

Neil Mj Crout

List of Publications by Year in descending order

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89
papers

2,808
citations

186265
28
h-index

206112
48
g-index

89
all docs

89
docs citations

89
times ranked

3268
citing authors

#	ARTICLE	IF	CITATIONS
1	Predicting the activity of Cd ²⁺ and Zn ²⁺ in soil pore water from the radio-labile metal fraction. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 375-385.	3.9	127
2	Methods for determining labile cadmium and zinc in soil. <i>European Journal of Soil Science</i> , 2000, 51, 129-136.	3.9	122
3	Towards the systematic simplification of mechanistic models. <i>Ecological Modelling</i> , 2006, 198, 240-246.	2.5	118
4	Predicting Soil to Plant Transfer of Radiocesium Using Soil Characteristics. <i>Environmental Science & Technology</i> , 1999, 33, 1218-1223.	10.0	115
5	Predicting the transfer of radiocaesium from organic soils to plants using soil characteristics. <i>Journal of Environmental Radioactivity</i> , 2001, 52, 31-43.	1.7	110
6	Three-dimensional quantification of soil hydraulic properties using X-ray Computed Tomography and image-based modeling. <i>Water Resources Research</i> , 2015, 51, 1006-1022.	4.2	94
7	Radio-caesium fixation dynamics: measurement in six Cumbrian soils. <i>European Journal of Soil Science</i> , 1995, 46, 461-469.	3.9	77
8	Consequences of warming on tundra carbon balance determined by reindeer grazing history. <i>Nature Climate Change</i> , 2014, 4, 384-388.	18.8	75
9	Evaluating a "Free Ion Activity Model"™ applied to metal uptake by <i>Lolium perenne</i> L. grown in contaminated soils. <i>Plant and Soil</i> , 2005, 270, 1-12.	3.7	73
10	Modelling of Cd, Cu, Ni, Pb and Zn uptake, by winter wheat and forage maize, from a sewage disposal farm. <i>Soil Use and Management</i> , 2003, 19, 19-27.	4.9	72
11	Phytoextraction of cadmium and zinc from arable soils amended with sewage sludge using <i>Thlaspi caerulescens</i> : Development of a predictive model. <i>Environmental Pollution</i> , 2007, 150, 363-372.	7.5	71
12	Phytoextraction of cadmium and zinc by <i>Salix</i> from soil historically amended with sewage sludge. <i>Plant and Soil</i> , 2007, 290, 157-172.	3.7	71
13	Technical assessment and evaluation of environmental models and software: Letter to the Editor. <i>Environmental Modelling and Software</i> , 2011, 26, 328-336.	4.5	64
14	Is my model too complex? Evaluating model formulation using model reduction. <i>Environmental Modelling and Software</i> , 2009, 24, 1-7.	4.5	61
15	Assessing the influence of the rhizosphere on soil hydraulic properties using X-ray computed tomography and numerical modelling. <i>Journal of Experimental Botany</i> , 2015, 66, 2305-2314.	4.8	60
16	Urban geochemistry: research strategies to assist risk assessment and remediation of brownfield sites in urban areas. <i>Environmental Geochemistry and Health</i> , 2008, 30, 565-576.	3.4	59
17	Speciation and solubility of Cu, Ni and Pb in contaminated soils. <i>European Journal of Soil Science</i> , 2004, 55, 579-590.	3.9	57
18	A review of transfer to fungi and consequences for modelling environmental transfer. <i>Journal of Environmental Radioactivity</i> , 2000, 48, 95-121.	1.7	49

