

Kathleen M Smits

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

1,344
citations

471509

17
h-index

361022

35
g-index

59
all docs

59
docs citations

59
times ranked

1117
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal Conductivity of Sands under Varying Moisture and Porosity in Drainage "Wetting Cycles. Vadose Zone Journal, 2010, 9, 172-180.	2.2	142
2	Evaporation from soils under thermal boundary conditions: Experimental and modeling investigation to compare equilibrium and nonequilibrium based approaches. Water Resources Research, 2011, 47, .	4.2	112
3	Study of the effect of wind speed on evaporation from soil through integrated modeling of the atmospheric boundary layer and shallow subsurface. Water Resources Research, 2014, 50, 661-680.	4.2	108
4	Empirical two-point mixing model for calibrating the ECH ₂ O EC5 soil moisture sensor in sands. Water Resources Research, 2008, 44, .	4.2	90
5	An evaluation of models of bare soil evaporation formulated with different land surface boundary conditions and assumptions. Water Resources Research, 2012, 48, .	4.2	79
6	Heat and water transport in soils and across the soil-atmosphere interface: 1. Theory and different model concepts. Water Resources Research, 2017, 53, 1057-1079.	4.2	67
7	Temperature Dependence of Thermal Properties of Sands across a Wide Range of Temperatures (30-70°C). Vadose Zone Journal, 2013, 12, vj2012.0033.	2.2	61
8	Impact of coupled heat transfer and water flow on soil borehole thermal energy storage (SBTES) systems: Experimental and modeling investigation. Geothermics, 2015, 57, 56-72.	3.4	51
9	Room for improvement: A review and evaluation of 24 soil thermal conductivity parameterization schemes commonly used in land-surface, hydrological, and soil-vegetation-atmosphere transfer models. Earth-Science Reviews, 2020, 211, 103419.	9.1	47
10	Heat Transfer in Unsaturated Soil with Application to Borehole Thermal Energy Storage. Vadose Zone Journal, 2016, 15, 1-17.	2.2	42
11	Effect of subsurface soil moisture variability and atmospheric conditions on methane gas migration in shallow subsurface. International Journal of Greenhouse Gas Control, 2016, 55, 105-117.	4.6	40
12	Heat and water transport in soils and across the soil-atmosphere interface: 2. Numerical analysis. Water Resources Research, 2017, 53, 1080-1100.	4.2	37
13	Natural Gas Emissions from Underground Pipelines and Implications for Leak Detection. Environmental Science and Technology Letters, 2019, 6, 401-406.	8.7	34
14	Continuum-scale investigation of evaporation from bare soil under different boundary and initial conditions: An evaluation of nonequilibrium phase change. Water Resources Research, 2015, 51, 7630-7648.	4.2	29
15	Effect of Turbulence and Roughness on Coupled Porous-Medium/Free-Flow Exchange Processes. Transport in Porous Media, 2016, 114, 395-424.	2.6	27
16	Thermal Conductivity of Binary Sand Mixtures Evaluated through Full Water Content Range. Soil Science Society of America Journal, 2016, 80, 592-603.	2.2	24
17	Sensible Heat Balance and Heat Pulse Method Applicability to In Situ Soil Water Evaporation. Vadose Zone Journal, 2014, 13, 1-11.	2.2	18
18	Experimental and Modeling Study of Forest Fire Effect on Soil Thermal Conductivity. Pedosphere, 2016, 26, 462-473.	4.0	18

#	ARTICLE	IF	CITATIONS
19	Evaluation of Model Concepts to Describe Water Transport in Shallow Subsurface Soil and Across the Soil–Air Interface. <i>Transport in Porous Media</i> , 2019, 128, 945-976.	2.6	17
20	Effect of aggregate size distribution on soil moisture, soil-gas diffusivity, and N ₂ O emissions from a pasture soil. <i>Geoderma</i> , 2021, 383, 114737.	5.1	17
21	Water Retention Characteristics and Pore Structure of Binary Mixtures. <i>Vadose Zone Journal</i> , 2015, 14, 1-7.	2.2	16
22	Effect of <sc>NAPL</sc> Source Morphology on Mass Transfer in the Vadose Zone. <i>Ground Water</i> , 2015, 53, 685-698.	1.3	16
23	Estimating natural gas emissions from underground pipelines using surface concentration measurements†. <i>Environmental Pollution</i> , 2020, 267, 115514.	7.5	16
24	Soil Moisture and Thermal Behavior in the Vicinity of Buried Objects Affecting Remote Sensing Detection: Experimental and Modeling Investigation. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2013, 51, 2675-2688.	6.3	14
25	Remediation in developing countries: A review of previously implemented projects and analysis of stakeholder participation efforts. <i>Critical Reviews in Environmental Science and Technology</i> , 2021, 51, 1259-1280.	12.8	14
26	Measurement of Thermal Conductivity Function of Unsaturated Soil Using a Transient Water Release and Imbibition Method. <i>Geotechnical Testing Journal</i> , 2014, 37, 20140046.	1.0	14
27	Experimental and Numerical Study of Evaporation From Wavy Surfaces by Coupling Free Flow and Porous Media Flow. <i>Water Resources Research</i> , 2018, 54, 9096-9117.	4.2	13
28	Characterization of Thermal, Hydraulic, and Gas Diffusion Properties in Variably Saturated Sand Grades. <i>Vadose Zone Journal</i> , 2016, 15, 1-11.	2.2	12
29	Coupled Thermally-Enhanced Bioremediation and Renewable Energy Storage System: Conceptual Framework and Modeling Investigation. <i>Water (Switzerland)</i> , 2018, 10, 1288.	2.7	12
30	The effect of the top soil layer on moisture and evaporation dynamics. <i>Vadose Zone Journal</i> , 2020, 19, e20049.	2.2	12
31	Trace organic chemical attenuation during managed aquifer recharge: Insights from a variably saturated 2D tank experiment. <i>Journal of Hydrology</i> , 2017, 548, 641-651.	5.4	11
32	Voces Mineras: Clarifying the future of artisanal and small-scale mining collaborations. <i>The Extractive Industries and Society</i> , 2020, 7, 68-72.	1.2	11
33	Gas–Diffusivity based characterization of aggregated agricultural soils. <i>Soil Science Society of America Journal</i> , 2020, 84, 387-398.	2.2	11
34	Calibration and field deployment of low-cost sensor network to monitor underground pipeline leakage. <i>Sensors and Actuators B: Chemical</i> , 2022, 355, 131276.	7.8	11
35	A Screening Model for Injection–Extraction Treatment Well Recirculation System Design. <i>Ground Water Monitoring and Remediation</i> , 2008, 28, 63-71.	0.8	8
36	Gas Component Transport Across the Soil–Atmosphere Interface for Gases of Different Density: Experiments and Modeling. <i>Water Resources Research</i> , 2020, 56, e2020WR027600.	4.2	8

