Ovidius Constanta, Seria Matematica, 2015, 23, 167-186.	0.1	5
558	On Infiltration and Infiltration Characteristic Times. Water Resources Research, 2022, 58, .	1.7	5

#	Article	IF	Citations
559	Molecular characterisation of the bonding of herbicide metabolites to humic acid. Computational and Theoretical Chemistry, 2006, 759, 133-136.	1.5	4
560	DYNAMICS OF BENAZOLIN UNDER THE INFLUENCE OF DEGRADING MAIZE STRAW IN UNDISTURBED SOIL COLUMNS. Environmental Toxicology and Chemistry, 2007, 26, 2151.	2.2	4
561	Influence of interface roughness and heterogeneities on the waveguide inversion of dispersive GPR data. , 2010, , .		4
562	High resolution imaging of the unsaturated and saturated zones of a gravel aquifer using full-waveform inversion. , 2011, , .		4
563	Radio brightness validation on different spatial scales during the SMOS validation campaign 2010 in the Rur catchment, Germany. , 2011, , .		4
564	Influences of perfluorooctanoic acid on the aggregation of multi-walled carbon nanotubes. Journal of Environmental Sciences, 2013, 25, 466-472.	3.2	4
565	Electromagnetic characterization of organic-rich soils at the microwave L-band with ground-penetrating radar, radiometry and laboratory measurements. , 2014, , .		4
566	Active and passive L-band microwave remote sensing for soil moisture — A test-bed for SMAP fusion algorithms. , 2014, , .		4
567	Effect of short-term variations of environmental conditions on atmospheric CO18O isoforcing of different plant species. Agricultural and Forest Meteorology, 2015, 201, 128-140.	1.9	4
568	Using electrical anisotropy for structural characterization of sediments: an experimental validation study. Near Surface Geophysics, 2016, 14, 357-369.	0.6	4
569	GPR full-waveform inversion of horizontal ZOP borehole data using GprMax. , 2016, , .		4
570	GPR full-waveform inversion, recent developments, and future opportunities. , 2018, , .		4
571	Invigorating hydrological research through journal publications. Hydrological Sciences Journal, 2018, 63, 1113-1117.	1.2	4
572	Integrating Invasive and Non-invasive Monitoring Sensors to Detect Field-Scale Soil Hydrological Behavior. Frontiers in Water, 2020, 2, .	1.0	4
573	Presentation and discussion of the high-resolution atmosphere–land-surface–subsurface simulation dataset of the simulated Neckar catchment for the period 2007–2015. Earth System Science Data, 2021, 13, 4437-4464.	3.7	4
574	A Blueprint for a Distributed Terrestrial Ecosystem Research Infrastructure. , 2017, , 279-303.		4
575	Miscible Displacement, Sorption and Desorption of Atrazine in a Brazilian Oxisol. Vadose Zone Journal, 2003, 2, 728-738.	1.3	4
576	Coupled modelling of hydrological processes and grassland production in two contrasting climates. Hydrology and Earth System Sciences, 2022, 26, 2277-2299.	1.9	4