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19	The fate of 15N added to high Arctic tundra to mimic increased inputs of atmospheric nitrogen released from a melting snowpack. <i>Global Change Biology</i> , 2005, 11, 1640-1654.	9.5	44
20	Complementarity of light and water use in tropical agroforests. <i>Forest Ecology and Management</i> , 1998, 102, 259-274.	3.2	39
21	KINETICS OF METAL FIXATION IN SOILS: MEASUREMENT AND MODELING BY ISOTOPIC DILUTION. <i>Environmental Toxicology and Chemistry</i> , 2006, 25, 659.	4.3	39
22	Kinetics of Cd sorption, desorption and fixation by calcite: A long-term radiotracer study. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 1498-1512.	3.9	38
23	Predicting Arsenic Solubility in Contaminated Soils Using Isotopic Dilution Techniques. <i>Environmental Science & Technology</i> , 2002, 36, 982-988.	10.0	36
24	Quantification of root water uptake in soil using X-ray computed tomography and image-based modelling. <i>Plant, Cell and Environment</i> , 2018, 41, 121-133.	5.7	36
25	Photothermal impact on maize performance: a simulation approach. <i>Ecological Modelling</i> , 2004, 180, 277-290.	2.5	34
26	Effects of gamma irradiation on <i>Holcus lanatus</i> (Yorkshire fog grass) and associated soil microorganisms. <i>Journal of Environmental Radioactivity</i> , 2004, 74, 57-71.	1.7	34
27	KINETICS OF ZINC AND CADMIUM RELEASE IN FRESHLY CONTAMINATED SOILS. <i>Environmental Toxicology and Chemistry</i> , 2006, 25, 664.	4.3	34
28	The uptake by vegetation of chernobyl and aged radiocaesium in upland West Cumbria. <i>Journal of Environmental Radioactivity</i> , 1992, 16, 181-195.	1.7	33
29	Fit-for-purpose modelling of radiocaesium soil-to-plant transfer for nuclear emergencies: a review. <i>Journal of Environmental Radioactivity</i> , 2019, 201, 58-66.	1.7	33
30	Applying Bayesian Model Averaging to mechanistic models: An example and comparison of methods. <i>Environmental Modelling and Software</i> , 2008, 23, 973-985.	4.5	30
31	Iodine binding to humic acid. <i>Chemosphere</i> , 2016, 157, 208-214.	8.2	30
32	Modelling 3H and 14C transfer to farm animals and their products under steady state conditions. <i>Journal of Environmental Radioactivity</i> , 2007, 98, 205-217.	1.7	29
33	A stochastic modelling approach for real-time forecasting of winter wheat yield. <i>Field Crops Research</i> , 1999, 62, 85-95.	5.1	28
34	Changes in CO2 during Ocean Anoxic Event 1d indicate similarities to other carbon cycle perturbations. <i>Earth and Planetary Science Letters</i> , 2018, 491, 172-182.	4.4	28
35	Microbial carbon dynamics in nitrogen amended Arctic tundra soil: Measurement and model testing. <i>Soil Biology and Biochemistry</i> , 2005, 37, 2088-2098.	8.8	27
36	How well do crop modeling groups predict wheat phenology, given calibration data from the target population?. <i>European Journal of Agronomy</i> , 2021, 124, 126195.	4.1	27