#	ARTICLE	IF	CITATIONS
37	Reply to comment by Michael D. Novak on "Evaporation from soils under thermal boundary conditions: Experimental and modeling investigation to compare equilibrium and nonequilibrium based approaches". <i>Water Resources Research</i> , 2012, 48, .	4.2	7
38	Optimal Decision Making Algorithm for Managed Aquifer Recharge and Recovery Operation Using Near Real-time Data: Benchtop Scale Laboratory Demonstration. <i>Ground Water Monitoring and Remediation</i> , 2017, 37, 27-41.	0.8	7
39	Hydrogeochemical and microbiological effects of simulated recharge and drying within a 2D meso-scale aquifer. <i>Chemosphere</i> , 2020, 241, 125116.	8.2	7
40	Evaporation from undulating soil surfaces under turbulent airflow through numerical and experimental approaches. <i>Vadose Zone Journal</i> , 2020, 19, e20038.	2.2	7
41	Study of methane migration in the shallow subsurface from a gas pipe leak. <i>Elementa</i> , 2021, 9, .	3.2	7
42	Modeling temporal variability in the surface expression above a methane leak: The ESCAPE model. <i>Journal of Natural Gas Science and Engineering</i> , 2021, 96, 104275.	4.4	7
43	Effect of varying atmospheric conditions on methane boundary layer development in a free flow domain interfaced with a porous media domain. , 2018, 8, 335-348.		6
44	Integrating scientific and local knowledge into pollution remediation planning: An iterative conceptual site model framework. <i>Environmental Development</i> , 2021, 40, 100675.	4.1	6
45	A review of the environmental and health implications of recycling mine tailings for construction purposes in artisanal and small-scale mining communities. <i>The Extractive Industries and Society</i> , 2022, 9, 101019.	1.2	5
46	Characterization of Grain Size Distribution, Thermal Conductivity, and Gas Diffusivity in Variably Saturated Binary Sand Mixtures. <i>Vadose Zone Journal</i> , 2018, 17, 1-13.	2.2	4
47	How lessons from an evolving comprehensive approach for water and sanitation can improve artisanal and small-scale mining environmental initiatives. <i>Journal of Cleaner Production</i> , 2021, 282, 124457.	9.3	4
48	Incorporating positive deviance into comprehensive remediation projects: A case study from artisanal and small-scale gold mining in the municipality of Andes, Colombia. <i>Environmental Science and Policy</i> , 2021, 123, 142-150.	4.9	4
49	Gas diffusivity-based characterization of aggregated soils linking to methane migration in shallow subsurface. <i>Vadose Zone Journal</i> , 2021, 20, .	2.2	4
50	Numerical modeling of non-isothermal gas flow and NAPL vapor transport in soil. <i>Computer Physics Communications</i> , 2016, 202, 175-187.	7.5	3
51	Accounting for Temperature Effects on the Performance of Soil Moisture Sensors in Sandy Soils. <i>Soil Science Society of America Journal</i> , 2019, 83, 1319-1323.	2.2	3
52	Exploring the Effects of Atmospheric Forcings on Evaporation: Experimental Integration of the Atmospheric Boundary Layer and Shallow Subsurface. <i>Journal of Visualized Experiments</i> , 2015, , e52704.	0.3	1
53	Development and application of a screening model for evaluating bioenhanced dissolution in DNAPL source zones. <i>Journal of Contaminant Hydrology</i> , 2015, 183, 1-15.	3.3	1
54	Effects of "soil-like" particle size on gas transport and water retention properties in aged municipal solid waste from a Sri Lankan open dumpsite. <i>Soil Science Society of America Journal</i> , 2020, 84, 1080-1093.	2.2	1

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55	Determination of Vapor and Momentum Roughness Lengths Above an Undulating Soil Surface Based on PIV Measured Velocity Profiles. <i>Water Resources Research</i> , 2021, 57, e2021WR029578.	4.2	1
56	Impact of a Thermo-Hydraulic Insulation Layer on the Long-Term Response of Soil-Borehole Thermal Energy Storage Systems. , 2016, , .		0
57	20 years of Vadose Zone Journal. <i>Vadose Zone Journal</i> , 2021, 20, e20141.	2.2	0
58	Simultaneous and continuous measurements of thermal and hydrological properties of sand using Transient Release and Imbibition Method. , 2014, , 1749-1754.		0