Changwen Du

List of Publications by Year
in descending order

110 papers	3,481 citations	186209 28 h-index	161767 54 g-index
113 all docs	113 docs citations	113 times ranked	3495 citing authors

#	Article	IF	Citations
1	Long-Term Dynamic of Cold Stress during Heading and Flowering Stage and Its Effects on Rice Growth in China. Atmosphere, 2022, 13, 103.	1.0	5
2	Determination of total protein and wet gluten in wheat flour by Fourier transform infrared photoacoustic spectroscopy with multivariate analysis. Journal of Food Composition and Analysis, 2022, 106, 104349.	1.9	14
3	Control-released urea improved agricultural production efficiency and reduced the ecological and environmental impact in rice-wheat rotation system: A life-cycle perspective. Field Crops Research, 2022, 278, 108445.	2.3	12
4	Sensing of Soil Organic Matter Using Laser-Induced Breakdown Spectroscopy Coupled with Optimized Self-Adaptive Calibration Strategy. Sensors, 2022, 22, 1488.	2.1	2
5	Development of Prediction Models for Estimating Key Rice Growth Variables Using Visible and NIR Images from Unmanned Aerial Systems. Remote Sensing, 2022, 14, 1384.	1.8	5
6	In-situ rapid monitoring of nitrate in urban water bodies using Fourier transform infrared attenuated total reflectance spectroscopy (FTIR-ATR) coupled with deconvolution algorithm. Journal of Environmental Management, 2022, 317, 115452.	3.8	7
7	Biomimetic Modification of Water-Borne Polymer Coating with Carnauba Wax for Controlled Release of Urea. International Journal of Molecular Sciences, 2022, 23, 7422.	1.8	3
8	Applying convolutional neural networks (CNN) for end-to-end soil analysis based on laser-induced breakdown spectroscopy (LIBS) with less spectral preprocessing. Computers and Electronics in Agriculture, 2022, 199, 107171.	3.7	23
9	LIBS and FTIRâ€“ATR spectroscopy studies of mineralâ€“organic associations in saline soil. Land Degradation and Development, 2021, 32, 1786-1795.	1.8	13
10	Solvent-Free Synthesis of Iron-Based Metal-Organic Frameworks (MOFs) as Slow-Release Fertilizers. Polymers, 2021, 13, 561.	2.0	14
11	Prediction of Rice Yield in East China Based on Climate and Agronomic Traits Data Using Artificial Neural Networks and Partial Least Squares Regression. Agronomy, 2021, 11, 282.	1.3	18
12	Combination of high-resolution laser-induced breakdown spectroscopy and least square method for reducing soil carbon overestimation due to iron interference. Geoderma, 2021, 385, 114881.	2.3	3
13	Estimating Plant Nitrogen Concentration of Rice through Fusing Vegetation Indices and Color Moments Derived from UAV-RGB Images. Remote Sensing, 2021, 13, 1620.	1.8	20
14	In Situ Monitoring of Nitrate Content in Leafy Vegetables Using Attenuated Total Reflectanceâ€‰â^'â€‰Fourier-Transform Mid-infrared Spectroscopy Coupled with Machine Learning Algorithm. Food Analytical Methods, 2021, 14, 2237-2248.	1.3	7
15	Improved Accuracy of Phenological Detection in Rice Breeding by Using Ensemble Models of Machine Learning Based on UAV-RGB Imagery. Remote Sensing, 2021, 13, 2678.	1.8	8
16	Estimation of nitrogen nutrition index in rice from UAV RGB images coupled with machine learning algorithms. Computers and Electronics in Agriculture, 2021, 189, 106421.	3.7	50
17	Hydrophobic modification of waterborne polymer slows urea release and improves nitrogen use efficiency in rice. Science of the Total Environment, 2021, 794, 148612.	3.9	8
18	Application of FTIR-PAS in Rapid Assessment of Rice Quality under Climate Change Conditions. Foods, 2021, 10, 159.	1.9	19

