Songchao Chen

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7776895/publications.pdf

Version: 2024-02-01

78 papers	4,023 citations	109264 35 h-index	123376 61 g-index
85 all docs	85 docs citations	85 times ranked	2831 citing authors

#	Article	IF	Citations
1	Soil erosion modelling: A global review and statistical analysis. Science of the Total Environment, 2021, 780, 146494.	3.9	261
2	Current status, spatial features, health risks, and potential driving factors of soil heavy metal pollution in China at province level. Environmental Pollution, 2020, 266, 114961.	3.7	257
3	Current and future assessments of soil erosion by water on the Tibetan Plateau based on RUSLE and CMIP5 climate models. Science of the Total Environment, 2018, 635, 673-686.	3.9	184
4	Can N₂O emissions offset the benefits from soil organic carbon storage?. Global Change Biology, 2021, 27, 237-256.	4.2	174
5	Digital mapping of GlobalSoilMap soil properties at a broad scale: A review. Geoderma, 2022, 409, 115567.	2.3	167
6	Prediction of soil organic matter using a spatially constrained local partial least squares regression and the <scp>C</scp>hinese visâ€“<scp>NIR</scp> spectral library. European Journal of Soil Science, 2015, 66, 679-687.	1.8	138
7	Modelling bioaccumulation of heavy metals in soil-crop ecosystems and identifying its controlling factors using machine learning. Environmental Pollution, 2020, 262, 114308.	3.7	126
8	A high-resolution map of soil pH in China made by hybrid modelling of sparse soil data and environmental covariates and its implications for pollution. Science of the Total Environment, 2019, 655, 273-283.	3.9	124
9	Fine resolution map of top- and subsoil carbon sequestration potential in France. Science of the Total Environment, 2018, 630, 389-400.	3.9	109
10	Application of portable XRF and VNIR sensors for rapid assessment of soil heavy metal pollution. PLoS ONE, 2017, 12, e0172438.	1.1	94
11	Evaluation of Machine Learning Approaches to Predict Soil Organic Matter and pH Using vis-NIR Spectra. Sensors, 2019, 19, 263.	2.1	91
12	Identifying heavy metal pollution hot spots in soil-rice systems: A case study in South of Yangtze River Delta, China. Science of the Total Environment, 2019, 658, 614-625.	3.9	90
13	Rapid identification of soil organic matter level via visible and near-infrared spectroscopy: Effects of two-dimensional correlation coefficient and extreme learning machine. Science of the Total Environment, 2018, 644, 1232-1243.	3.9	85
14	In Situ Measurements of Organic Carbon in Soil Profiles Using vis-NIR Spectroscopy on the Qinghaiâ€“Tibet Plateau. Environmental Science & Technology, 2015, 49, 4980-4987.	4.6	81
15	Combination of fractional order derivative and memory-based learning algorithm to improve the estimation accuracy of soil organic matter by visible and near-infrared spectroscopy. Catena, 2019, 174, 104-116.	2.2	81
16	National digital soil map of organic matter in topsoil and its associated uncertainty in 1980's China. Geoderma, 2019, 335, 47-56.	2.3	80
17	Multiâ€sensor fusion for the determination of several soil properties in the Yangtze River Delta, China. European Journal of Soil Science, 2019, 70, 162-173.	1.8	79
18	Soil erosion modelling: A bibliometric analysis. Environmental Research, 2021, 197, 111087.	3.7	78

