Fien Degryse

List of Publications by Citations

88 papers	3,255 citations	34 h-index	55 g-index
92 ext. papers	3,732 ext. citations	5.1 avg, IF	5.39 L-index

#	Paper	IF	Citations
88	Partitioning of metals (Cd, Co, Cu, Ni, Pb, Zn) in soils: concepts, methodologies, prediction and applications – a review. *European Journal of Soil Science*, **2009**, 60, 590-612	3.4	258
87	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	3.2	185
86	Fate and effect of zinc from tire debris in soil. *Environmental Science & Technology*, **2002**, 36, 3706-10	10.3	158
85	Metal complexation properties of freshwater dissolved organic matter are explained by its aromaticity and by anthropogenic ligands. *Environmental Science & Technology*, **2011**, 45, 2584-90	10.3	140
84	Labile Cd complexes increase Cd availability to plants. *Environmental Science & Technology*, **2006**, 40, 830-6	10.3	138
83	Copper speciation and isotopic fractionation in plants: uptake and translocation mechanisms. *New Phytologist*, **2013**, 199, 367-378	9.8	110
82	Solubility and toxicity of antimony trioxide (Sb2O3) in soil. *Environmental Science & Technology*, **2008**, 42, 4378-83	10.3	103
81	Soil solution concentration of Cd and Zn canbe predicted with a CaCl2 soil extract. *European Journal of Soil Science*, **2003**, 54, 149-158	3.4	86
80	Dissolution rate and agronomic effectiveness of struvite fertilizers – effect of soil pH, granulation and base excess. *Plant and Soil*, **2017**, 410, 139-152	4.2	83
79	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	4.2	83
78	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, 2277-81	10.3	81
77	Efficacy of Hydroxyapatite Nanoparticles as Phosphorus Fertilizer in Andisols and Oxisols. *Soil Science Society of America Journal*, **2015**, 79, 551-558	2.5	79
76	The UV-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	3.4	70
75	Graphene Oxide: A New Carrier for Slow Release of Plant Micronutrients. *ACS Applied Materials & Interfaces*, **2017**, 9, 43325-43335	9.5	66
74	Zinc toxicity to nitrification in soil and soilless culture can be predicted with the same biotic ligand model. *Environmental Science & Technology*, **2007**, 41, 2992-7	10.3	64
73	Radio-labile cadmium and zinc in soils as affected by pH and source of contamination. *European Journal of Soil Science*, **2004**, 55, 113-122	3.4	64
72	Diffusion limitations in root uptake of cadmium and zinc, but not nickel, and resulting bias in the Michaelis constant. *Plant Physiology*, **2012**, 160, 1097-109	6.6	57

71	Copper isotope fractionation during equilibration with natural and synthetic ligands. *Environmental Science & Technology*, **2014**, 48, 8620-6	10.3	54
70	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, 5317-23	7.8	54
69	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	4.2	54
68	The performance of DGT versus conventional soil phosphorus tests in tropical soils - An isotope dilution study. *Plant and Soil*, **2012**, 359, 267-279	4.2	53
67	Relating soil solution Zn concentration to diffusive gradients in thin films measurements in contaminated soils. *Environmental Science & Technology*, **2003**, 37, 3958-65	10.3	52
66	Agronomic Effectiveness of Zinc Sources as Micronutrient Fertilizer. *Advances in Agronomy*, **2016**, 139, 215-267	7.7	49
65	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	3.4	47
64	Speciation of nickel in surface waters measured with the Donnan membrane technique. *Analytica Chimica Acta*, **2006**, 578, 195-202	6.6	47
63	Aluminum-Activated Malate Transporters Can Facilitate GABA Transport. *Plant Cell*, **2018**, 30, 1147-1164	11.6	45
62	Labile lead in polluted soils measured by stable isotope dilution. *European Journal of Soil Science*, **2007**, 58, 1-7	3.4	42
61	Zinc speciation in mining and smelter contaminated overbank sediments by EXAFS spectroscopy. *Geochimica Et Cosmochimica Acta*, **2010**, 74, 3707-3720	5.5	41
60	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	3.4	38
59	Agronomic Effectiveness of Granulated and Powdered P-Exchanged Mg-Al LDH Relative to Struvite and MAP. *Journal of Agricultural and Food Chemistry*, **2017**, 65, 6736-6744	5.7	36
58	Mobility of Cd and Zn in polluted and unpolluted Spodosols. *European Journal of Soil Science*, **2006**, 57, 122-133	3.4	35
57	Natural colloidal P and its contribution to plant P uptake. *Environmental Science & Technology*, **2015**, 49, 3427-34	10.3	34
56	Isotopic fractionation of Zn in tomato plants suggests the role of root exudates on Zn uptake. *Plant and Soil*, **2013**, 370, 605-613	4.2	34
55	Critical loads of metals and other trace elements to terrestrial environments. *Environmental Science & Technology*, **2007**, 41, 6326-31	10.3	34
54	Elemental Sulfur Oxidation in Australian Cropping Soils. *Soil Science Society of America Journal*, **2015**, 79, 89-96	2.5	31

