Dani Or

List of Publications by Year
in descending order

345 papers	18,471 citations	11651 70 h-index	20358 116 g-index
386 all docs	386 docs citations	386 times ranked	13169 citing authors

#	Article	IF	Citations
1	A Review of Advances in Dielectric and Electrical Conductivity Measurement in Soils Using Time Domain Reflectometry. Vadose Zone Journal, 2003, 2, 444-475.	2.2	729
2	Physical constraints affecting bacterial habitats and activity in unsaturated porous media â€“ a review. Advances in Water Resources, 2007, 30, 1505-1527.	3.8	513
3	Adsorption and capillary condensation in porous media: Liquid retention and interfacial configurations in angular pores. Water Resources Research, 1999, 35, 1949-1964.	4.2	505
4	Modeling Soil Processes: Review, Key Challenges, and New Perspectives. Vadose Zone Journal, 2016, 15, 1-57.	2.2	445
5	Characteristic lengths affecting evaporative drying of porous media. Physical Review E, 2008, 77, 056309.	2.1	358
6	Biophysical processes supporting the diversity of microbial life in soil. FEMS Microbiology Reviews, 2017, 41, 599-623.	8.6	314
7	Advances in Soil Evaporation Physicsâ€”A Review. Vadose Zone Journal, 2013, 12, 1-16.	2.2	286
8	Time domain reflectometry measurement principles and applications. Hydrological Processes, 2002, 16, 141-153.	2.6	278
9	Hydraulic conductivity of variably saturated porous media: Film and corner flow in angular pore space. Water Resources Research, 2001, 37, 1257-1276.	4.2	265
10	Liquid retention and interfacial area in variably saturated porous media: Upscaling from single-pore to sample-scale model. Water Resources Research, 1999, 35, 3591-3605.	4.2	258
11	Water films and scaling of soil characteristic curves at low water contents. Water Resources Research, 2005, 41, .	4.2	253
12	Temperature effects on soil bulk dielectric permittivity measured by time domain reflectometry: A physical model. Water Resources Research, 1999, 35, 371-383.	4.2	227
13	Hydraulic redistribution in a stand of Artemisia tridentata: evaluation of benefits to transpiration assessed with a simulation model. Oecologia, 2002, 130, 173-184.	2.0	219
14	Temperature effects on soil bulk dielectric permittivity measured by time domain reflectometry: Experimental evidence and hypothesis development. Water Resources Research, 1999, 35, 361-369.	4.2	216
15	Quantifying the role of vegetation in slope stability: A case study in Tuscany (Italy). Ecological Engineering, 2010, 36, 285-291.	3.6	209
16	Historical increase in agricultural machinery weights enhanced soil stress levels and adversely affected soil functioning. Soil and Tillage Research, 2019, 194, 104293.	5.6	204
17	Quantifying lateral root reinforcement in steep slopes â€“ from a bundle of roots to tree stands. Earth Surface Processes and Landforms, 2010, 35, 354-367.	2.5	199
18	Hydration-controlled bacterial motility and dispersal on surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 14369-14372.	7.1	182