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19	Fertilizing maize croppings with blends of slow/controlledâ€release and conventional nitrogen fertilizers. Journal of Plant Nutrition and Soil Science, 2021, 184, 227-237.	1.1	12
20	Grain Yield Estimation in Rice Breeding Using Phenological Data and Vegetation Indices Derived from UAV Images. Agronomy, 2021, 11, 2439.	1.3	13
21	Global Sensitivity Analysis for CERES-Rice Model under Different Cultivars and Specific-Stage Variations of Climate Parameters. Agronomy, 2021, 11, 2446.	1.3	1
22	A method combining FTIR-ATR and Raman spectroscopy to determine soil organic matter: Improvement of prediction accuracy using competitive adaptive reweighted sampling (CARS). Computers and Electronics in Agriculture, 2021, 191, 106549.	3.7	36
23	In situ detection of rice leaf cuticle responses to nitrogen supplies by depth-profiling Fourier transform photoacoustic spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 228, 117759.	2.0	4
24	Modified selfâ€adaptive model for improving the prediction accuracy of soil organic matter by laserâ€induced breakdown spectroscopy. Soil Science Society of America Journal, 2020, 84, 1995-2009.	1.2	3
25	In Situ Determination of Nitrate in Water Using Fourier Transform Mid-Infrared Attenuated Total Reflectance Spectroscopy Coupled with Deconvolution Algorithm. Molecules, 2020, 25, 5838.	1.7	15
26	Qualifications of Rice Growth Indicators Optimized at Different Growth Stages Using Unmanned Aerial Vehicle Digital Imagery. Remote Sensing, 2020, 12, 3228.	1.8	15
27	Forensic soil analysis using laser-induced breakdown spectroscopy (LIBS) and Fourier transform infrared total attenuated reflectance spectroscopy (FTIR-ATR): Principles and case studies. Forensic Science International, 2020, 310, 110222.	1.3	40
28	Responses of Leaf Cuticles to Rice Blast: Detection and Identification Using Depth-Profiling Fourier Transform Mid-Infrared Photoacoustic Spectroscopy. Plant Disease, 2020, 104, 847-852.	0.7	7
29	Optimization of measuring procedure of farmland soils using laserâ€induced breakdown spectroscopy. Soil Science Society of America Journal, 2020, 84, 1307-1326.	1.2	6
30	Agricultural soil characterization by FTIR spectroscopy at micrometer scales: Depth profiling by photoacoustic spectroscopy. Geoderma, 2019, 335, 94-103.	2.3	58
31	Interaction between polyacrylate coatings used in controlled-release fertilizers and soils in wheat-rice rotation fields. Agriculture, Ecosystems and Environment, 2019, 286, 106650.	2.5	9
32	Fast and Simultaneous Determination of Soil Properties Using Laser-Induced Breakdown Spectroscopy (LIBS): A Case Study of Typical Farmland Soils in China. Soil Systems, 2019, 3, 66.	1.0	17
33	Detection of soil organic matter from laser-induced breakdown spectroscopy (LIBS) and mid-infrared spectroscopy (FTIR-ATR) coupled with multivariate techniques. Geoderma, 2019, 355, 113905.	2.3	45
34	Rapid diagnosis of nitrogen status in rice based on Fourier transform infrared photoacoustic spectroscopy (FTIR-PAS). Plant Methods, 2019, 15, 94.	1.9	19
35	Degradation of Metal-Organic Framework Materials as Controlled-Release Fertilizers in Crop Fields. Polymers, 2019, 11, 947.	2.0	19
36	Development of a Polyacrylate/Silica Nanoparticle Hybrid Emulsion for Delaying Nutrient Release in Coated Controlled-Release Urea. Coatings, 2019, 9, 88.	1.2	16