#	Article	IF	Citations
577	Same soil, different climate: Crop model intercomparison on translocated lysimeters. Vadose Zone Journal, 2022, 21, .	1.3	4
578	Quantitative Imaging of 3D Solute Transport Using 2D Timeâ€‘Lapse ERT: A Synthetic Feasibility Study. , 2004, , .		3
579	Combining 15N-CP/MAS NMR and quantum chemistry to reveal the occurrence of proton transfer: The case of the aminobenzothiazole/carboxylic acid adduct. Geoderma, 2011, 169, 4-12.	2.3	3
580	Explicit consideration of measurement uncertainty during Bayesian inversion of dispersive GPR data. , 2011, , .		3
581	Combined effective wavelet estimation and full-waveform inversion of GPR data. , 2011, , .		3
582	New improved algorithm for sky calibration of L-band radiometers J&#x00DC;LBARA and ELBARA II. , 2012, , .		3
583	On the origin of slow processes of charge transport in porous media. Philosophical Magazine, 2012, 92, 4628-4648.	0.7	3
584	No effect of digestate amendment on Cs-137 and Sr-90 translocation in lysimeter experiments. Chemosphere, 2017, 172, 310-315.	4.2	3
585	Joint editorial: Invigorating hydrological research through journal publications. Hydrology and Earth System Sciences, 2018, 22, 5735-5739.	1.9	3
586	In Situ Detection of Tree Root Systems under Heterogeneous Anthropogenic Soil Conditions Using Ground Penetrating Radar. Journal of Infrastructure Systems, 2019, 25, .	1.0	3
587	Integrating ground-based and remote sensing-based monitoring of near-surface soil moisture in a Mediterranean environment. , 2019, , .		3
588	Improvement of ground-penetrating radar full-waveform inversion images using cone penetration test data. Geophysics, 2021, 86, H13-H25.	1.4	3
589	Simplified characteristic time method for accurate estimation of the soil hydraulic parameters from oneâ€‘dimensional infiltration experiments. Vadose Zone Journal, 2021, 20, e20117.	1.3	3
590	The Importance of Subsurface Processes in Land Surface Modeling over a Temperate Region: An Analysis with SMAP, Cosmic Ray Neutron Sensing and Triple Collocation Analysis. Remote Sensing, 2021, 13, 3068.	1.8	3
591	Comments on â€œTime Domain Reflectometry Laboratory Calibration in Travel Time, Bulk Electrical Conductivity, and Effective Frequencyâ€. Vadose Zone Journal, 2006, 5, 1071-1072.	1.3	3
592	Nonâ€‘Invasive 3D Conductivity Measurements During Flow Experiments in Columns with Merit. , 2004, , .		3
593	HYDROLOGIC AND CRYOSPHERIC PROCESSES OBSERVED FROM SPACE. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-7/W3, 1101-1110.	0.2	3
594	One decade (2011â€"2020) of European agricultural water stress monitoring by MSG-SEVIRI: workflow implementation on the Virtual Earth Laboratory (VLab) platform. International Journal of Digital Earth, 2022, 15, 730-747.	1.6	3

#	Article	IF	Citations
595	Machine Learning with UAS LiDAR for Winter Wheat Biomass Estimations. AGILE: GIScience Series, 0, 3, 1-4.	0.0	3
596	Water supply from the groundwater table and the growth of poplar: A case study. Agricultural and Forest Meteorology, 1990, 50, 65-74.	1.9	2
597	Determination of the macrodispersive parameters of a motion in a two-layer porous medium. Acta Mechanica, 1998, 129, 117-126.	1.1	2
598	Reply [to â€œComment on â€œRenormalization group analysis of macrodispersion in a directed random flowâ€•by U. Jaekel and H. Vereeckenâ€]. Water Resources Research, 1998, 34, 3199-3200.	1.7	2
599	Analysis of the Time Behaviour of a Diffusive Transport in a Stratified Medium. , 2001, 45, 365-384.		2
600	Full-waveform modeling of ground-coupled GPR antennas for wave propagation in multilayered media: The problem solved?. , 2010, , .		2
601	Full-waveform inversion of cross-hole GPR data measured at the boise gravel aquifer. , 2011, , .		2
602	Two-layer inversion of dispersive GPR data due to freezing induced waveguides &#x2014; A synthetic study. , 2011, , .		2
603	Soil moisture retrieval using L-band radiometer and ground-penetrating radar. , 2011, , .		2
604	Characterizing a low-velocity waveguide using crosshole GPR full-waveform inversion. , 2012, , .		2
605	A particle smoother with sequential importance resampling for radiative transfer parameter estimation. , 2013, , .		2
606	Comparison of smoothness-constrained and geostatistically based cross-borehole electrical resistivity tomography for characterization of solute tracer plumes. Water Science and Engineering, 2016, 9, 274-286.	1.4	2
607	Observing Ecohydrological Processes: Challenges and Perspectives. Ecohydrology, 2019, , 1-27.	0.2	2
608	Quantitative imaging of 33P in plant materials using 14C polymer references. Analytical and Bioanalytical Chemistry, 2019, 411, 1253-1260.	1.9	2
609	Stable-Isotope-Aided Investigation of the Effect of Redox Potential on Nitrous Oxide Emissions as Affected by Water Status and N Fertilization. Water (Switzerland), 2020, 12, 2918.	1.2	2
610	Using low-wavenumber information in crosshole GPR FWI by considering angle difference identity with cosine approach: A synthetic study. , 2021, , .		2
611	A spatialising tool to simulate pesticide fate in the unsaturated zone on a catchment scale. Agronomy for Sustainable Development, 2005, 25, 279-283.	2.2	2
612	Modelling velocity and retardation factor of a nonlinearly sorbing solute plume. Soil Research, 2005, 43, 735.	0.6	2