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19	Extracellular Polymeric Substances Affecting Pore-Scale Hydrologic Conditions for Bacterial Activity in Unsaturated Soils. Vadose Zone Journal, 2007, 6, 298-305.	2.2	178
20	Drying front and water content dynamics during evaporation from sand delineated by neutron radiography. Water Resources Research, 2008, 44, .	4.2	171
21	Stomatal Control and Leaf Thermal and Hydraulic Capacitances under Rapid Environmental Fluctuations. PLoS ONE, 2013, 8, e54231.	2.5	156
22	Root zone solute dynamics under drip irrigation: A review. Plant and Soil, 2000, 222, 163-190.	3.7	155
23	Coupling of evaporative fluxes from drying porous surfaces with air boundary layer: Characteristics of evaporation from discrete pores. Water Resources Research, 2012, 48, .	4.2	152
24	Balancing water scarcity and quality for sustainable irrigated agriculture. Water Resources Research, 2015, 51, 3419-3436.	4.2	140
25	Soil structureÂis an important omission in Earth System Models. Nature Communications, 2020, 11, 522.	12.8	138
26	The physical structure of soil: Determinant and consequence of trophic interactions. Soil Biology and Biochemistry, 2020, 148, 107876.	8.8	137
27	Sources and characteristics of acoustic emissions from mechanically stressed geologic granular media â€" A review. Earth-Science Reviews, 2012, 112, 97-114.	9.1	133
28	Effects of Maxwell-Wagner polarization on soil complex dielectric permittivity under variable temperature and electrical conductivity. Water Resources Research, 2006, 42, .	4.2	132
29	What determines drying rates at the onset of diffusion controlled stageâ€2 evaporation from porous media?. Water Resources Research, 2011, 47, .	4.2	130
30	Flow in unsaturated fractured porous media: Hydraulic conductivity of rough surfaces. Water Resources Research, 2000, 36, 1165-1177.	4.2	129
31	Modeling post-tillage soil structural dynamics: a review. Soil and Tillage Research, 2002, 64, 41-59.	5.6	129
32	Rheological Properties of Wet Soils and Clays under Steady and Oscillatory Stresses. Soil Science Society of America Journal, 2001, 65, 624-637.	2.2	128
33	Critical evaluation of enhancement factors for vapor transport through unsaturated porous media. Water Resources Research, 2009, 45, .	4.2	128
34	Root distribution and water uptake patterns of corn under surface and subsurface drip irrigation. Plant and Soil, 1998, 206, 123-136.	3.7	127
35	Nonlinear Parameter Estimation Using Spreadsheet Software. Journal of Natural Resources and Life Sciences Education, 1998, 27, 13-19.	0.2	127
36	Rootâ€soil mechanical interactions during pullout and failure of root bundles. Journal of Geophysical Research, 2010, 115, .	3.3	126

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37	Spatial organization of bacterial populations in response to oxygen and carbon counter-gradients in pore networks. Nature Communications, 2018, 9, 769.	12.8	125
38	The concept of field capacity revisited: Defining intrinsic static and dynamic criteria for soil internal drainage dynamics. Water Resources Research, 2014, 50, 4787-4802.	4.2	120
39	Microbial community dynamics in soil aggregates shape biogeochemical gas fluxes from soil profiles â€“ upscaling an aggregate biophysical model. Global Change Biology, 2016, 22, 3141-3156.	9.5	120
40	Lattice Boltzmann method for modeling liquid-vapor interface configurations in porous media. Water Resources Research, 2004, 40, .	4.2	118
41	Conceptual and Parametric Representation of Soil Hydraulic Properties: A Review. Vadose Zone Journal, 2013, 12, 1-20.	2.2	118
42	Interfacial jumps and pressure bursts during fluid displacement in interacting irregular capillaries. Journal of Colloid and Interface Science, 2012, 377, 406-415.	9.4	114
43	Modeling the dynamics of the soil pore-size distribution. Soil and Tillage Research, 2002, 64, 61-78.	5.6	108
44	Monitoring and prediction in early warning systems for rapid mass movements. Natural Hazards and Earth System Sciences, 2015, 15, 905-917.	3.6	107
45	Suppressing viscous fingering in structured porous media. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4833-4838.	7.1	107
46	Cavitation during desaturation of porous media under tension. Water Resources Research, 2002, 38, 19-1-19-14.	4.2	102
47	Standardizing Characterization of Electromagnetic Water Content Sensors: Part 1. Methodology. Vadose Zone Journal, 2005, 4, 1048-1058.	2.2	99
48	A Review of Geophysical Methods for Soil Structure Characterization. Reviews of Geophysics, 2018, 56, 672-697.	23.0	97
49	Stochastic model for posttillage soil pore space evolution. Water Resources Research, 2000, 36, 1641-1652.	4.2	96
50	Characteristics of evaporation from partially wettable porous media. Water Resources Research, 2009, 45, .	4.2	94
51	Evaporation rates across a convective air boundary layer are dominated by diffusion. Water Resources Research, 2013, 49, 1602-1610.	4.2	92
52	A Parametric Model for Twoâ€Đimensional Water Uptake Intensity by Corn Roots under Drip Irrigation. Soil Science Society of America Journal, 1996, 60, 1039-1049.	2.2	91
53	Hydration and diffusion processes shape microbial community organization and function in model soil aggregates. Water Resources Research, 2015, 51, 9804-9827.	4.2	91
54	Evaporation and capillary coupling across vertical textural contrasts in porous media. Physical Review E, 2009, 80, 046318.	2.1	90

