Fien Degryse

List of Publications by Year
in descending order

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89 papers	4,234 citations	94269 37 h-index	118652 62 g-index
92 all docs	92 docs citations	92 times ranked	4444 citing authors

#	Article	IF	Citations
1	Partitioning of metals (Cd, Co, Cu, Ni, Pb, Zn) in soils: concepts, methodologies, prediction and applications â€“ a review. European Journal of Soil Science, 2009, 60, 590-612.	1.8	313
2	Predicting availability of mineral elements to plants with the DGT technique: a review of experimental data and interpretation by modelling. Environmental Chemistry, 2009, 6, 198.	0.7	210
3	Fate and Effect of Zinc from Tire Debris in Soil. Environmental Science & Technology, 2002, 36, 3706-3710.	4.6	203
4	Metal Complexation Properties of Freshwater Dissolved Organic Matter Are Explained by Its Aromaticity and by Anthropogenic Ligands. Environmental Science & Technology, 2011, 45, 2584-2590.	4.6	188
5	Labile Cd Complexes Increase Cd Availability to Plants. Environmental Science & Technology, 2006, 40, 830-836.	4.6	157
6	Copper speciation and isotopic fractionation in plants: uptake and translocation mechanisms. New Phytologist, 2013, 199, 367-378.	3.5	133
7	Graphene Oxide: A New Carrier for Slow Release of Plant Micronutrients. ACS Applied Materials & Interfaces, 2017, 9, 43325-43335.	4.0	131
8	Efficacy of Hydroxyapatite Nanoparticles as Phosphorus Fertilizer in Andisols and Oxisols. Soil Science Society of America Journal, 2015, 79, 551-558.	1.2	121
9	Dissolution rate and agronomic effectiveness of struvite fertilizers â€“ effect of soil pH, granulation and base excess. Plant and Soil, 2017, 410, 139-152.	1.8	120
10	Solubility and Toxicity of Antimony Trioxide (Sb₂O₃) in Soil. Environmental Science & Technology, 2008, 42, 4378-4383.	4.6	118
11	Soil solution concentration of Cd and Zn canbe predicted with a CaCl2 soil extract. European Journal of Soil Science, 2003, 54, 149-158.	1.8	97
12	The Copper-Mobilizing-Potential of Dissolved Organic Matter in Soils Varies 10-Fold Depending on Soil Incubation and Extraction Procedures. Environmental Science & Technology, 2007, 41, 2277-2281.	4.6	94
13	Metal complexes increase uptake of Zn and Cu by plants: implications for uptake and deficiency studies in chelator-buffered solutions. Plant and Soil, 2006, 289, 171-185.	1.8	92
14	Agronomic Effectiveness of Zinc Sources as Micronutrient Fertilizer. Advances in Agronomy, 2016, 139, 215-267.	2.4	90
15	The UVâ€absorbance of dissolved organic matter predicts the fivefold variation in its affinity for mobilizing Cu in an agricultural soil horizon. European Journal of Soil Science, 2008, 59, 1087-1095.	1.8	80
16	Copper Isotope Fractionation during Equilibration with Natural and Synthetic Ligands. Environmental Science & Technology, 2014, 48, 8620-8626.	4.6	74
17	Zinc Toxicity to Nitrification in Soil and Soilless Culture Can Be Predicted with the Same Biotic Ligand Model. Environmental Science & Technology, 2007, 41, 2992-2997.	4.6	72
18	Radio-labile cadmium and zinc in soils as affected by pH and source of contamination. European Journal of Soil Science, 2004, 55, 113-122.	1.8	71