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37	Optimization of metalâ€“organic (citric acid) frameworks for controlled release of nutrients. RSC Advances, 2019, 9, 32270-32277.	1.7	13
38	Investigation of soil properties using different techniques of midâ€infrared spectroscopy. European Journal of Soil Science, 2019, 70, 96-106.	1.8	30
39	Evaluation of Mercury Uptake and Distribution in Rice (Oryza sativa L.). Bulletin of Environmental Contamination and Toxicology, 2018, 100, 451-456.	1.3	10
40	Rapid and Nondestructive Detection of Pesticide Residues by Depth-Profiling Fourier Transform Infrared Photoacoustic Spectroscopy. ACS Omega, 2018, 3, 3548-3553.	1.6	15
41	Degradation of Polyacrylate in the Outdoor Agricultural Soil Measured by FTIR-PAS and LIBS. Polymers, 2018, 10, 1296.	2.0	26
42	The Facile Modification of Polyacrylate Emulsion via Hexadecane to Enhance Controlled-release Profiles of Coated Urea. Scientific Reports, 2018, 8, 12279.	1.6	12
43	Release profile predictions of controlled release fertilisers: Least Squares Support Vector Machines. Biosystems Engineering, 2018, 172, 67-74.	1.9	8
44	Application of Graphene-Oxide-Modified Polyacrylate Polymer for Controlled-Release Coated Urea. Coatings, 2018, 8, 64.	1.2	6
45	Application of Nano Fe^{III}â€“Tannic Acid Complexes in Modifying Aqueous Acrylic Latex for Controlled-Release Coated Urea. Journal of Agricultural and Food Chemistry, 2017, 65, 1030-1036.	2.4	39
46	Soil variability description using Fourier transform mid-infrared photoacoustic spectroscopy coupling with RGB method. Catena, 2017, 152, 190-197.	2.2	13
47	Evaluation of net nitrification rates in paddy soil using mid-infrared attenuated total reflectance spectroscopy. Analytical Methods, 2017, 9, 748-755.	1.3	7
48	Optimized self-adaptive model for assessment of soil organic matter using Fourier transform mid-infrared photoacoustic spectroscopy. Chemometrics and Intelligent Laboratory Systems, 2017, 171, 9-15.	1.8	13
49	Characterization of nano FeIII-tannic acid modified polyacrylate in controlled-release coated urea by Fourier transform infrared photoacoustic spectroscopy and laser-induced breakdown spectroscopy. Polymer Testing, 2017, 64, 101-108.	2.3	19
50	Quantitative analysis of different nitrogen isotope labelled nitrates in paddy soil using mid-infrared attenuated total reflectance spectroscopy. Analytical Methods, 2017, 9, 5388-5394.	1.3	8
51	Economic and Soil Environmental Benefits of Using Controlledâ€Release Bulk Blending Urea in the North China Plain. Land Degradation and Development, 2017, 28, 2370-2379.	1.8	27
52	Identification of Chinese medicinal fungus Cordyceps sinensis by depth-profiling mid-infrared photoacoustic spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2017, 173, 489-494.	2.0	17
53	A Selfâ€Adaptive Model for the Prediction of Soil Organic Matter Using Midâ€Infrared Photoacoustic Spectroscopy. Soil Science Society of America Journal, 2016, 80, 238-246.	1.2	15
54	Technical Note: Characterisation of Loess Soils Using near Infrared Photoacoustic Spectroscopy. Journal of Near Infrared Spectroscopy, 2016, 24, 225-230.	0.8	3