53	Uptake of Metals from Soil into Vegetables **2011**, 325-367		31
52	First observation of diffusion-limited plant root phosphorus uptake from nutrient solution. *Plant, Cell and Environment*, **2012**, 35, 1558-66	8.4	29
51	Phosphorus Diffusion from Fertilizer: Visualization, Chemical Measurements, and Modeling. *Soil Science Society of America Journal*, **2014**, 78, 832-842	2.5	28
50	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	4.2	28
49	Improving the efficacy of selenium fertilizers for wheat biofortification. *Scientific Reports*, **2019**, 9, 19520	4.9	27
48	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	3.4	26
47	Mechanisms of enhanced mobilisation of trace metals by anionic surfactants in soil. *Environmental Pollution*, **2011**, 159, 809-16	9.3	25
46	Oxidation of Elemental Sulfur in Granular Fertilizers Depends on the Soil-Exposed Surface Area. *Soil Science Society of America Journal*, **2016**, 80, 294-305	2.5	24
45	Manganese Toxicity in Barley is Controlled by Solution Manganese and Soil Manganese Speciation. *Soil Science Society of America Journal*, **2012**, 76, 399-407	2.5	24
44	Enhanced sorption and fixation of radiocaesium in soils amended with K-bentonites, submitted to wetting□rying cycles. *European Journal of Soil Science*, **2004**, 55, 513-522	3.4	24
43	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	3.4	22
42	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	2.5	22
41	Availability of fertiliser sulphate and elemental sulphur to canola in two consecutive crops. *Plant and Soil*, **2016**, 398, 313-325	4.2	20
40	Fluid Fertilizers Improve Phosphorus Diffusion but not Lability in Andisols and Oxisols. *Soil Science Society of America Journal*, **2014**, 78, 214-224	2.5	20
39	Cadmium and nickel uptake by tomato and spinach seedlings: plant or transport control?. *Environmental Chemistry*, **2012**, 9, 48	3.2	20
38	The dissociation kinetics of Cu-dissolved organic matter complexes from soil and soil amendments. *Analytica Chimica Acta*, **2010**, 670, 24-32	6.6	20
37	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	6.1	19
36	An Agar Gel Technique Demonstrates Diffusion Limitations to Cadmium Uptake by Higher Plants. *Environmental Chemistry*, **2006**, 3, 419	3.2	18

