

Jan Diels

List of Publications by Year in descending order

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103
papers

3,567
citations

108046

37
h-index

182931

54
g-index

104
all docs

104
docs citations

104
times ranked

4445
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimum Stand Density of Tropical Maize Varieties: An On-farm Evaluation of Grain Yield Responses in the Nigerian Savanna. <i>Frontiers in Agronomy</i> , 2022, 4, .	1.5	1
2	Evapotranspiration simulation from a sparsely vegetated agricultural field in a semi-arid agro-ecosystem using Penman-Monteith models. <i>Agricultural and Forest Meteorology</i> , 2021, 303, 108370.	1.9	16
3	A Workflow to Extract the Geometry and Type of Vegetated Landscape Elements from Airborne LiDAR Point Clouds. <i>Remote Sensing</i> , 2021, 13, 4031.	1.8	2
4	Soil Water Retention as Affected by Management Induced Changes of Soil Organic Carbon: Analysis of Long-Term Experiments in Europe. <i>Land</i> , 2021, 10, 1362.	1.2	25
5	Banana Biomass Estimation and Yield Forecasting from Non-Destructive Measurements for Two Contrasting Cultivars and Water Regimes. <i>Agronomy</i> , 2020, 10, 1435.	1.3	13
6	Measuring soil evaporation from a cropped land in the semi-arid Makanya catchment, Northern Tanzania: Methods and challenges. <i>Physics and Chemistry of the Earth</i> , 2020, 118-119, 102884.	1.2	3
7	Vadose Zone Lag Time Effect on Groundwater Drought in a Temperate Climate. <i>Water (Switzerland)</i> , 2020, 12, 2123.	1.2	8
8	Canopy cover evolution, diurnal patterns and leaf area index relationships in a Mchare and Cavendish banana cultivar under different soil moisture regimes. <i>Scientia Horticulturae</i> , 2020, 272, 109328.	1.7	17
9	Anaerobic Respiration in the Unsaturated Zone of Agricultural Soil Mobilizes Phosphorus and Manganese. <i>Environmental Science & Technology</i> , 2020, 54, 4922-4931.	4.6	32
10	Optimizing sowing density-based management decisions with different nitrogen rates on smallholder maize farms in Northern Nigeria. <i>Experimental Agriculture</i> , 2020, 56, 866-883.	0.4	6
11	Survival and growth analysis of multipurpose trees, shrubs, and grasses used to rehabilitate badlands in the subhumid tropics. <i>Land Degradation and Development</i> , 2019, 30, 470-480.	1.8	10
12	High resolution mapping of agricultural water productivity using SEBAL in a cultivated African catchment, Tanzania. <i>Physics and Chemistry of the Earth</i> , 2019, 112, 36-49.	1.2	20
13	Scale effects of runoff generation under reduced and conventional tillage. <i>Catena</i> , 2019, 176, 1-13.	2.2	20
14	Options for calibrating CERES-maize genotype specific parameters under data-scarce environments. <i>PLoS ONE</i> , 2019, 14, e0200118.	1.1	19
15	Investigating regionalization techniques for large-scale hydrological modelling. <i>Journal of Hydrology</i> , 2019, 570, 220-235.	2.3	38
16	Extracting drainage networks and their connectivity using LiDAR data. <i>Hydrological Processes</i> , 2018, 32, 1026-1037.	1.1	21
17	Drainage ditch extraction from airborne LiDAR point clouds. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2018, 146, 409-420.	4.9	22
18	Multi-criteria-based Plant Species Selection for Gully and Riverbank Stabilization in a Sub-humid Tropical Area. <i>Land Degradation and Development</i> , 2017, 28, 1675-1686.	1.8	10