#	Article	IF	Citations
19	Simultaneous measurement of multiple soil properties through proximal sensor data fusion: A case study. Geoderma, 2019, 341, 111-128.	2.3	73
20	Prediction of soil attributes using the Chinese soil spectral library and standardized spectra recorded at field conditions. Soil and Tillage Research, 2016, 155, 492-500.	2.6	71
21	Soil carbon stocks under different land uses and the applicability of the soil carbon saturation concept. Soil and Tillage Research, 2019, 188, 53-58.	2.6	71
22	Estimating forest soil organic carbon content using vis-NIR spectroscopy: Implications for large-scale soil carbon spectroscopic assessment. Geoderma, 2019, 348, 37-44.	2.3	70
23	High-resolution three-dimensional mapping of soil organic carbon in China: Effects of SoilGrids products on national modeling. Science of the Total Environment, 2019, 685, 480-489.	3.9	66
24	Comparing laboratory and airborne hyperspectral data for the estimation and mapping of topsoil organic carbon: Feature selection coupled with random forest. Soil and Tillage Research, 2020, 199, 104589.	2.6	66
25	National estimation of soil organic carbon storage potential for arable soils: A data-driven approach coupled with carbon-landscape zones. Science of the Total Environment, 2019, 666, 355-367.	3.9	61
26	Assessment of important soil properties related to Chinese Soil Taxonomy based on visâ€“NIR reflectance spectroscopy. Computers and Electronics in Agriculture, 2018, 144, 1-8.	3.7	58
27	Exploring the potential of airborne hyperspectral image for estimating topsoil organic carbon: Effects of fractional-order derivative and optimal band combination algorithm. Geoderma, 2020, 365, 114228.	2.3	58
28	Satellite data integration for soil clay content modelling at a national scale. International Journal of Applied Earth Observation and Geoinformation, 2019, 82, 101905.	1.4	57
29	X-ray fluorescence and visible near infrared sensor fusion for predicting soil chromium content. Geoderma, 2019, 352, 61-69.	2.3	57
30	Model averaging for mapping topsoil organic carbon in France. Geoderma, 2020, 366, 114237.	2.3	52
31	Building a pedotransfer function for soil bulk density on regional dataset and testing its validity over a larger area. Geoderma, 2018, 312, 52-63.	2.3	48
32	Cadmium concentration estimation in peri-urban agricultural soils: Using reflectance spectroscopy, soil auxiliary information, or a combination of both?. Geoderma, 2019, 354, 113875.	2.3	45
33	Predicting total dissolved salts and soluble ion concentrations in agricultural soils using portable visible near-infrared and mid-infrared spectrometers. Biosystems Engineering, 2016, 152, 94-103.	1.9	43
34	Heavy Metal Pollution Delineation Based on Uncertainty in a Coastal Industrial City in the Yangtze River Delta, China. International Journal of Environmental Research and Public Health, 2018, 15, 710.	1.2	42
35	Revealing the scale- and location-specific controlling factors of soil organic carbon in Tibet. Geoderma, 2021, 382, 114713.	2.3	39
36	Organic carbon prediction in soil cores using VNIR and MIR techniques in an alpine landscape. Scientific Reports, 2017, 7, 2144.	1.6	37

#	Article	IF	Citations
37	Monitoring soil organic carbon in alpine soils using in situ visâ€NIR spectroscopy and a multilayer perceptron. Land Degradation and Development, 2020, 31, 1026-1038.	1.8	37
38	Composite assessment of human health risk from potentially toxic elements through multiple exposure routes: A case study in farmland in an important industrial city in East China. Journal of Geochemical Exploration, 2020, 210, 106443.	1.5	37
39	Probability mapping of soil thickness by random survival forest at a national scale. Geoderma, 2019, 344, 184-194.	2.3	36
40	Data fusion for the measurement of potentially toxic elements in soil using portable spectrometers. Environmental Pollution, 2020, 263, 114649.	3.7	36
41	Baseline map of soil organic carbon in Tibet and its uncertainty in the 1980s. Geoderma, 2019, 334, 124-133.	2.3	35
42	A comprehensive framework for assessing the impact of potential agricultural pollution on grain security and human health in economically developed areas. Environmental Pollution, 2020, 263, 114653.	3.7	35
43	Evaluating validation strategies on the performance of soil property prediction from regional to continental spectral data. Geoderma, 2021, 400, 115159.	2.3	32
44	Fine-Resolution Mapping of Soil Total Nitrogen across China Based on Weighted Model Averaging. Remote Sensing, 2020, 12, 85.	1.8	31
45	Improvement of Spatial Modeling of Cr, Pb, Cd, As and Ni in Soil Based on Portable X-ray Fluorescence (PXRF) and Geostatistics: A Case Study in East China. International Journal of Environmental Research and Public Health, 2019, 16, 2694.	1.2	30
46	Diagnosis of cadmium contamination in urban and suburban soils using visible-to-near-infrared spectroscopy. Environmental Pollution, 2021, 291, 118128.	3.7	26
47	Rapid Determination of Soil Class Based on Visible-Near Infrared, Mid-Infrared Spectroscopy and Data Fusion. Remote Sensing, 2020, 12, 1512.	1.8	25
48	Digital mapping of the soil thickness of loess deposits over a calcareous bedrock in central France. Catena, 2021, 198, 105062.	2.2	24
49	A method using near infrared hyperspectral imaging to highlight the internal quality of apple fruit slices. Postharvest Biology and Technology, 2021, 175, 111497.	2.9	24
50	Potential of VIS-NIR-SWIR Spectroscopy from the Chinese Soil Spectral Library for Assessment of Nitrogen Fertilization Rates in the Paddy-Rice Region, China. Remote Sensing, 2015, 7, 7029-7043.	1.8	23
51	Rapid determination of soil classes in soil profiles using visâ€“NIR spectroscopy and multiple objectives mixed support vector classification. European Journal of Soil Science, 2019, 70, 42-53.	1.8	21
52	An integrated assessment methodology for management of potentially contaminated sites based on public data. Science of the Total Environment, 2021, 783, 146913.	3.9	21
53	Fusion of visible-to-near-infrared and mid-infrared spectroscopy to estimate soil organic carbon. Soil and Tillage Research, 2022, 217, 105284.	2.6	21
54	Soil organic carbon storage, distribution, and influencing factors at different depths in the dryland farming regions of Northeast and North China. Catena, 2022, 210, 105934.	2.2	18