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37	Evaluating and reducing a model of radiocaesium soil-plant uptake. <i>Journal of Environmental Radioactivity</i> , 2011, 102, 262-269.	1.7	26
38	Modeling Radiocesium Fixation in Upland Organic Soils of Northwest England. <i>Environmental Science & Technology</i> , 1996, 30, 2735-2741.	10.0	25
39	Generic relationship between calcium intake and radiostrontium transfer to the milk of dairy ruminants. <i>Radiation and Environmental Biophysics</i> , 1998, 37, 129-131.	1.4	24
40	Coordination of Cd ²⁺ ions in the internal pore system of zeolite-X: A combined EXAFS and isotopic exchange study. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 1577-1587.	3.9	24
41	Inter-varietal variation in caesium and strontium uptake by plants: a meta-analysis. <i>Journal of Environmental Radioactivity</i> , 2015, 139, 103-117.	1.7	23
42	Transfer of Cadmium and Mercury to Sheep Tissues. <i>Environmental Science & Technology</i> , 1999, 33, 2395-2402.	10.0	22
43	Spatial modelling of transfer of long-lived radionuclides from soil to agricultural products in the Chernigov region, Ukraine. <i>Ecological Modelling</i> , 2000, 128, 35-50.	2.5	22
44	Variation in the metabolism of radiocaesium between individual sheep. <i>Radiation and Environmental Biophysics</i> , 1998, 37, 277-281.	1.4	21
45	Modelling the canopy development of bambara groundnut. <i>Agricultural and Forest Meteorology</i> , 2010, 150, 1007-1015.	4.8	21
46	The use of dietary calcium intake of dairy ruminants to predict the transfer coefficient of radiostrontium to milk. <i>Radiation and Environmental Biophysics</i> , 1997, 36, 39-43.	1.4	20
47	Dynamic distribution of radioisotopes of cerium, ruthenium and silver in sheep tissues. <i>Journal of Environmental Radioactivity</i> , 1998, 38, 317-338.	1.7	20
48	The dynamic transfer of ³ H and ¹⁴ C in mammals: a proposed generic model. <i>Radiation and Environmental Biophysics</i> , 2009, 48, 29-45.	1.4	20
49	Neural network unfolding of photon and neutron spectra using an NE-213 scintillation detector. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1993, 329, 269-276.	1.6	19
50	Zinc uptake and phyto-toxicity: Comparing intensity- and capacity-based drivers. <i>Science of the Total Environment</i> , 2020, 699, 134314.	8.0	19
51	A model of radioiodine transfer to goat milk incorporating the influence of stable iodine. <i>Radiation and Environmental Biophysics</i> , 2000, 39, 59-65.	1.4	18
52	The transfer of ⁷³ As, ¹⁰⁹ Cd and ²⁰³ Hg to the milk and tissues of dairy cattle. <i>Journal of Agricultural Science</i> , 2004, 142, 203-212.	1.3	18
53	A thermodynamic model of freshwater Antarctic lake ice. <i>Ecological Modelling</i> , 2008, 210, 231-241.	2.5	18
54	Dynamic radiocaesium distribution in sheep: Measurement and modelling. <i>Journal of Environmental Radioactivity</i> , 1993, 20, 35-48.	1.7	17

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55	Modeling the Dynamics of Radioiodine in Dairy Cows. <i>Journal of Dairy Science</i> , 1996, 79, 254-259.	3.4	17
56	OVERVIEW OF SELECTED SOIL PORE WATER EXTRACTION METHODS FOR THE DETERMINATION OF POTENTIALLY TOXIC ELEMENTS IN CONTAMINATED SOILS: OPERATIONAL AND TECHNICAL ASPECTS. , 2008, , 213-249.		17
57	The impact of long-term biosolids application (>100 years) on soil metal dynamics. <i>Science of the Total Environment</i> , 2020, 720, 137441.	8.0	17
58	Radiocaesium variability within sheep flocks: relationships between the ¹³⁷ Cs activity concentrations of individual ewes within a flock and between ewes and their progeny. <i>Science of the Total Environment</i> , 1996, 177, 85-96.	8.0	16
59	Time-dependent sorption of Cd ²⁺ on CaX zeolite: Experimental observations and model predictions. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 4850-4861.	3.9	16
60	Chapter Two Good Modelling Practice. <i>Developments in Integrated Environmental Assessment</i> , 2008, 3, 15-31.	0.0	16
61	The effects of elevated carbon dioxide, temperature and soil moisture on the water use of stands of groundnut (<i>Arachis hypogaea</i> L.). <i>Journal of Experimental Botany</i> , 1994, 45, 1633-1638.	4.8	15
62	A Model of Radiostrontium Transfer in Dairy Goats Based on Calcium Metabolism. <i>Journal of Dairy Science</i> , 1998, 81, 92-99.	3.4	15
63	Does soil adhesion matter when predicting radiocaesium transfer to animals?. <i>Journal of Environmental Radioactivity</i> , 1993, 20, 201-212.	1.7	14
64	A metabolic derivation of tritium transfer coefficients in animal products. <i>Radiation and Environmental Biophysics</i> , 2001, 40, 325-334.	1.4	14
65	Identifying optimal agricultural countermeasure strategies for a hypothetical contamination scenario using the strategy model. <i>Journal of Environmental Radioactivity</i> , 2005, 83, 383-397.	1.7	14
66	Factors contributing to radiocaesium variability in upland sheep flocks in west Cumbria (United Kingdom). <i>Journal of Environmental Radioactivity</i> , 2000, 10, 11-20.	1.7	14
67	Zinc solubility and fractionation in cultivated calcareous soils irrigated with wastewater. <i>Science of the Total Environment</i> , 2015, 518-519, 310-319.	8.0	14
68	Simple winter wheat green area index model under UK conditions. <i>Journal of Agricultural Science</i> , 1999, 132, 263-271.	1.3	13
69	Ageing and structural effects on the sorption characteristics of Cd ²⁺ by clinoptilolite and Y-type zeolite studied using isotope exchange technique. <i>Journal of Hazardous Materials</i> , 2010, 184, 574-584.	12.4	13
70	Iodine bioavailability in acidic soils of Northern Ireland. <i>Geoderma</i> , 2019, 348, 97-106.	5.1	13
71	The transfer of arsenic to sheep tissues. <i>Journal of Agricultural Science</i> , 2001, 136, 331-344.	1.3	12
72	Real-time physical data acquisition through a remote sensing platform on a polar lake. <i>Limnology and Oceanography: Methods</i> , 2004, 2, 191-201.	2.0	12