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55	Two-Dimensional Visualization of Nitrogen Distribution in Leaves of Chinese Cabbage (Brassica) Tj ETQq1 1 0.784314 rgBT /Overlock Technique. Journal of Agricultural and Food Chemistry, 2016, 64, 7696-7701.	2.4	11
56	Application of FTIR-PAS and Raman spectroscopies for the determination of organic matter in farmland soils. Talanta, 2016, 158, 262-269.	2.9	60
57	A global spectral library to characterize the world's soil. Earth-Science Reviews, 2016, 155, 198-230.	4.0	546
58	Characterizing typical farmland soils in China using Raman spectroscopy. Geoderma, 2016, 268, 147-155.	2.3	25
59	Soil mercury accumulation and transference to different crop grains. Human and Ecological Risk Assessment (HERA), 2016, 22, 1242-1252.	1.7	17
60	Thermal post-treatment alters nutrient release from a controlled-release fertilizer coated with a waterborne polymer. Scientific Reports, 2015, 5, 13820.	1.6	10
61	Diagnosis of nitrogen status in Chinese cabbage (Brassica rapa chinensis) using the ratio of amide II to amide I in leaves based on midâ€infrared photoacoustic spectroscopy. Journal of Plant Nutrition and Soil Science, 2015, 178, 888-895.	1.1	6
62	Determination of Nitrogen in Rapeseed by Fourier Transform Infrared Photoacoustic Spectroscopy and Independent Component Analysis. Analytical Letters, 2015, 48, 1150-1162.	1.0	4
63	Biodegradation of a biochar-modified waterborne polyacrylate membrane coating for controlled-release fertilizer and its effects on soil bacterial community profiles. Environmental Science and Pollution Research, 2015, 22, 8672-8682.	2.7	45
64	In Situ Measurement of Ammonia Concentration in Soil Headspace Using Fourier Transform Mid-Infrared Photoacoustic Spectroscopy. Pedosphere, 2015, 25, 605-612.	2.1	12
65	Comparison on the interaction of Al3+/nano-Al13 with calf thymus DNA /salmon sperm DNA. Journal of Molecular Structure, 2015, 1100, 154-161.	1.8	14
66	Characterization of the Release of Urea from Coated Fertilizer by Fourier Transform Infrared Spectroscopy with Attenuated Total Reflectance. Analytical Letters, 2015, 48, 2380-2390.	1.0	4
67	Fourier Transform Mid-Infrared Photoacoustic Spectroscopy for Presymptomatic Detection of Powdery Mildew Infection inRubus corchorifoliusL.. Spectroscopy Letters, 2015, 48, 610-615.	0.5	4
68	Application of waterborne acrylic emulsions in coated controlled release fertilizer using reacted layer technology. Chinese Journal of Chemical Engineering, 2015, 23, 309-314.	1.7	28
69	Use of FTIRâ€PAS combined with chemometrics to quantify nutritional information in rapeseeds (Brassica napus). Journal of Plant Nutrition and Soil Science, 2014, 177, 927-933.	1.1	10
70	Fast and nondestructive determination of protein content in rapeseeds (Brassica napusL.) using Fourier transform infrared photoacoustic spectroscopy (FTIR-PAS). Journal of the Science of Food and Agriculture, 2014, 94, 2239-2245.	1.7	19
71	A 1915â€“2011 microscale record of soil organic matter under wheat cultivation using FTIR-PAS depth-profiling. Agronomy for Sustainable Development, 2014, 34, 803-811.	2.2	23
72	Determination of the contents of magnesium and potassium in rapeseeds using FTIR-PAS combined with least squares support vector machines and uninformative variable elimination. Analytical Methods, 2014, 6, 2586-2591.	1.3	9

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73	Classification of rapeseed colors using Fourier transform mid-infrared photoacoustic spectroscopy. Analytical Methods, 2014, 6, 1412.	1.3	4
74	Assessing soil constituents and labile soil organic carbon by mid-infrared photoacoustic spectroscopy. Soil Biology and Biochemistry, 2014, 77, 41-50.	4.2	87
75	Classifying rapeseed varieties using Fourier transform infrared photoacoustic spectroscopy (FTIR-PAS). Computers and Electronics in Agriculture, 2014, 107, 58-63.	3.7	18
76	Rapid Determination of N Isotope Labeled Nitrate Using Fourier Transform Infrared Attenuated Total Reflection Spectroscopy. Chinese Journal of Analytical Chemistry, 2014, 42, 747-752.	0.9	7
77	Aqueous polyacrylate/poly(siliconeâ€coâ€acrylate) emulsion coated fertilizers for slow nutrientâ€release application. Journal of Applied Polymer Science, 2014, 131, .	1.3	16
78	Application of mid-infrared photoacoustic spectroscopy in monitoring carbonate content in soils. Sensors and Actuators B: Chemical, 2013, 188, 1167-1175.	4.0	32
79	Characterization of Soil Humic Substances Using Mid-infrared Photoacoustic Spectroscopy. , 2013, , 43-47.		4
80	Rapid Determination of Nitrate in Chinese Cabbage Using Fourier Transforms Mid-infrared Spectroscopy. Chinese Journal of Analytical Chemistry, 2013, 41, 1264.	0.9	1
81	Organic and Inorganic Carbon in Paddy Soil as Evaluated by Mid-Infrared Photoacoustic Spectroscopy. PLoS ONE, 2012, 7, e43368.	1.1	9
82	Application of Infrared Photoacoustic Spectroscopy in Soil Analysis. Applied Spectroscopy Reviews, 2011, 46, 405-422.	3.4	51
83	Phosphate Adsorption on Granular Palygorskite: Batch and Column Studies. Water Environment Research, 2011, 83, 147-153.	1.3	18
84	Effect of longâ€term fertilization on the transformations of waterâ€extractable phosphorus in a fluvoâ€aquic soil. Journal of Plant Nutrition and Soil Science, 2011, 174, 20-27.	1.1	1
85	Plants use alternative strategies to utilize nonexchangeable potassium in minerals. Plant and Soil, 2011, 343, 209-220.	1.8	57
86	Characterization of Greenhouse Soil Properties Using Mid-infrared Photoacoustic Spectroscopy. Spectroscopy Letters, 2011, 44, 359-368.	0.5	8
87	Evaluating Plant-Available Potassium in Different Soils Using a Modified Sodium Tetraphenylboron Method. Soil Science, 2010, 175, 544-551.	0.9	26
88	Depth profiling of clayâ€“xanthan complexes using step-scan mid-infrared photoacoustic spectroscopy. Journal of Soils and Sediments, 2010, 10, 855-862.	1.5	24
89	Characterization of animal manures using mid-infrared photoacoustic spectroscopy. Bioresource Technology, 2010, 101, 6273-6277.	4.8	11
90	Evaluation of Waterborne Coating for Controlled-Release Fertilizer Using Wurster Fluidized Bed. Industrial & Engineering Chemistry Research, 2010, 49, 9644-9647.	1.8	52