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19	Internal Loading and Redox Cycling of Sediment Iron Explain Reactive Phosphorus Concentrations in Lowland Rivers. <i>Environmental Science & Technology</i> , 2017, 51, 2584-2592.	4.6	69
20	Bridging rigorous assessment of water availability from field to catchment scale with a parsimonious agro-hydrological model. <i>Environmental Modelling and Software</i> , 2017, 94, 140-156.	1.9	10
21	Minimum tillage, tied ridging and mulching for better maize yield and yield stability in the Central Highlands of Kenya. <i>Soil and Tillage Research</i> , 2017, 170, 157-166.	2.6	55
22	Model-based life cycle assessment of nitrogen fertilization in a cauliflower-leek rotation system. <i>Acta Horticulturae</i> , 2016, , 403-410.	0.1	1
23	Extracting cross sections and water levels of vegetated ditches from LiDAR point clouds. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2016, 53, 64-75.	1.4	8
24	Phosphorus use efficiency of improved faba bean (<i>Vicia faba</i>) varieties in low-input agroecosystems. <i>Journal of Plant Nutrition and Soil Science</i> , 2016, 179, 347-354.	1.1	18
25	Impact of dry-wet and freeze-thaw events on pesticide mineralizing populations and their activity in wetland ecosystems: A microcosm study. <i>Chemosphere</i> , 2016, 146, 85-93.	4.2	12
26	A semi-quantitative approach for modelling crop response to soil fertility: evaluation of the AquaCrop procedure. <i>Journal of Agricultural Science</i> , 2015, 153, 1218-1233.	0.6	37
27	Phosphorus losses from agricultural land to natural waters are reduced by immobilization in iron-rich sediments of drainage ditches. <i>Water Research</i> , 2015, 71, 160-170.	5.3	72
28	Combining $\delta^{13}\text{C}$ measurements and ERT imaging: improving our understanding of competition at the crop-soil-hedge interface. <i>Plant and Soil</i> , 2015, 393, 1-20.	1.8	20
29	Dissolved phosphorus transport from soil to surface water in catchments with different land use. <i>Ambio</i> , 2015, 44, 228-240.	2.8	40
30	Numerical calculation of soil water potential in an irrigated 'conference' pear orchard. <i>Agricultural Water Management</i> , 2015, 148, 113-122.	2.4	8
31	Large-Scale Hydrological Simulations Using the Soil Water Assessment Tool, Protocol Development, and Application in the Danube Basin. <i>Journal of Environmental Quality</i> , 2014, 43, 145-154.	1.0	48
32	Identifying the Transport Pathways of Dissolved Organic Carbon in Contrasting Catchments. <i>Vadose Zone Journal</i> , 2014, 13, 1-14.	1.3	21
33	The use of visible and near-infrared reflectance measurements for identifying the source of suspended sediment in rivers and comparison with geochemical fingerprinting. <i>Journal of Soils and Sediments</i> , 2014, 14, 1869-1885.	1.5	13
34	Effects of selected soil and water conservation technologies on nutrient losses and maize yields in the central highlands of Kenya. <i>Agricultural Water Management</i> , 2014, 137, 52-58.	2.4	57
35	Modeling scale-dependent runoff generation in a small semi-arid watershed accounting for rainfall intensity and water depth. <i>Advances in Water Resources</i> , 2014, 69, 65-78.	1.7	13
36	Estimating the parameters of a 3-D root distribution function from root observations with the trench profile method: case study with simulated and field-observed root data. <i>Plant and Soil</i> , 2014, 375, 75-88.	1.8	23