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55	Spatial characterization of root reinforcement at stand scale: Theory and case study. Geomorphology, 2012, 171-172, 190-200.	2.6	88
56	Scaling of capillary, gravity and viscous forces affecting flow morphology in unsaturated porous media. Advances in Water Resources, 2008, 31, 1129-1136.	3.8	84
57	Synthetic Microbial Ecology: Engineering Habitats for Modular Consortia. Frontiers in Microbiology, 2017, 8, 1125.	3.5	84
58	Dynamics of soil aggregate coalescence governed by capillary and rheological processes. Water Resources Research, 2000, 36, 367-379.	4.2	83
59	Cell-to-cell bacterial interactions promoted by drier conditions on soil surfaces. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9791-9796.	7.1	83
60	Hydromechanical triggering of landslides: From progressive local failures to mass release. Water Resources Research, 2012, 48, .	4.2	82
61	Hydraulic functions for swelling soils: pore scale considerations. Journal of Hydrology, 2003, 272, 50-71.	5.4	81
62	Microbial community response to hydration-desiccation cycles in desert soil. Scientific Reports, 2017, 7, 45735.	3.3	80
63	Aqueous films limit bacterial cell motility and colony expansion on partially saturated rough surfaces. Environmental Microbiology, 2010, 12, 1363-1373.	3.8	79
64	Evaporation from layered porous media. Journal of Geophysical Research, 2010, 115, .	3.3	79
65	Effects of hydrophobic layers on evaporation from porous media. Geophysical Research Letters, 2008, 35, .	4.0	78
66	An interdisciplinary approach towards improved understanding of soil deformation during compaction. Soil and Tillage Research, 2013, 128, 61-80.	5.6	78
67	Soil bacterial diversity mediated by microscale aqueous-phase processes across biomes. Nature Communications, 2020, 11, 116.	12.8	78
68	Continuous Soil Carbon Dioxide and Oxygen Measurements and Estimation of Gradientâ€Based Gaseous Flux. Vadose Zone Journal, 2005, 4, 1161-1169.	2.2	77
69	Hydration dynamics promote bacterial coexistence on rough surfaces. ISME Journal, 2013, 7, 395-404.	9.8	76
70	Frequency analysis of timeâ€domain reflectometry (TDR) with application to dielectric spectroscopy of soil constituents. Geophysics, 1999, 64, 707-718.	2.6	75
71	Evolution of soil wetting patterns preceding a hydrologically induced landslide inferred from electrical resistivity survey and point measurements of volumetric water content and pore water pressure. Water Resources Research, 2013, 49, 7992-8004.	4.2	75
72	A framework for modelling soil structure dynamics induced by biological activity. Global Change Biology, 2020, 26, 5382-5403.	9.5	75

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73	Pullout tests of root analogs and natural root bundles in soil: Experiments and modeling. Journal of Geophysical Research, 2011, 116, .	3.3	74
74	Microbial dispersal in unsaturated porous media: Characteristics of motile bacterial cell motions in unsaturated angular pore networks. Water Resources Research, 2014, 50, 7406-7429.	4.2	73
75	Unsaturated Hydraulic Conductivity of Structured Porous Media: A Review of Liquid Configurationâ€“Based Models. Vadose Zone Journal, 2002, 1, 14-37.	2.2	71
76	Natural and managed soil structure: On the fragile scaffolding for soil functioning. Soil and Tillage Research, 2021, 208, 104912.	5.6	70
77	Geometrical factors and interfacial processes affecting complex dielectric permittivity of partially saturated porous media. Water Resources Research, 2006, 42, .	4.2	68
78	Soil Penetration by Earthworms and Plant Rootsâ€”Mechanical Energetics of Bioturbation of Compacted Soils. PLoS ONE, 2015, 10, e0128914.	2.5	67
79	Wind increases leaf water use efficiency. Plant, Cell and Environment, 2016, 39, 1448-1459.	5.7	66
80	Surface Evaporative Capacitance: How Soil Type and Rainfall Characteristics Affect Globalâ€Scale Surface Evaporation. Water Resources Research, 2019, 55, 519-539.	4.2	66
81	Fiber bundle model for multiscale modeling of hydromechanical triggering of shallow landslides. Water Resources Research, 2009, 45, .	4.2	65
82	An analytical fiber bundle model for pullout mechanics of root bundles. Journal of Geophysical Research, 2011, 116, .	3.3	65
83	Lattice Boltzmann method for homogeneous and heterogeneous cavitation. Physical Review E, 2005, 71, 046703.	2.1	64
84	Liquid-phase continuity and solute concentration dynamics during evaporation from porous media: Pore-scale processes near vaporization surface. Physical Review E, 2010, 81, 046308.	2.1	64
85	Spatial statistical modeling of shallow landslidesâ€”Validating predictions for different landslide inventories and rainfall events. Geomorphology, 2011, 133, 11-22.	2.6	64
86	Effects of stomata clustering on leaf gas exchange. New Phytologist, 2015, 207, 1015-1025.	7.3	64
87	Longâ€Term Soil Structure Observatory for Monitoring Postâ€Compaction Evolution of Soil Structure. Vadose Zone Journal, 2017, 16, 1-16.	2.2	63
88	Water balance for Great Basin phreatophytes derived from eddy covariance, soil water, and water table measurements. Journal of Hydrology, 2006, 329, 595-605.	5.4	61
89	Mechanical interactions between neighbouring roots during pullout tests. Plant and Soil, 2013, 367, 391-406.	3.7	61
90	A Review of Advances in Dielectric and Electrical Conductivity Measurement in Soils Using Time Domain Reflectometry. Vadose Zone Journal, 2003, 2, 444-475.	2.2	60