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19	Aluminum-Activated Malate Transporters Can Facilitate GABA Transport. Plant Cell, 2018, 30, 1147-1164.	3.1	71
20	Diffusion Limitations in Root Uptake of Cadmium and Zinc, But Not Nickel, and Resulting Bias in the Michaelis Constant Â Â. Plant Physiology, 2012, 160, 1097-1109.	2.3	65
21	The performance of DGT versus conventional soil phosphorus tests in tropical soils - An isotope dilution study. Plant and Soil, 2012, 359, 267-279.	1.8	63
22	Mobilization of Cu and Zn by root exudates of dicotyledonous plants in resin-buffered solutions and in soil. Plant and Soil, 2008, 306, 69-84.	1.8	62
23	Agronomic Effectiveness of Granulated and Powdered P-Exchanged Mgâ€“Al LDH Relative to Struvite and MAP. Journal of Agricultural and Food Chemistry, 2017, 65, 6736-6744.	2.4	59
24	Relating Soil Solution Zn Concentration to Diffusive Gradients in Thin Films Measurements in Contaminated Soils. Environmental Science & Technology, 2003, 37, 3958-3965.	4.6	57
25	Speciation of nickel in surface waters measured with the Donnan membrane technique. Analytica Chimica Acta, 2006, 578, 195-202.	2.6	56
26	Modelling the effects of ageing on Cd, Zn, Ni and Cu solubility in soils using an assemblage model. European Journal of Soil Science, 2008, 59, 1160-1170.	1.8	56
27	Effect of Organic P Forms and P Present in Inorganic Colloids on the Determination of Dissolved P in Environmental Samples by the Diffusive Gradient in Thin Films Technique, Ion Chromatography, and Colorimetry. Analytical Chemistry, 2011, 83, 5317-5323.	3.2	56
28	Natural Colloidal P and Its Contribution to Plant P Uptake. Environmental Science & Technology, 2015, 49, 3427-3434.	4.6	53
29	Improving the efficacy of selenium fertilizers for wheat biofortification. Scientific Reports, 2019, 9, 19520.	1.6	52
30	Zinc speciation in mining and smelter contaminated overbank sediments by EXAFS spectroscopy. Geochimica Et Cosmochimica Acta, 2010, 74, 3707-3720.	1.6	51
31	Labile lead in polluted soils measured by stable isotope dilution. European Journal of Soil Science, 2007, 58, 1-7.	1.8	47
32	Elemental Sulfur Oxidation in Australian Cropping Soils. Soil Science Society of America Journal, 2015, 79, 89-96.	1.2	46
33	Characterization of zinc in contaminated soils: complementary insights from isotopic exchange, batch extractions and XAFS spectroscopy. European Journal of Soil Science, 2011, 62, 318-330.	1.8	45
34	Uptake of Metals from Soil into Vegetables. , 2011, , 325-367.		44
35	Phosphorus Diffusion from Fertilizer: Visualization, Chemical Measurements, and Modeling. Soil Science Society of America Journal, 2014, 78, 832-842.	1.2	42
36	First observation of diffusionâ€limited plant root phosphorus uptake from nutrient solution. Plant, Cell and Environment, 2012, 35, 1558-1566.	2.8	41