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37	Importance of correct B value determination to quantify biological N ₂ fixation and N balances of faba beans (<i>Vicia faba</i> L.) via ¹⁵ N natural abundance. <i>Biology and Fertility of Soils</i> , 2014, 50, 517-525.	2.3	37
38	Length of growing season, rainfall temporal distribution, onset and cessation dates in the Kenyan highlands. <i>Agricultural and Forest Meteorology</i> , 2014, 188, 24-32.	1.9	69
39	Effects of selected soil and water conservation techniques on runoff, sediment yield and maize productivity under sub-humid and semi-arid conditions in Kenya. <i>Catena</i> , 2014, 121, 288-296.	2.2	66
40	Nitrogen and phosphorus benefits from faba bean (<i>Vicia faba</i> L.) residues to subsequent wheat crop in the humid highlands of Ethiopia. <i>Nutrient Cycling in Agroecosystems</i> , 2014, 98, 253-266.	1.1	13
41	Controls on dissolved organic carbon export through surface runoff from loamy agricultural soils. <i>Geoderma</i> , 2014, 226-227, 387-396.	2.3	37
42	Can We Use Electrical Resistivity Tomography to Measure Root Zone Dynamics in Fields with Multiple Crops?. <i>Procedia Environmental Sciences</i> , 2013, 19, 403-410.	1.3	9
43	Calibration of WAVE in Irrigated Maize: Fallow vs. Cover Crops. <i>Procedia Environmental Sciences</i> , 2013, 19, 785-793.	1.3	1
44	Estimating the parameters of the Green&Amp;Ampt infiltration equation from rainfall simulation data: Why simpler is better. <i>Journal of Hydrology</i> , 2013, 476, 332-344.	2.3	52
45	Development and parameterization of an infiltration model accounting for water depth and rainfall intensity. <i>Hydrological Processes</i> , 2013, 27, 3777-3790.	1.1	13
46	Noninvasive Monitoring of Soil Water Dynamics in Mixed Cropping Systems: A Case Study in Ratchaburi Province, Thailand. <i>Vadose Zone Journal</i> , 2013, 12, 1-12.	1.3	49
47	Evaluating Experimental Design of ERT for Soil Moisture Monitoring in Contour Hedgerow Intercropping Systems. <i>Vadose Zone Journal</i> , 2012, 11, vj2011.0186.	1.3	30
48	Spatial patterns, causes and consequences of landslides in the Gilgel Gibe catchment, SW Ethiopia. <i>Catena</i> , 2012, 97, 127-136.	2.2	74
49	Long-term dynamics of the atrazine mineralization potential in surface and subsurface soil in an agricultural field as a response to atrazine applications. <i>Chemosphere</i> , 2012, 86, 1028-1034.	4.2	20
50	Soil functioning and conservation tillage in the Belgian Loam Belt. <i>Soil and Tillage Research</i> , 2012, 122, 1-11.	2.6	28
51	Experimental rainfall&runoff data: Reconsidering the concept of infiltration capacity. <i>Journal of Hydrology</i> , 2011, 399, 255-262.	2.3	51
52	Assessing the effect of soil tillage on crop growth: A meta-regression analysis on European crop yields under conservation agriculture. <i>European Journal of Agronomy</i> , 2010, 33, 231-241.	1.9	221
53	Monod kinetics rather than a first-order degradation model explains atrazine fate in soil mini-columns: Implications for pesticide fate modelling. <i>Environmental Pollution</i> , 2010, 158, 1405-1411.	3.7	44
54	Dependence of effective hydraulic conductivity on rainfall intensity: loamy agricultural soils. <i>Hydrological Processes</i> , 2010, 24, 2257-2268.	1.1	21