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91	Soil Texture Effects on Surface Resistance to Bareâ€Soil Evaporation. Geophysical Research Letters, 2018, 45, 10,398.	4.0	59
92	Infrared thermography of evaporative fluxes and dynamics of salt deposition on heterogeneous porous surfaces. Water Resources Research, 2011, 47, .	4.2	58
93	Colloid mobilization by fluid displacement fronts in channels. Journal of Colloid and Interface Science, 2013, 406, 44-50.	9.4	58
94	Evaporation suppression from water reservoirs: Efficiency considerations of partial covers. Water Resources Research, 2011, 47, .	4.2	57
95	Inertial forces affect fluid front displacement dynamics in a pore-throat network model. Physical Review E, 2014, 90, 023019.	2.1	57
96	Microgravity effects on water flow and distribution in unsaturated porous media: Analyses of flight experiments. Water Resources Research, 1999, 35, 929-942.	4.2	56
97	Rainfall-triggered shallow landslides at catchment scale: Threshold mechanics-based modeling for abruptness and localization. Water Resources Research, 2013, 49, 6266-6285.	4.2	56
98	Infiltration from the Pedon to Global Grid Scales: An Overview and Outlook for Land Surface Modeling. Vadose Zone Journal, 2019, 18, 1-53.	2.2	56
99	Ground-penetrating radar measurement of soil water content dynamics using a suspended horn antenna. IEEE Transactions on Geoscience and Remote Sensing, 2004, 42, 1695-1705.	6.3	55
100	On the effective measurement frequency of time domain reflectometry in dispersive and nonconductive dielectric materials. Water Resources Research, 2005, 41, .	4.2	55
101	Interfacial interactions and colloid retention under steady flows in a capillary channel. Journal of Colloid and Interface Science, 2006, 303, 171-184.	9.4	55
102	Frequency Domain Analysis for Extending Time Domain Reflectometry Water Content Measurement in Highly Saline Soils. Soil Science Society of America Journal, 2004, 68, 1568-1577.	2.2	54
103	Shearâ€induced force fluctuations and acoustic emissions in granular material. Journal of Geophysical Research: Solid Earth, 2013, 118, 6086-6098.	3.4	54
104	Modeling and analysis of evaporation processes from porous media on the REV scale. Water Resources Research, 2014, 50, 1059-1079.	4.2	54
105	A Review of Advances in Dielectric and Electrical Conductivity Measurement in Soils Using Time Domain Reflectometry. Vadose Zone Journal, 2003, 2, 444.	2.2	54
106	Wetting-induced soil structural changes: The theory of liquid phase sintering. Water Resources Research, 1996, 32, 3041-3049.	4.2	53
107	Annual mesoscale study of water balance in a Great Basin heterogeneous desert valley. Journal of Hydrology, 1997, 191, 223-244.	5.4	53
108	Pore scale mechanisms for enhanced vapor transport through partially saturated porous media. Water Resources Research, 2012, 48, .	4.2	53