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91	Evaluation of soil fertility using infrared spectroscopy: a review. Environmental Chemistry Letters, 2009, 7, 97-113.	8.3	84
92	Determination of soil properties using Fourier transform mid-infrared photoacoustic spectroscopy. Vibrational Spectroscopy, 2009, 49, 32-37.	1.2	85
93	Characteristics and accumulation of heavy metals in sediments originated from an electroplating plant. Journal of Hazardous Materials, 2009, 163, 922-930.	6.5	50
94	Risk assessment of potentially toxic element pollution in soils and rice (Oryza sativa) in a typical area of the Yangtze River Delta. Environmental Pollution, 2009, 157, 2542-2549.	3.7	267
95	Removal of phosphate from aqueous solution by thermally treated natural palygorskite. Water Research, 2009, 43, 2907-2915.	5.3	181
96	In situ Evaluation of Net Nitrification Rate in Terra Rossa Soil Using a Fourier Transform Infrared Attenuated Total Reflection 15N Tracing Technique. Applied Spectroscopy, 2009, 63, 1168-1173.	1.2	11
97	Evaluation of Soil Fertility Using Infrared Spectroscopy â€“ A Review. , 2009, , 453-483.		5
98	Prediction of nitrate release from polymer-coated fertilizers using an artificial neural network model. Biosystems Engineering, 2008, 99, 478-486.	1.9	45
99	Identification of agricultural Mediterranean soils using mid-infrared photoacoustic spectroscopy. Geoderma, 2008, 143, 85-90.	2.3	71
100	Enhancement of Phosphorus Solubility by Humic Substances in Ferrosols. Pedosphere, 2008, 18, 533-538.	2.1	53
101	Characterization of Soils Using Photoacoustic Mid-Infrared Spectroscopy. Applied Spectroscopy, 2007, 61, 1063-1067.	1.2	53
102	Effect of Long-Term Rice Straw Return on Soil Glomalin, Carbon and Nitrogen. Pedosphere, 2007, 17, 295-302.	2.1	75
103	Effect of CO2 Enrichment on the Growth and Nutrient Uptake of Tomato Seedlings. Pedosphere, 2007, 17, 343-351.	2.1	31
104	Effects of modified clinoptilolite on phosphorus mobilisation and potassium or ammonium release in Ferrosols. Soil Research, 2006, 44, 285.	0.6	11
105	Potassium Movement and Transformation in an Acid Soil as Affected by Phosphorus. Soil Science Society of America Journal, 2006, 70, 2057-2064.	1.2	10
106	Release Characteristics of Nutrients from Polymer-coated Compound Controlled Release Fertilizers. Journal of Polymers and the Environment, 2006, 14, 223-230.	2.4	147
107	Response of Rice (Oryza sativa) with Root Surface Iron Plaque Under Aluminium Stress. Annals of Botany, 2006, 98, 389-395.	1.4	92
108	Mathematical Model for Potassium Release from Polymer-coated Fertiliser. Biosystems Engineering, 2004, 88, 395-400.	1.9	40

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109	Effects of Boron and Calcium Supply on Calcium Fractionation in Plants and Suspension Cells of Rape Cultivars with Different Boron Efficiency. Journal of Plant Nutrition, 2003, 26, 789-806.	0.9	17
110	STUDY ON THE PHYSIOLOGICAL MECHANISM OF BORON UTILIZATION EFFICIENCY IN RAPE CULTIVARS. Journal of Plant Nutrition, 2002, 25, 231-244.	0.9	21