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55	DOES CROP-LIVESTOCK INTEGRATION LEAD TO IMPROVED CROP PRODUCTION IN THE SAVANNA OF WEST AFRICA?. <i>Experimental Agriculture</i> , 2010, 46, 439-455.	0.4	18
56	Assessment of nutrient deficiencies in maize in nutrient omission trials and long-term field experiments in the West African Savanna. <i>Plant and Soil</i> , 2009, 314, 143-157.	1.8	45
57	Inverse modeling of pesticide degradation and pesticide-degrading population size dynamics in a bioremediation system: Parameterizing the Monod model. <i>Chemosphere</i> , 2009, 75, 726-731.	4.2	20
58	Potential nutrient supply, nutrient utilization efficiencies, fertilizer recovery rates and maize yield in northern Nigeria. <i>Nutrient Cycling in Agroecosystems</i> , 2008, 80, 161-172.	1.1	15
59	Plant age and rock phosphate effects on the organic resource quality of herbaceous legume residues and their N and P release dynamics. <i>Agronomy for Sustainable Development</i> , 2008, 28, 429-437.	2.2	5
60	THE ROLE OF CATTLE MANURE IN ENHANCING ON-FARM PRODUCTIVITY, MACRO- AND MICRO-NUTRIENT UPTAKE, AND PROFITABILITY OF MAIZE IN THE GUINEA SAVANNA. <i>Experimental Agriculture</i> , 2008, 44, 313-328.	0.4	10
61	Design and Testing of a Drop Counter for Use in Vadose Zone Water Samplers. <i>Vadose Zone Journal</i> , 2008, 7, 434-438.	1.3	4
62	Numerical Analysis of Passive Capillary Wick Samplers prior to Field Installation. <i>Soil Science Society of America Journal</i> , 2007, 71, 35-42.	1.2	26
63	Does the enhanced P acquisition by maize following legumes in a rotation result from improved soil P availability?. <i>Soil Biology and Biochemistry</i> , 2007, 39, 2555-2566.	4.2	39
64	Evaluation of cowpea genotypes for variations in their contribution of N and P to subsequent maize crop in three agro-ecological zones of West Africa. , 2007, , 401-412.		3
65	The development of a prototype land information system for the northern Guinea savanna of Nigeria as a basis for agro-technology transfer. , 2007, , 629-646.		1
66	Balanced Nutrient Management System Technologies In The Northern Guinea Savanna Of Nigeria: Validation And Perspective. , 2007, , 669-678.		1
67	Differential ¹³ C Isotopic Discrimination in Maize at Varying Water Stress and at Low to High Nitrogen Availability. <i>Plant and Soil</i> , 2006, 282, 313-326.	1.8	54
68	Plant-available P for Maize and Cowpea in P-deficient Soils from the Nigerian Northern Guinea Savanna – Comparison of E- and L-values. <i>Plant and Soil</i> , 2006, 283, 251-264.	1.8	34
69	Phosphorus intensity determines short-term P uptake by pigeon pea (<i>Cajanus cajan</i> L.) grown in soils with differing P buffering capacity. <i>Plant and Soil</i> , 2006, 284, 217-227.	1.8	21
70	On-farm Evaluation of Biological Nitrogen Fixation Potential and Grain Yield of Lablab and Two Soybean Varieties in the Northern Guinea Savanna of Nigeria. <i>Nutrient Cycling in Agroecosystems</i> , 2005, 73, 267-275.	1.1	20
71	Senna siamea trees recycle Ca from a Ca-rich subsoil and increase the topsoil pH in agroforestry systems in the West African derived savanna zone. <i>Plant and Soil</i> , 2005, 269, 285-296.	1.8	27
72	Long-term integrated soil fertility management in South-western Nigeria: Crop performance and impact on the soil fertility status. <i>Plant and Soil</i> , 2005, 273, 337-354.	1.8	43