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109	A generalized complementary relationship between actual and potential evaporation defined by a reference surface temperature. Water Resources Research, 2016, 52, 385-406.	4.2	53
110	Fiber-optic high-resolution acoustic emission (AE) monitoring of slope failure. Landslides, 2017, 14, 1139-1146.	5.4	52
111	WATER AND SOLUTE DYNAMICS UNDER A DRIP-IRRIGATED CROP: EXPERIMENTS AND ANALYTICAL MODEL. Transactions of the American Society of Agricultural Engineers, 2000, 43, 1597-1608.	0.9	51
112	Evaporation from porous surfaces into turbulent airflows: Coupling eddy characteristics with pore scale vapor diffusion. Water Resources Research, 2013, 49, 8432-8442.	4.2	51
113	Effects of soil spatial variability at the hillslope and catchment scales on characteristics of rainfallâ€induced landslides. Water Resources Research, 2016, 52, 1781-1799.	4.2	51
114	Cooperation in carbon source degradation shapes spatial self-organization of microbial consortia on hydrated surfaces. Scientific Reports, 2017, 7, 43726.	3.3	51
115	Pore-Scale Analysis of Evaporation and Condensation Dynamics in Porous Media. Langmuir, 2010, 26, 13924-13936.	3.5	49
116	Linking rainfall-induced landslides with debris flows runout patterns towards catchment scale hazard assessment. Geomorphology, 2017, 280, 1-15.	2.6	49
117	The Porous Surface Model, a Novel Experimental System for Online Quantitative Observation of Microbial Processes under Unsaturated Conditions. Applied and Environmental Microbiology, 2008, 74, 5195-5200.	3.1	48
118	Mechanisms for acoustic emissions generation during granular shearing. Granular Matter, 2014, 16, 627-640.	2.2	48
119	Analytical Models for Soil Poreâ€Size Distribution After Tillage. Soil Science Society of America Journal, 2002, 66, 1104-1114.	2.2	47
120	Evaporation from partially covered water surfaces. Water Resources Research, 2010, 46, .	4.2	47
121	Aquatic habitats and diffusion constraints affecting microbial coexistence in unsaturated porous media. Water Resources Research, 2005, 41, .	4.2	46
122	A Mechanistic Model of Microbially Mediated Soil Biogeochemical Processes: A Reality Check. Global Biogeochemical Cycles, 2019, 33, 620-648.	4.9	46
123	Error analyses of simplified unsaturated flow models under large uncertainty in hydraulic properties. Water Resources Research, 1992, 28, 2913-2924.	4.2	45
124	Thermoâ€evaporative fluxes from heterogeneous porous surfaces resolved by infrared thermography. Water Resources Research, 2010, 46, .	4.2	45
125	Effects of rainfall spatial variability and intermittency on shallow landslide triggering patterns at a catchment scale. Water Resources Research, 2014, 50, 7780-7799.	4.2	45
126	Bacterial flagellar motility on hydrated rough surfaces controlled by aqueous film thickness and connectedness. Scientific Reports, 2016, 6, 19409.	3.3	45

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127	Modeling metabolic networks of individual bacterial agents in heterogeneous and dynamic soil habitats (IndiMeSH). PLoS Computational Biology, 2019, 15, e1007127.	3.2	45
128	Water Table Depth and Soil Salinization: From Poreâ€Scale Processes to Fieldâ€Scale Responses. Water Resources Research, 2020, 56, e2019WR026707.	4.2	45
129	Limited diffusive fluxes of substrate facilitate coexistence of two competing bacterial strains. FEMS Microbiology Ecology, 2008, 64, 1-8.	2.7	44
130	Stochastic modeling of unsaturated flow in heterogeneous soils with water uptake by plant roots: The Parallel Columns Model. Water Resources Research, 1993, 29, 619-631.	4.2	43
131	Pore scale dynamics underlying the motion of drainage fronts in porous media. Water Resources Research, 2014, 50, 8441-8457.	4.2	43
132	The Plumbing of Land Surface Models: Is Poor Performance a Result of Methodology or Data Quality?. Journal of Hydrometeorology, 2016, 17, 1705-1723.	1.9	43
133	A new soil metric potential sensor based on time domain reflectometry. Water Resources Research, 1999, 35, 3399-3407.	4.2	42
134	Covariation of vegetation and climate constrains present and future T/ET variability. Environmental Research Letters, 2018, 13, 104012.	5.2	42
135	Invasion percolation of single component, multiphase fluids with lattice Boltzmann models. Physica B: Condensed Matter, 2003, 338, 298-303.	2.7	40
136	WATER RETENTION AND CHARACTERISTIC CURVE. , 2005, , 278-289.		40
137	Kirkham's Legacy and Contemporary Challenges in Soil Physics Research. Soil Science Society of America Journal, 2011, 75, 1589-1601.	2.2	40
138	Speed and attenuation of acoustic waves in snow: Laboratory experiments and modeling with Biot's theory. Cold Regions Science and Technology, 2016, 125, 1-11.	3.5	40
139	Resolving Species Level Changes in a Representative Soil Bacterial Community Using Microfluidic Quantitative PCR. Frontiers in Microbiology, 2017, 8, 2017.	3.5	40
140	Nearâ€Surface Soil Water Content Measurements Using Horn Antenna Radar: Methodology and Overview. Vadose Zone Journal, 2003, 2, 500-510.	2.2	39
141	Flow and Uptake Patterns Affecting Soil Water Sensor Placement for Drip Irrigation Management. Transactions of the American Society of Agricultural Engineers, 1996, 39, 2007-2016.	0.9	38
142	Temperature dynamics during nonisothermal evaporation from drying porous surfaces. Water Resources Research, 2013, 49, 7339-7349.	4.2	38
143	Evaporation suppression and energy balance of water reservoirs covered with self-assembling floating elements. Hydrology and Earth System Sciences, 2018, 22, 4015-4032.	4.9	38
144	Design of Porous Media for Optimal Gas and Liquid Fluxes to Plant Roots. Soil Science Society of America Journal, 1998, 62, 563-573.	2.2	37