35	Formulation, synthesis and characterization of boron phosphate (BPO4) compounds as raw materials to develop slow-release boron fertilizers. *Journal of Plant Nutrition and Soil Science*, **2014**, 177, 860-868	2.3	16
34	Mobilization of Zn upon waterlogging riparian Spodosols is related to reductive dissolution of Fe minerals. *European Journal of Soil Science*, **2010**, 61, 1014-1024	3.4	16
33	Uptake of elemental or sulfate-S from fall- or spring-applied co-granulated fertilizer by corn: A stable isotope and modeling study. *Field Crops Research*, **2018**, 221, 322-332	5.5	15
32	Sulfur and Zinc Availability from Co-granulated Zn-Enriched Elemental Sulfur Fertilizers. *Journal of Agricultural and Food Chemistry*, **2017**, 65, 1108-1115	5.7	13
31	Mobilization of Cd upon acidification of agricultural soils: column study and field modelling. *European Journal of Soil Science*, **2007**, 58, 152-165	3.4	13
30	Model studies of corrosion-induced copper runoff fate in soil. *Environmental Toxicology and Chemistry*, **2006**, 25, 683-91	3.8	12
29	Diffusion and solubility control of fertilizer-applied zinc: chemical assessment and visualization. *Plant and Soil*, **2015**, 386, 195-204	4.2	11
28	Labile complexes facilitate cadmium uptake by Caco-2 cells. *Science of the Total Environment*, **2012**, 426, 90-9	10.2	10
27	Agronomic Effectiveness of Granular and Fluid Phosphorus Fertilizers in Andisols and Oxisols. *Soil Science Society of America Journal*, **2015**, 79, 577-584	2.5	10
26	Slow and Fast-Release Boron Sources in Potash Fertilizers: Spatial Variability, Nutrient Dissolution and Plant Uptake. *Soil Science Society of America Journal*, **2018**, 82, 1437-1448	2.5	10
25	Effects of pH and ionic strength on elemental sulphur oxidation in soil. *Biology and Fertility of Soils*, **2017**, 53, 247-256	6.1	9
24	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	2.5	9
23	Boron phosphates (BPO4) as a seedling-safe boron fertilizer source. *Plant and Soil*, **2015**, 391, 153-160	4.2	8
22	Slow-release boron fertilisers: co-granulation of boron sources with mono-ammonium phosphate (MAP). *Soil Research*, **2015**, 53, 505	1.8	8
21	A stable-isotope methodology for measurement of soil-applied zinc-fertilizer recovery in durum wheat (Triticum durum). *Journal of Plant Nutrition and Soil Science*, **2013**, 176, 756-763	2.3	8
20	Engineered Phosphate Fertilizers with Dual-Release Properties. *Industrial & Engineering Chemistry Research*, **2020**, 59, 5512-5524	3.9	7
19	Model-based rationalization of sulphur mineralization in soils using 35S isotope dilution. *Soil Biology and Biochemistry*, **2018**, 120, 1-11	7.5	7
18	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	2.3	7

17	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	4.5	7
16	Effect of Cogranulation on Oxidation of Elemental Sulfur: Theoretical Model and Experimental Validation. *Soil Science Society of America Journal*, **2016**, 80, 1244-1253	2.5	6
15	Efficiency of soil-applied 67Zn-enriched fertiliser across three consecutive crops. *Pedosphere*, **2021**, 31, 531-537	5	4
14	Sulfur Uptake from Fertilizer Fortified with Sulfate and Elemental S in Three Contrasting Climatic Zones. *Agronomy*, **2020**, 10, 1035	3.6	3
13	DGT and Bioavailability216-262		3
12	Effect of soil properties on time-dependent fixation (ageing) of selenate. *Geoderma*, **2021**, 383, 114741	6.7	3
11	Low Effective Surface Area Explains Slow Oxidation of Co-Granulated Elemental Sulfur. *Soil Science Society of America Journal*, **2016**, 80, 911-918	2.5	2
10	Comparison and modelling of extraction methods to assess agronomic effectiveness of fertilizer zinc. *Journal of Plant Nutrition and Soil Science*, **2020**, 183, 248-259	2.3	1
9	Development and Testing of Improved Efficiency Boron-Enriched Diammonium Phosphate Fertilizers. *Journal of Soil Science and Plant Nutrition*, **2021**, 21, 1134-1143	3.2	1
8	Mechanochemical Synthesis of Zinc Borate for Use as a Dual-Release B Fertilizer. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 15995-16004	8.3	0
7	Layered Double Hydroxides as Slow-Release Fertilizer Compounds for the Micronutrient Molybdenum. *Journal of Agricultural and Food Chemistry*, **2021**, 69, 14501-14511	5.7	0
6	Long-term fate of fertilizer sulfate- and elemental S in co-granulated fertilizers. *Nutrient Cycling in Agroecosystems*, **2021**, 120, 31-48	3.3	0
5	Application method influences the oxidation rate of biologically and chemically produced elemental sulfur fertilizers. *Soil Science Society of America Journal*, **2021**, 85, 746-759	2.5	0
4	Isotopic signatures reveal zinc cycling in the natural habitat of hyperaccumulator Dichapetalum gelonioides subspecies from Malaysian Borneo. *BMC Plant Biology*, **2021**, 21, 437	5.3	0
3	Using Se-Labelled Foliar Fertilisers to Determine How Se Transfers Within Wheat Over Time. *Frontiers in Nutrition*, **2021**, 8, 732409	6.2	
2	Fixation of Cadmium and Zinc in Soils **2006**, 157-172		
1	Screening fertilizers for their phosphorus runoff risk using laboratory methods. *Journal of Environmental Quality*, **2021**, 50, 955-966	3.4	