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73	A metabolic approach to simulating the dynamics of C-14, H-3 and S-35 in sheep tissues. Radiation and Environmental Biophysics, 1998, 36, 243-250.	1.4	10
74	What role should null-hypothesis significance tests have in statistical education and hypothesis falsification?. Trends in Ecology and Evolution, 2007, 22, 445-446.	8.7	10
75	An approach to modelling the effect of environmental and physiological factors upon biomass accumulation in winter wheat. Journal of Agricultural Science, 2001, 136, 369-381.	1.3	9
76	Semi-automatic reduction and upscaling of large models: A farm management example. Ecological Modelling, 2010, 221, 590-598.	2.5	9
77	Analysis of 129I and 127I in soils of the Chernobyl Exclusion Zone, 29 years after the deposition of 129I. Science of the Total Environment, 2019, 692, 966-974.	8.0	9
78	Investigating the use of microdialysis and SEC-UV-ICP-MS to assess iodine interactions in soil solution. Chemosphere, 2019, 229, 41-50.	8.2	8
79	Effects of incubation time and filtration method on K _d of indigenous selenium and iodine in temperate soils. Journal of Environmental Radioactivity, 2017, 177, 84-90.	1.7	6
80	Modelling of Cd, Cu, Ni, Pb and Zn uptake, by winter wheat and forage maize, from a sewage disposal farm. Soil Use and Management, 2003, 19, 19-27.	4.9	6
81	TLM: a technique with application in the numerical solution of diffusion problems. Agricultural and Forest Meteorology, 1990, 51, 1-20.	4.8	5
82	Have missing markets for ecological goods and services affected modelling of terrestrial C and N fluxes?. Ecological Modelling, 2004, 179, 569-574.	2.5	5
83	Chapter 9 Predicting transfer of radionuclides: soil-plant-animal. Radioactivity in the Environment, 2003, 4, 261-286.	0.2	4
84	An objective approach to model reduction: Application to the Sirius wheat model. Agricultural and Forest Meteorology, 2014, 189-190, 211-219.	4.8	4
85	Extraction and Characterization of Pore Water in Contaminated Soils. , 2018, , 195-235.		4
86	Calibration of an NE213 scintillator up to 60 MeV for in situ spectrometry in a neutron cancer therapy facility. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1989, 277, 664-668.	1.6	3
87	Derivation of irrigation requirements for radiological impact assessments. Journal of Environmental Radioactivity, 2016, 164, 91-103.	1.7	2
88	Using Simulated Weather Data and Updating Technique to Forecast Wheat Yield. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 61-65.	0.4	1
89	Operating at the extreme: estimating the upper yield boundary of winter wheat production in commercial practice. Royal Society Open Science, 2020, 7, 191919.	2.4	0