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145	Who Invented the Tensiometer?. Soil Science Society of America Journal, 2001, 65, 1-3.	2.2	37
146	Natural length scales define the range of applicability of the Richards equation for capillary flows. Water Resources Research, 2015, 51, 7130-7144.	4.2	37
147	Stochastic analysis of unsaturated steady state flow through bounded heterogeneous formations. Water Resources Research, 1993, 29, 1141-1148.	4.2	36
148	Surface area, geometrical and configurational effects on permittivity of porous media. Journal of Non-Crystalline Solids, 2002, 305, 247-254.	3.1	36
149	Dynamics of Microbial Growth and Coexistence on Variably Saturated Rough Surfaces. Microbial Ecology, 2009, 58, 262-275.	2.8	36
150	Energy partitioning dynamics of drying terrestrial surfaces. Journal of Hydrology, 2014, 519, 1257-1270.	5.4	36
151	Soil Water and Crop Yield Spatial Variability Induced by Irrigation Nonuniformity. Soil Science Society of America Journal, 1992, 56, 226-233.	2.2	34
152	Gas Diffusion Measurement and Modeling in Coarseâ€Textured Porous Media. Vadose Zone Journal, 2003, 2, 602-610.	2.2	34
153	Liquid fragmentation and intermittent flow regimes in unsaturated fractured media. Water Resources Research, 2005, 41, .	4.2	34
154	Dynamics of soil biogeochemical gas emissions shaped by remolded aggregate sizes and carbon configurations under hydration cycles. Global Change Biology, 2018, 24, e378-e392.	9.5	34
155	In Situ Method for Estimating Subsurface Unsaturated Hydraulic Conductivity. Water Resources Research, 1995, 31, 1863-1870.	4.2	33
156	Simulation of gaseous diffusion in partially saturated porous media under variable gravity with lattice Boltzmann methods. Water Resources Research, 2005, 41, W08410.	4.2	33
157	Anisotropy factor of saturated and unsaturated soils. Water Resources Research, 2006, 42, .	4.2	33
158	Leaf-scale experiments reveal an important omission in the Penmanâ€“Monteith equation. Hydrology and Earth System Sciences, 2017, 21, 685-706.	4.9	33
159	The engineering of spatially linked microbial consortia â€“ potential and perspectives. Current Opinion in Biotechnology, 2020, 62, 137-145.	6.6	33
160	Modeled effects on permittivity measurements of water content in high surface area porous media. Physica B: Condensed Matter, 2003, 338, 284-290.	2.7	32
161	Farm vehicles approaching weights of sauropods exceed safe mechanical limits for soil functioning. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2117699119.	7.1	32
162	Experimental and Numerical Evaluation of Analytical Volume Balance Model for Soil Water Dynamics under Drip Irrigation. Soil Science Society of America Journal, 2003, 67, 1657-1671.	2.2	31