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37	Mobility of Cd and Zn in polluted and unpolluted Spodosols. European Journal of Soil Science, 2006, 57, 122-133.	1.8	40
38	Isotopic fractionation of Zn in tomato plants suggests the role of root exudates on Zn uptake. Plant and Soil, 2013, 370, 605-613.	1.8	39
39	Limited Dissolved Phosphorus Runoff Losses from Layered Double Hydroxide and Struvite Fertilizers in a Rainfall Simulation Study. Journal of Environmental Quality, 2018, 47, 371-377.	1.0	39
40	Manganese Toxicity in Barley is Controlled by Solution Manganese and Soil Manganese Speciation. Soil Science Society of America Journal, 2012, 76, 399-407.	1.2	37
41	Oxidation of Elemental Sulfur in Granular Fertilizers Depends on the Soil-Exposed Surface Area. Soil Science Society of America Journal, 2016, 80, 294-305.	1.2	37
42	Critical Loads of Metals and Other Trace Elements to Terrestrial Environments. Environmental Science & Technology, 2007, 41, 6326-6331.	4.6	35
43	DGT-measured fluxes explain the chloride-enhanced cadmium uptake by plants at low but not at high Cd supply. Plant and Soil, 2009, 318, 127-135.	1.8	31
44	Sequestration of Phosphorus-Binding Cations by Complexing Compounds is not a Viable Mechanism to Increase Phosphorus Efficiency. Soil Science Society of America Journal, 2013, 77, 2050-2059.	1.2	30
45	An anion resin membrane technique to overcome detection limits of isotopically exchanged P in P-sorbing soils. European Journal of Soil Science, 2004, 55, 63-69.	1.8	29
46	Mechanisms of enhanced mobilisation of trace metals by anionic surfactants in soil. Environmental Pollution, 2011, 159, 809-816.	3.7	29
47	Fluid Fertilizers Improve Phosphorus Diffusion but not Lability in Andisols and Oxisols. Soil Science Society of America Journal, 2014, 78, 214-224.	1.2	29
48	Availability of fertiliser sulphate and elemental sulphur to canola in two consecutive crops. Plant and Soil, 2016, 398, 313-325.	1.8	27
49	Abundance and diversity of sulphur-oxidising bacteria and their role in oxidising elemental sulphur in cropping soils. Biology and Fertility of Soils, 2017, 53, 159-169.	2.3	26
50	Formulation, synthesis and characterization of boron phosphate (BPO₄) compounds as raw materials to develop slowâ€release boron fertilizers. Journal of Plant Nutrition and Soil Science, 2014, 177, 860-868.	1.1	25
51	Enhanced sorption and fixation of radiocaesium in soils amended with K-bentonites, submitted to wetting-drying cycles. European Journal of Soil Science, 2004, 55, 513-522.	1.8	24
52	Sulfur and Zinc Availability from Co-granulated Zn-Enriched Elemental Sulfur Fertilizers. Journal of Agricultural and Food Chemistry, 2017, 65, 1108-1115.	2.4	23
53	Uptake of elemental or sulfate-S from fall- or spring-applied co-granulated fertilizer by cornâ€"A stable isotope and modeling study. Field Crops Research, 2018, 221, 322-332.	2.3	23
54	Slow and Fastâ€Release Boron Sources in Potash Fertilizers: Spatial Variability, Nutrient Dissolution and Plant Uptake. Soil Science Society of America Journal, 2018, 82, 1437-1448.	1.2	23

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55	The dissociation kinetics of Cu-dissolved organic matter complexes from soil and soil amendments. Analytica Chimica Acta, 2010, 670, 24-32.	2.6	22
56	Cadmium and nickel uptake by tomato and spinach seedlings: plant or transport control?. Environmental Chemistry, 2012, 9, 48.	0.7	21
57	An Agar Gel Technique Demonstrates Diffusion Limitations to Cadmium Uptake by Higher Plants. Environmental Chemistry, 2006, 3, 419.	0.7	19
58	Mobilization of Zn upon waterlogging riparian Spodosols is related to reductive dissolution of Fe minerals. European Journal of Soil Science, 2010, 61, 1014-1024.	1.8	17
59	Agronomic Effectiveness of Granular and Fluid Phosphorus Fertilizers in Andisols and Oxisols. Soil Science Society of America Journal, 2015, 79, 577-584.	1.2	16
60	Diffusion and solubility control of fertilizer-applied zinc: chemical assessment and visualization. Plant and Soil, 2015, 386, 195-204.	1.8	15
61	Effects of pH and ionic strength on elemental sulphur oxidation in soil. Biology and Fertility of Soils, 2017, 53, 247-256.	2.3	15
62	Engineered Phosphate Fertilizers with Dual-Release Properties. Industrial & Engineering Chemistry Research, 2020, 59, 5512-5524.	1.8	15
63	Mobilization of Cd upon acidification of agricultural soils: column study and field modelling. European Journal of Soil Science, 2007, 58, 152-165.	1.8	14
64	MODEL STUDIES OF CORROSION-INDUCED COPPER RUNOFF FATE IN SOIL. Environmental Toxicology and Chemistry, 2006, 25, 683.	2.2	13
65	Responses of Canola to the Application of Slow-Release Boron Fertilizers and Their Residual Effect. Soil Science Society of America Journal, 2015, 79, 97-103.	1.2	13
66	Model-based rationalization of sulphur mineralization in soils using 35S isotope dilution. Soil Biology and Biochemistry, 2018, 120, 1-11.	4.2	13
67	Labile complexes facilitate cadmium uptake by Caco-2 cells. Science of the Total Environment, 2012, 426, 90-99.	3.9	12
68	Slow-release boron fertilisers: co-granulation of boron sources with mono-ammonium phosphate (MAP). Soil Research, 2015, 53, 505.	0.6	12
69	Rapid and Low-Cost Method for Evaluation of Nutrient Release from Controlled-Release Fertilizers Using Electrical Conductivity. Journal of Polymers and the Environment, 2018, 26, 4388-4395.	2.4	12
70	Boron phosphates (BPO4) as a seedling-safe boron fertilizer source. Plant and Soil, 2015, 391, 153-160.	1.8	11
71	A column perfusion test to assess the kinetics of nutrient release by soluble, sparingly soluble and coated granular fertilizers. Journal of Plant Nutrition and Soil Science, 2019, 182, 763-771.	1.1	11
72	A stableâ€isotope methodology for measurement of soilâ€applied zincâ€fertilizer recovery in durum wheat (Triticum durum). Journal of Plant Nutrition and Soil Science, 2013, 176, 756-763.	1.1	9