#	Article	IF	Citations
55	Visible, near- and mid-infrared spectroscopy coupled with an innovative chemometric strategy to control apple puree quality. Food Control, 2021, 120, 107546.	2.8	17
56	Improved Mapping of Potentially Toxic Elements in Soil via Integration of Multiple Data Sources and Various Geostatistical Methods. Remote Sensing, 2020, 12, 3775.	1.8	16
57	Climate change-induced greening on the Tibetan Plateau modulated by mountainous characteristics. Environmental Research Letters, 2021, 16, 064064.	2.2	16
58	Evaluation of Optimized Preprocessing and Modeling Algorithms for Prediction of Soil Properties Using VIS-NIR Spectroscopy. Sensors, 2021, 21, 6745.	2.1	14
59	Hand-feel soil texture and particle-size distribution in central France. Relationships and implications. Catena, 2022, 213, 106155.	2.2	12
60	Impacts of national scale digital soil mapping programs in France. Geoderma Regional, 2020, 23, e00337.	0.9	10
61	Comparison of near-infrared, mid-infrared, Raman spectroscopy and near-infrared hyperspectral imaging to determine chemical, structural and rheological properties of apple purees. Journal of Food Engineering, 2022, 323, 111002.	2.7	9
62	Digital Mapping of Soil Organic Carbon with Machine Learning in Dryland of Northeast and North Plain China. Remote Sensing, 2022, 14, 2504.	1.8	9
63	Preliminary risk assessment of regional industrial enterprise sites based on big data. Science of the Total Environment, 2022, 838, 156609.	3.9	9
64	Effectiveness of different approaches for in situ measurements of organic carbon using visible and near infrared spectrometry in the Poyang Lake basin area. Land Degradation and Development, 2021, 32, 1301-1311.	1.8	8
65	Organic carbon storage potential of cropland topsoils in East China: Indispensable roles of cropping systems and soil managements. Soil and Tillage Research, 2021, 211, 105052.	2.6	8
66	Drivers of water erosion-induced lateral soil carbon loss on the Tibetan Plateau. Catena, 2022, 211, 105970.	2.2	7
67	Fruit variability impacts puree quality: Assessment on individually processed apples using the visible and near infrared spectroscopy. Food Chemistry, 2022, 390, 133088.	4.2	7
68	A review of the world's soil museums and exhibitions. Advances in Agronomy, 2021, 166, 277-304.	2.4	6
69	Strategies for efficient estimation of soil organic content at the local scale based on a national spectral database. Land Degradation and Development, 2022, 33, 1649-1661.	1.8	6
70	Comparing Two Different Development Methods of External Parameter Orthogonalization for Estimating Organic Carbon from Field-Moist Intact Soils by Reflectance Spectroscopy. Remote Sensing, 2022, 14, 1303.	1.8	6
71	Improving remote sensing of salinity on topsoil with crop residues using novel indices of optical and microwave bands. Geoderma, 2022, 422, 115935.	2.3	6
72	THE GLOBALSOILMAP PROJECT: PAST, PRESENT, FUTURE, AND NATIONAL EXAMPLES FROM FRANCE. Dokuchaev Soil Bulletin, 2018, , 3-23.	0.1	5

#	Article	IF	Citations
73	Role of Environment Variables in Spatial Distribution of Soil C, N, P Ecological Stoichiometry in the Typical Black Soil Region of Northeast China. Sustainability, 2022, 14, 2636.	1.6	5
74	Hand-feel soil texture observations to evaluate the accuracy of digital soil maps for local prediction of soil particle size distribution: A case study in Central France. Pedosphere, 2023, 33, 731-743.	2.1	5
75	Mid-infrared technique to forecast cooked puree properties from raw apples: A potential strategy towards sustainability and precision processing. Food Chemistry, 2021, 355, 129636.	4.2	4
76	Digital soil mapping of organic carbon at two depths in loess hilly region of Northern Iran. , 2022, , 467-475.		2
77	Effects of sediment texture on in-stream nitrogen uptake. Environmental Earth Sciences, 2014, 72, 21-33.	1.3	1
78	Current Estimates of Soil Organic Carbon Stocks Are Not Four to Six Times Underestimated. Comment on â€œNon-Flat Earth Recalibrated for Terrain and Topsoil. Soil Syst. 2018, 2, 64â€• Soil Systems, 2020, 4, 45.	1.0	0