#	Article	IF	Citations
613	Time-lapse ground-penetrating radar full-waveform inversion to detect tracer plumes: A numerical study. , 2018, , .		2
614	Application of Spectral Induced Polarization and Electrical Impedance Tomography on Mixtures of Biochars and Active Carbons with Sand. , 2012, , .		2
615	Causation Discovery of Weather and Vegetation Condition on Global Wildfire Using the PCMCI Approach. , 2021, , .		2
616	Miscible Displacement, Sorption and Desorption of Atrazine in a Brazilian Oxisol. Vadose Zone Journal, 2003, 2, 728.	1.3	2
617	Experimental design to reduce inductive coupling in spectral electrical impedance tomography (sEIT) measurements. Geophysical Journal International, 0, , .	1.0	2
618	GPR and EMI characterization of the hyperarid study site of Yungay, Chile: Implications of applying geophysical methods on Mars. Earth and Space Science, 2021, 8, e2021EA001790.	1.1	2
619	Hydrogeophysical characterization of subsurface solute transport at the Krauthausen test site: experiments and numerical modelling. , 2005, , 221-237.		1
620	Light fiber optic probe for measuring internal breakthrough of rare earth ion-labelled microspheres in porous media under unsaturated conditions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 325, 173-179.	2.3	1
621	A unified full-waveform method for modeling ground penetrating radar and electromagnetic induction data for non-destructive characterization of soil and materials. , 2009, , .		1
622	High-resolution imaging of a vineyard in south of France using ground penetrating radar and electromagnetic induction. , 2010, , .		1
623	Estimation of radiative transfer parameters for soil moisture retrieval from SMOS brightness temperatures - a synthetic 1D experiment with the Particle Filter. , 2011, , .		1
624	Ground-penetrating radar characterization of water as a function of frequency, salinity and temperature. , 2011, , .		1
625	Active and passive airborne microwave remote sensing for soil moisture retrieval in the Rur catchment, Germany. , 2012, , .		1
626	Time series analysis of SMOS and ASCAT: Soil moisture product validation in the Rur and Erft catchments. , 2012, , .		1
627	Estimation and validation of leaf area index time series for crops on 5M scale from space. , 2013, , .		1
628	Strategies to Observe and Understand Processes and Drivers in the Biogeosphere. Eos, 2014, 95, 16-16.	0.1	1
629	Root Processes Affecting the Soil Moisture Patterns in Ecohydrology. Ecohydrology, 2018, , 1-17.	0.2	1
630	Presentation of CPlantBox: a whole functional-structural plant model (root and shoot) coupled with a mechanistic resolution of carbon and water flows. , 2018, , .		1

#	Article	IF	Citations
631	Calibration, inversion, and applications of multiconfiguration electromagnetic induction for agricultural top- and subsoil characterization. , 2018, , .		1
632	Mapping near-surface soil moisture in a Mediterranean agroforestry ecosystem using Cosmic-Ray Neutron Probe and Sentinel-1 Data. , 2020, , .		1
633	3-D Electromagnetic Modeling Explains Apparent-Velocity Increase in Crosshole GPR Data-Borehole Fluid Effect Correction Method Enables to Incorporating High-Angle Traveltime Data. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-10.	2.7	1
634	A Lagrangian Stochastic Model for the Transport in Statistically Homogeneous Porous Media. , 0, .		1
635	Improved resolution of ground penetrating radar full-waveform inversion by using cone penetration test data: A synthetic study. , 2019, , .		1
636	A new tool for laboratory studies on volatilization: Extension of applicability of the photovolatility chamber. , 2003, 22, 791.		1
637	Analysis of the Transport of Hydrophobic Organic Xenobiotics in the Presence of Dissolved Organic Carbon Using Soil Column Experiments. , 0, , 449-470.		1
638	Upscaling Issues in Ecohydrological Observations. Ecohydrology, 2018, , 1-21.	0.2	1
639	Joint Editorial Invigorating Hydrological Research through Journal Publications. Journal of Hydrology and Hydromechanics, 2018, 66, 257-260.	0.7	1
640	Sarsense: A C- and L-Band SAR Rehearsal Campaign in Germany in Preparation for ROSE-L. , 2020, , .		1
641	Reply to: Unbias the evaluation of soil hysteresis effects on transport, by R. Smith. Ecological Modelling, 1996, 87, 295-296.	1.2	0
642	<title>Laser-induced fluorescence (LIF) spectroscopy for in-situ analysis of fluorescence tracers in water and soils</title>. , 1997, , .		0
643	Asymptotic solutions for two-site non-equilibrium transport. Acta Mechanica, 1998, 129, 127-132.	1.1	0
644	Random Walkers Cellular Automata for Diffusion Processes. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2000, 80, 367-368.	0.9	0
645	Classes of solutions for a nonlinear diffusion PDE. Journal of Computational and Applied Mathematics, 2001, 133, 373-381.	1.1	0
646	Using CPT to Estimate an Aquifers Heterogeneity. , 2005, , .		0
647	Constraining GPR data inversion using hydrodynamic laws for noninvasive soil hydraulic and electric property determination. , 2007, , .		0
648	Integrated full-waveform analysis of ground penetrating radar and electromagnetic induction data for non-invasive reconstruction of multilayered media. , 2009, , .		0