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73	Effect of soil properties on time-dependent fixation (ageing) of selenate. Geoderma, 2021, 383, 114741.	2.3	9
74	Magnesium-fortified phosphate fertilizers improve nutrient uptake and plant growth without reducing phosphorus availability. Pedosphere, 2022, 32, 744-751.	2.1	9
75	Effect of Cogranulation on Oxidation of Elemental Sulfur: Theoretical Model and Experimental Validation. Soil Science Society of America Journal, 2016, 80, 1244-1253.	1.2	8
76	Comparison and modelling of extraction methods to assess agronomic effectiveness of fertilizer zinc. Journal of Plant Nutrition and Soil Science, 2020, 183, 248-259.	1.1	8
77	Layered Double Hydroxides as Slow-Release Fertilizer Compounds for the Micronutrient Molybdenum. Journal of Agricultural and Food Chemistry, 2021, 69, 14501-14511.	2.4	8
78	Low Effective Surface Area Explains Slow Oxidation of Coâ€Granulated Elemental Sulfur. Soil Science Society of America Journal, 2016, 80, 911-918.	1.2	7
79	Sulfur Uptake from Fertilizer Fortified with Sulfate and Elemental S in Three Contrasting Climatic Zones. Agronomy, 2020, 10, 1035.	1.3	7
80	Long-term fate of fertilizer sulfate- and elemental S in co-granulated fertilizers. Nutrient Cycling in Agroecosystems, 2021, 120, 31-48.	1.1	7
81	Efficiency of soil-applied 67Zn-enriched fertiliser across three consecutive crops. Pedosphere, 2021, 31, 531-537.	2.1	7
82	Mechanochemical Synthesis of Zinc Borate for Use as a Dual-Release B Fertilizer. ACS Sustainable Chemistry and Engineering, 2021, 9, 15995-16004.	3.2	7
83	DGT and Bioavailability. , 2016, , 216-262.		5
84	Development and Testing of Improved Efficiency Boron-Enriched Diammonium Phosphate Fertilizers. Journal of Soil Science and Plant Nutrition, 2021, 21, 1134-1143.	1.7	4
85	Application method influences the oxidation rate of biologically and chemically produced elemental sulfur fertilizers. Soil Science Society of America Journal, 2021, 85, 746-759.	1.2	3
86	Isotopic signatures reveal zinc cycling in the natural habitat of hyperaccumulator Dichapetalum gelonioides subspecies from Malaysian Borneo. BMC Plant Biology, 2021, 21, 437.	1.6	2
87	Using 77Se-Labelled Foliar Fertilisers to Determine How Se Transfers Within Wheat Over Time. Frontiers in Nutrition, 2021, 8, 732409.	1.6	1
88	Screening fertilizers for their phosphorus runoff risk using laboratory methods. Journal of Environmental Quality, 2021, 50, 955-966.	1.0	0
89	Fixation of Cadmium and Zinc in Soils. , 2006, , 157-172.		0