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163	Microscale pH variations during drying of soils and desert biocrusts affect HONO and NH3 emissions. Nature Communications, 2019, 10, 3944.	12.8	31
164	Hydraulic conductivity of partially saturated fractured porous media: flow in a cross-section. Advances in Water Resources, 2003, 26, 883-898.	3.8	30
165	Drying patterns of porous media containing wettability contrasts. Journal of Colloid and Interface Science, 2013, 391, 135-141.	9.4	30
166	New turbulent resistance parameterization for soil evaporation based on a poreâ€scale model: Impact on surface fluxes in <scp>CABLE</scp>. Journal of Advances in Modeling Earth Systems, 2017, 9, 220-238.	3.8	30
167	Ground-penetrating radar measurement of crop and surface water content dynamics. Remote Sensing of Environment, 2005, 96, 119-134.	11.0	29
168	Morphology, propagation dynamics and scaling characteristics of drying fronts in porous media. Geophysical Research Letters, 2012, 39, .	4.0	29
169	Effect of wetness patchiness on evaporation dynamics from drying porous surfaces. Water Resources Research, 2013, 49, 8250-8262.	4.2	29
170	Linking evaporative fluxes from bare soil across surface viscous sublayer with the Moninâ€“Obukhov atmospheric flux-profile estimates. Journal of Hydrology, 2015, 525, 684-693.	5.4	29
171	On Upscaling of Soil Microbial Processes and Biogeochemical Fluxes From Aggregates to Landscapes. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 1526-1547.	3.0	29
172	Bridging the Holistic-Reductionist Divide in Microbial Ecology. MSystems, 2019, 4, .	3.8	29
173	Individual-Based Model of Microbial Life on Hydrated Rough Soil Surfaces. PLoS ONE, 2016, 11, e0147394.	2.5	29
174	Spatial and temporal soil water estimation considering soil variability and evapotranspiration uncertainty. Water Resources Research, 1992, 28, 803-814.	4.2	28
175	Traveling liquid bridges in unsaturated fractured porous media. Transport in Porous Media, 2007, 68, 129-151.	2.6	28
176	Fluid Depletion in Shear Bands. Physical Review Letters, 2012, 109, 248001.	7.8	28
177	Evaporation Suppression From Water Bodies Using Floating Covers: Laboratory Studies of Cover Type, Wind, and Radiation Effects. Water Resources Research, 2019, 55, 4839-4853.	4.2	28
178	Global Prediction of Soil Saturated Hydraulic Conductivity Using Random Forest in a Covariateâ€Based GeoTransfer Function (CoGTF) Framework. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002242.	3.8	28
179	EVALUATION OF METHODS FOR DETERMINING SOIL-WATER RETENTIVITY AND UNSATURATED HYDRAULIC CONDUCTIVITY. Soil Science, 1994, 158, 1-13.	0.9	27
180	MICROGRAVITY EFFECTS ON WATER SUPPLY AND SUBSTRATE PROPERTIES IN POROUS MATRIX ROOT SUPPORT SYSTEMS. Acta Astronautica, 2000, 47, 839-848.	3.2	27

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181	Evolution of unsaturated hydraulic conductivity of aggregated soils due to compressive forces. Water Resources Research, 2008, 44, .	4.2	27
182	A Hydration-Based Biophysical Index for the Onset of Soil Microbial Coexistence. Scientific Reports, 2012, 2, 881.	3.3	27
183	Characteristics of acoustic emissions induced by fluid front displacement in porous media. Water Resources Research, 2012, 48, .	4.2	27
184	Codetection of acoustic emissions during failure of heterogeneous media: New perspectives for natural hazard early warning. Geophysical Research Letters, 2016, 43, 1075-1083.	4.0	27
185	Hydration status and diurnal trophic interactions shape microbial community function in desert biocrusts. Biogeosciences, 2017, 14, 5403-5424.	3.3	27
186	Plant Water Use Efficiency over Geological Time â€“ Evolution of Leaf Stomata Configurations Affecting Plant Gas Exchange. PLoS ONE, 2013, 8, e67757.	2.5	27
187	Deformation and permeability of aggregated soft earth materials. Journal of Geophysical Research, 2006, 111, .	3.3	26
188	Thermal signatures of turbulent airflows interacting with evaporating thin porous surfaces. International Journal of Heat and Mass Transfer, 2015, 87, 429-446.	4.8	26
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