

Rota Wagai

List of Publications by Year in descending order

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Version: 2024-02-01

45
papers

3,222
citations

218677

26
h-index

233421

45
g-index

52
all docs

52
docs citations

52
times ranked

3987
citing authors

#	ARTICLE	IF	CITATIONS
1	Beyond clay: towards an improved set of variables for predicting soil organic matter content. <i>Biogeochemistry</i> , 2018, 137, 297-306.	3.5	423
2	Sorptive stabilization of organic matter in soils by hydrous iron oxides. <i>Geochimica Et Cosmochimica Acta</i> , 2007, 71, 25-35.	3.9	386
3	Sequential density fractionation across soils of contrasting mineralogy: evidence for both microbial- and mineral-controlled soil organic matter stabilization. <i>Biogeochemistry</i> , 2009, 96, 209-231.	3.5	304
4	Organic matter in small mesopores in sediments and soils. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 3863-3872.	3.9	209
5	Variations in the soil microbial community composition of a tropical montane forest ecosystem: Does tree species matter?. <i>Soil Biology and Biochemistry</i> , 2008, 40, 2699-2702.	8.8	162
6	Linking temperature sensitivity of soil organic matter decomposition to its molecular structure, accessibility, and microbial physiology. <i>Global Change Biology</i> , 2013, 19, 1114-1125.	9.5	132
7	Nature of the "occluded" low-density fraction in soil organic matter studies: A critical review. <i>Soil Science and Plant Nutrition</i> , 2009, 55, 13-25.	1.9	131
8	Global distribution of clay-size minerals on land surface for biogeochemical and climatological studies. <i>Scientific Data</i> , 2017, 4, 170103.	5.3	128
9	Evidence of aggregate hierarchy at micro- to submicron scales in an allophanic Andisol. <i>Geoderma</i> , 2014, 216, 62-74.	5.1	122
10	Climate and parent material controls on organic matter storage in surface soils: A three-pool, density-separation approach. <i>Geoderma</i> , 2008, 147, 23-33.	5.1	107
11	Land use and environmental factors influencing soil surface CO ₂ flux and microbial biomass in natural and managed ecosystems in southern Wisconsin. <i>Soil Biology and Biochemistry</i> , 1998, 30, 1501-1509.	8.8	91
12	Association of organic matter with iron and aluminum across a range of soils determined via selective dissolution techniques coupled with dissolved nitrogen analysis. <i>Biogeochemistry</i> , 2013, 112, 95-109.	3.5	89
13	Improving understanding of soil organic matter dynamics by triangulating theories, measurements, and models. <i>Biogeochemistry</i> , 2018, 140, 1-13.	3.5	83
14	Soil Phosphorus Fractionation and Phosphorus-Use Efficiency of a Bornean Tropical Montane Rain Forest During Soil Aging With Podzolization. <i>Ecosystems</i> , 2004, 7, 259.	3.4	80
15	Extent and nature of organic coverage of soil mineral surfaces assessed by a gas sorption approach. <i>Geoderma</i> , 2009, 149, 152-160.	5.1	70
16	Beyond bulk: Density fractions explain heterogeneity in global soil carbon abundance and persistence. <i>Global Change Biology</i> , 2022, 28, 1178-1196.	9.5	67
17	Iron and aluminum association with microbially processed organic matter via meso-density aggregate formation across soils: organo-metallic glue hypothesis. <i>Soil</i> , 2020, 6, 597-627.	4.9	54
18	Interactive influences of climate and parent material on soil microbial community structure in Bornean tropical forest ecosystems. <i>Ecological Research</i> , 2011, 26, 627-636.	1.5	52