#	Article	IF	Citations
649	Sustainable use of water resources in Europe and the role of integrated modelling of phosphate fluxes. International Journal of Global Environmental Issues, 2010, 10, 172.	0.1	0
650	Closed loop brightness temperature data inversion for the retrieval of soil hydraulic properties. , 2011, , .		0
651	Analyzing topography effects for L-band radiometry using an improved model approach. , 2012, , .		0
652	Estimating soil hydraulic properties using L-band radiometer and ground-penetrating radar. , 2012, , .		0
653	VZJ Launches New Paper Type: â€œPriority Communicationsâ€. Vadose Zone Journal, 2013, 12, vzj2013.07.0001ann.	1.3	0
654	Characterization of low-velocity waveguides in crosshole GPR data using amplitude analysis and full-waveform inversion. , 2014, , .		0
655	Cosmic-ray neutron probes for satellite soil moisture validation. , 2017, , .		0
656	Joint Editorial: Invigorating hydrological research through journal publications. Hydrology Research, 2018, 49, iii-ix.	1.1	0
657	Time-lapse horizontal borehole GPR measurements to investigate spatial and temporal soil-water content changes. , 2018, , .		0
658	Invigorating Hydrological Research through Journal Publications. Journal of Hydrometeorology, 2018, 19, 1713-1719.	0.7	0
659	Joint Editorial: Invigorating Hydrological Research through Journal Publications. Vadose Zone Journal, 2018, 17, 180001ed.	1.3	0
660	Invigorating hydrological research through journal publications. Ecohydrology, 2018, 11, e2016.	1.1	0
661	Root Processes Affecting Soil Moisture Patterns in Ecohydrology. Ecohydrology, 2019, , 417-433.	0.2	0
662	Implications for Validation Activities of Global Soil Moisture Missions by the Prediction of Sub-Grid Soil Moisture Variability. , 2019, , .		0
663	Spruce Crown Transparency Levels Detected from Sentinel-2 Using Google Earth Engine. , 2021, , .		0
664	Response to â€œComments on â€˜A Set of Analytical Benchmarks to Test Numerical Models of Flow and Transport in Soilsâ€™â€. Vadose Zone Journal, 2006, 5, 128-128.	1.3	0
665	Closed loop hydrogeophysical inversion of timeâ€lapse GPR data to determine hydraulic properties of a sandy soil. , 2008, , .		0
666	Full-waveform Modeling and Joint Inversion of Electromagnetic Induction and Ground Penetrating Radar Data. , 2009, , .		0

#	Article	IF	Citations
667	Coupled Hydrogeophysical Inversion for Top Soil Hydraulic Properties Using Electrical Resistivity Tomography. , 2009, , .		0
668	Coupled Hydrogeophysical Inversion Using Particle Filtering. , 2009, , .		0
669	Data Fusion of Ground Penetrating Radar and Electromagnetic Induction for Reconstruction of Soil Electrical Properties. , 2010, , .		0
670	Electromagnetic Induction Calibration Using Antenna Transfer Functions. , 2011, , .		0
671	Joint editorial: Invigorating hydrological research through journal publications. Proceedings of the International Association of Hydrological Sciences, 0, 380, 3-8.	1.0	0
672	Investigating Soilâ€"Root Interactions with the Numerical Model R-SWMS. Methods in Molecular Biology, 2022, 2395, 259-283.	0.4	0
673	Recent development of the crosshole ground penetrating radar full-waveform inversion for hydrogeophysical applications. , 2021, , .		0
674	Recalibration of existing pedotransfer functions to estimate soil bulk density at a regional scale. European Journal of Soil Science, 0, , .	1.8	0