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73	Long-term soil organic carbon dynamics in a subhumid tropical climate: 13C data in mixed C3/C4 cropping and modeling with RothC. <i>Soil Biology and Biochemistry</i> , 2004, 36, 1739-1750.	4.2	70
74	The distribution of phosphorus fractions and desorption characteristics of some soils in the moist savanna zone of West Africa. <i>Nutrient Cycling in Agroecosystems</i> , 2004, 69, 127-141.	1.1	19
75	Impact of residue characteristics on phosphorus availability in West African moist savanna soils. <i>Biology and Fertility of Soils</i> , 2004, 39, 422-428.	2.3	15
76	Biomass estimations and carbon stock calculations in the oil palm plantations of African derived savannas using IKONOS data. <i>International Journal of Remote Sensing</i> , 2004, 25, 5447-5472.	1.3	147
77	Balanced nutrient management systems for cropping systems in the tropics: from concept to practice. <i>Agriculture, Ecosystems and Environment</i> , 2003, 100, 99-102.	2.5	12
78	Assessment of labile phosphorus fractions and adsorption characteristics in relation to soil properties of West African savanna soils. <i>Agriculture, Ecosystems and Environment</i> , 2003, 100, 285-294.	2.5	70
79	Sustainable resource management coupled to resilient germplasm to provide new intensive cereal-grain-legume-livestock systems in the dry savanna. <i>Agriculture, Ecosystems and Environment</i> , 2003, 100, 305-314.	2.5	134
80	Title is missing!. <i>Nutrient Cycling in Agroecosystems</i> , 2002, 62, 139-150.	1.1	30
81	Overview of inert tracer experiments in key Belgian soil types: Relation between transport and soil morphological and hydraulic properties. <i>Water Resources Research</i> , 2001, 37, 2873-2888.	1.7	65
82	Temporal variations in plant $\delta^{13}C$ values and implications for using the ^{13}C technique in long-term soil organic matter studies. <i>Soil Biology and Biochemistry</i> , 2001, 33, 1245-1251.	4.2	35
83	Maize Yield as Affected by Organic Inputs and Urea in the West African Moist Savanna. <i>Agronomy Journal</i> , 2001, 93, 1191-1199.	0.9	96
84	Title is missing!. <i>Nutrient Cycling in Agroecosystems</i> , 2001, 59, 129-141.	1.1	49
85	Title is missing!. <i>Agroforestry Systems</i> , 2001, 53, 21-30.	0.9	8
86	Title is missing!. <i>Plant and Soil</i> , 2001, 228, 61-71.	1.8	30
87	Nitrogen and phosphorus uptake by maize as affected by particulate organic matter quality, soil characteristics, and land-use history for soils from the West African moist savanna zone. <i>Biology and Fertility of Soils</i> , 2000, 30, 440-449.	2.3	32
88	Utilization of rock phosphate by crops on a representative toposequence in the Northern Guinea savanna zone of Nigeria: response by <i>Mucuna pruriens</i> , <i>Lablab purpureus</i> and maize. <i>Soil Biology and Biochemistry</i> , 2000, 32, 2063-2077.	4.2	64
89	Utilization of rock phosphate by crops on a representative toposequence in the Northern Guinea savanna zone of Nigeria: response by maize to previous herbaceous legume cropping and rock phosphate treatments. <i>Soil Biology and Biochemistry</i> , 2000, 32, 2079-2090.	4.2	54
90	Title is missing!. <i>Agroforestry Systems</i> , 1998, 42, 213-227.	0.9	28

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91	Title is missing!. Agroforestry Systems, 1998, 42, 229-244.	0.9	17
92	Title is missing!. Agroforestry Systems, 1998, 42, 245-264.	0.9	29
93	Mineral N dynamics in bare and cropped <i>Leucaena leucocephala</i> and <i>Dactyladenia barteri</i> alley cropping systems after the addition of 15 N-labelled leaf residues. European Journal of Soil Science, 1998, 49, 417-425.	1.8	13
94	Analysis of steady state chloride transport through two heterogeneous field soils. Water Resources Research, 1998, 34, 2539-2550.	1.7	40
95	A COMPARISON OF THE CONTRIBUTIONS OF CLAY, SILT, AND ORGANIC MATTER TO THE EFFECTIVE CEC OF SOILS OF SUBSAHARAN AFRICA.. Soil Science, 1997, 162, 785-794.	0.9	55
96	A stochastic approach to simulate water flow in a macroporous soil. Geoderma, 1996, 70, 299-324.	2.3	50
97	Determining Convective Lognormal Solute Transport Parameters from Resident Concentration Data. Soil Science Society of America Journal, 1996, 60, 1306-1317.	1.2	45
98	A deterministic evaluation analysis applied to an integrated soil-crop model. Ecological Modelling, 1995, 81, 183-195.	1.2	66
99	The effect of soil heterogeneity and hysteresis on solute transport: a numerical experiment. Ecological Modelling, 1995, 77, 273-288.	1.2	10
100	A STATISTICAL ANALYSIS OF SIX HYSTERESIS MODELS FOR THE MOISTURE RETENTION CHARACTERISTIC. Soil Science, 1994, 157, 345-355.	0.9	51
101	Determining local-scale solute transport parameters using time domain reflectometry (TDR). Journal of Hydrology, 1993, 148, 93-107.	2.3	68
102	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
103	Simulating water and nitrogen behaviour in soils cropped with winter wheat. Fertilizer Research, 1991, 27, 233-243.	0.5	41