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19	An open-source database for the synthesis of soil radiocarbon data: International Soil Radiocarbon Database (ISRaD) version 1.0. <i>Earth System Science Data</i> , 2020, 12, 61-76.	9.9	48
20	Leveraging drought risk reduction for sustainable food, soil and climate via soil organic carbon sequestration. <i>Scientific Reports</i> , 2019, 9, 19744.	3.3	44
21	Biodegradation and regeneration of water-soluble carbon in a forest soil: leaching column study. <i>Biology and Fertility of Soils</i> , 2002, 35, 18-26.	4.3	43
22	Vertical distribution and pools of microbial residues in tropical forest soils formed from distinct parent materials. <i>Biogeochemistry</i> , 2009, 92, 83-94.	3.5	38
23	In Search of a Binding Agent: Nano-Scale Evidence of Preferential Carbon Associations with Poorly-Crystalline Mineral Phases in Physically-Stable, Clay-Sized Aggregates. <i>Soil Systems</i> , 2018, 2, 32.	2.6	33
24	Radiocarbon (^{14}C) Diurnal Variations in Fine Particles at Sites Downwind from Tokyo, Japan in Summer. <i>Environmental Science & Technology</i> , 2011, 45, 6784-6792.	10.0	32
25	Nature of soil organo-mineral assemblage examined by sequential density fractionation with and without sonication: Is allophanic soil different?. <i>Geoderma</i> , 2015, 241-242, 295-305.	5.1	31
26	Inhibition of radiocesium adsorption on 2:1 clay minerals under acidic soil environment: Effect of organic matter vs. hydroxy aluminum polymer. <i>Geoderma</i> , 2018, 319, 52-60.	5.1	29
27	Distinctive Roles of Two Aggregate Binding Agents in Allophanic Andisols: Young Carbon and Poorly-Crystalline Metal Phases with Old Carbon. <i>Soil Systems</i> , 2018, 2, 29.	2.6	24
28	Methane and nitrous oxide emissions from paddy fields in Japan: An assessment of controlling factor using an intensive regional data set. <i>Agriculture, Ecosystems and Environment</i> , 2018, 252, 51-60.	5.3	23
29	Significant contribution of subseafloor microparticles to the global manganese budget. <i>Nature Communications</i> , 2019, 10, 400.	12.8	22
30	An improved method to identify osmium-stained organic matter within soil aggregate structure by electron microscopy and synchrotron X-ray micro-computed tomography. <i>Soil and Tillage Research</i> , 2019, 191, 275-281.	5.6	21
31	The effects of amoebal bacterivory on carbon and nitrogen dynamics depend on temperature and soil structure interactions. <i>Soil Biology and Biochemistry</i> , 2016, 94, 133-137.	8.8	15
32	Silicon cycled by tropical forest trees: effects of species, elevation and parent material on Mount Kinabalu, Malaysia. <i>Plant and Soil</i> , 2019, 443, 155-166.	3.7	15
33	Distinctive organic matter pools among particle-size fractions detected by solid-state ^{13}C -NMR, ^{13}C and ^{15}N analyses only after strong dispersion in an allophanic Andisol. <i>Soil Science and Plant Nutrition</i> , 2015, 61, 242-248.	1.9	13
34	Variation in the aboveground stand structure and fine-root biomass of Bornean heath (kerangas) forests in relation to altitude and soil nitrogen availability. <i>Trees - Structure and Function</i> , 2016, 30, 385-394.	1.9	13
35	Characteristics of phosphorus fractions in the soils derived from sedimentary and serpentinite rocks in lowland tropical rain forests, Borneo. <i>Soil Science and Plant Nutrition</i> , 2018, 64, 218-221.	1.9	13
36	Soil faunal effect on plant litter decomposition in mineral soil examined by two in-situ approaches: Sequential density-size fractionation and micromorphology. <i>Geoderma</i> , 2020, 357, 113910.	5.1	12

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37	Optimal Thermolysis Conditions for Soil Carbon Storage on Plant Residue Burning: Modeling the Trade-Off between Thermal Decomposition and Subsequent Biodegradation. <i>Journal of Environmental Quality</i> , 2015, 44, 228-235.	2.0	10
38	Ecosystem Dynamics After Abandonment of Rice Paddy Fields: Does Alien Plant Invasion Enhance Carbon Storage?. <i>Ecosystems</i> , 2020, 23, 617-629.	3.4	10
39	Distribution and chemical species of phosphorus across density fractions in Andisols of contrasting mineralogy. <i>Geoderma</i> , 2021, 395, 115080.	5.1	8
40	Soil organic carbon was more strongly linked with soil phosphate fixing capacity than with clay content across 20,000 agricultural soils in Japan: a potential role of reactive aluminum revealed by soil database approach. <i>Soil Science and Plant Nutrition</i> , 2021, 67, 233-242.	1.9	7
41	Soil temperature and moisture-based estimation of rates of soil aggregate formation by the endogeic earthworm <i>Eisenia japonica</i> (Michaelsen, 1892). <i>Biology and Fertility of Soils</i> , 2016, 52, 789-797.	4.3	6
42	Divergent roles of iron and aluminum in sediment organic matter association at the terrestrial-aquatic interface. <i>Biogeochemistry</i> , 2022, 157, 355-378.	3.5	6
43	Heterotrophic denitrification constrains the upper limit of dissolved N ₂ O-nitrate concentration ratio in agricultural groundwater. <i>Nutrient Cycling in Agroecosystems</i> , 2015, 101, 181-191.	2.2	5
44	Asian dust increases radiocesium retention ability of serpentine soils in Japan. <i>Journal of Environmental Radioactivity</i> , 2019, 204, 86-94.	1.7	4
45	Millennium timescale carbon stability in an Andisol: How persistent are organo-metal complexes?. <i>Geoderma</i> , 2022, 417, 115820.	5.1	2