

Jonathan Sanderman

List of Publications by Year in descending order

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Version: 2024-02-01

92
papers

9,237
citations

57758

44
h-index

45317

90
g-index

101
all docs

101
docs citations

101
times ranked

10349
citing authors

#	ARTICLE	IF	CITATIONS
1	Natural climate solutions. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11645-11650.	7.1	1,709
2	Soil carbon debt of 12,000 years of human land use. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9575-9580.	7.1	713
3	The role of soil carbon in natural climate solutions. Nature Sustainability, 2020, 3, 391-398.	23.7	571
4	Natural climate solutions for the United States. Science Advances, 2018, 4, eaat1869.	10.3	333
5	Pathways of mineral-associated soil organic matter formation: Integrating the role of plant carbon source, chemistry, and point of entry. Global Change Biology, 2019, 25, 12-24.	9.5	323
6	Towards a global-scale soil climate mitigation strategy. Nature Communications, 2020, 11, 5427.	12.8	302
7	Contribution of the land sector to a 1.5 °C world. Nature Climate Change, 2019, 9, 817-828.	18.8	301
8	Long-term carbon storage through retention of dissolved aromatic acids by reactive particles in soil. Global Change Biology, 2012, 18, 2594-2605.	9.5	236
9	A global map of mangrove forest soil carbon at 30m spatial resolution. Environmental Research Letters, 2018, 13, 055002.	5.2	231
10	Microbial community structure mediates response of soil C decomposition to litter addition and warming. Soil Biology and Biochemistry, 2015, 80, 175-188.	8.8	180
11	Global-change controls on soil-carbon accumulation and loss in coastal vegetated ecosystems. Nature Geoscience, 2019, 12, 685-692.	12.9	176
12	Predicting contents of carbon and its component fractions in Australian soils from diffuse reflectance mid-infrared spectra. Soil Research, 2013, 51, 577.	1.1	175
13	Dissolved organic carbon chemistry and dynamics in contrasting forest and grassland soils. Biogeochemistry, 2008, 89, 181-198.	3.5	173
14	The global significance of omitting soil erosion from soil organic carbon cycling schemes. Nature Climate Change, 2016, 6, 187-191.	18.8	168
15	Protecting irrecoverable carbon in Earth's ecosystems. Nature Climate Change, 2020, 10, 287-295.	18.8	159
16	Salinity and sodicity affect soil respiration and dissolved organic matter dynamics differentially in soils varying in texture. Soil Biology and Biochemistry, 2012, 45, 8-13.	8.8	158
17	Australian vegetated coastal ecosystems as global hotspots for climate change mitigation. Nature Communications, 2019, 10, 4313.	12.8	150
18	Quantifying the allocation of soil organic carbon to biologically significant fractions. Soil Research, 2013, 51, 561.	1.1	129

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19	Accounting for soil carbon sequestration in national inventories: a soil scientist's perspective. <i>Environmental Research Letters</i> , 2010, 5, 034003.	5.2	118
20	The sorption of organic carbon onto differing clay minerals in the presence and absence of hydrous iron oxide. <i>Geoderma</i> , 2013, 209-210, 15-21.	5.1	117
21	Linking soils and streams: Sources and chemistry of dissolved organic matter in a small coastal watershed. <i>Water Resources Research</i> , 2009, 45, .	4.2	114
22	Effects of clay mineralogy and hydrous iron oxides on labile organic carbon stabilisation. <i>Geoderma</i> , 2012, 173-174, 104-110.	5.1	114
23	Land-based measures to mitigate climate change: Potential and feasibility by country. <i>Global Change Biology</i> , 2021, 27, 6025-6058.	9.5	114
24	Carbon sequestration by Australian tidal marshes. <i>Scientific Reports</i> , 2017, 7, 44071.	3.3	112
25	Can management induced changes in the carbonate system drive soil carbon sequestration? A review with particular focus on Australia. <i>Agriculture, Ecosystems and Environment</i> , 2012, 155, 70-77.	5.3	102
26	Losses and recovery of organic carbon from a seagrass ecosystem following disturbance. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2015, 282, 20151537.	2.6	102
27	Global mapping of potential natural vegetation: an assessment of machine learning algorithms for estimating land potential. <i>PeerJ</i> , 2018, 6, e5457.	2.0	94
28	Application of eddy covariance measurements to the temperature dependence of soil organic matter mean residence time. <i>Global Biogeochemical Cycles</i> , 2003, 17, n/a-n/a.	4.9	93
29	Future carbon emissions from global mangrove forest loss. <i>Global Change Biology</i> , 2021, 27, 2856-2866.	9.5	93
30	Accurate and Precise Prediction of Soil Properties from a Large Mid-Infrared Spectral Library. <i>Soil Systems</i> , 2019, 3, 11.	2.6	88
31	A comparative study of dissolved organic carbon transport and stabilization in California forest and grassland soils. <i>Biogeochemistry</i> , 2008, 89, 309-327.	3.5	83
32	Sediment anoxia limits microbial-driven seagrass carbon remineralization under warming conditions. <i>FEMS Microbiology Ecology</i> , 2017, 93, .	2.7	82
33	Soil carbon science for policy and practice. <i>Nature Sustainability</i> , 2019, 2, 1070-1072.	23.7	80
34	Sorption of dissolved organic matter in salt-affected soils: Effect of salinity, sodicity and texture. <i>Science of the Total Environment</i> , 2012, 435-436, 337-344.	8.0	74
35	Similar composition but differential stability of mineral retained organic matter across four classes of clay minerals. <i>Biogeochemistry</i> , 2014, 121, 409-424.	3.5	72
36	Role of large-scale soil structure in organic carbon turnover: Evidence from California grassland soils. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	67

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37	A Global Assessment of the Chemical Recalcitrance of Seagrass Tissues: Implications for Long-Term Carbon Sequestration. <i>Frontiers in Plant Science</i> , 2017, 8, 925.	3.6	67
38	Nitrate addition stimulates microbial decomposition of organic matter in salt marsh sediments. <i>Global Change Biology</i> , 2019, 25, 3224-3241.	9.5	61
39	Variability and Vulnerability of Coastal "Blue Carbon" Stocks: A Case Study from Southeast Australia. <i>Ecosystems</i> , 2018, 21, 263-279.	3.4	54
40	Mid-infrared spectroscopy for prediction of soil health indicators in the United States. <i>Soil Science Society of America Journal</i> , 2020, 84, 251-261.	2.2	53
41	A comparative study of dissolved organic carbon transport and stabilization in California forest and grassland soils. <i>Biogeochemistry</i> , 2009, 92, 41-59.	3.5	51
42	Uncertainty in soil carbon accounting due to unrecognized soil erosion. <i>Global Change Biology</i> , 2013, 19, 264-272.	9.5	50
43	Greater soil carbon stocks and faster turnover rates with increasing agricultural productivity. <i>Soil</i> , 2017, 3, 1-16.	4.9	49
44	The dynamics of soil redistribution and the implications for soil organic carbon accounting in agricultural south-eastern Australia. <i>Global Change Biology</i> , 2012, 18, 2081-2088.	9.5	48
45	Spatial patterns and controls of soil chemical weathering rates along a transient hillslope. <i>Earth and Planetary Science Letters</i> , 2009, 288, 184-193.	4.4	47
46	Impacts of Rotational Grazing on Soil Carbon in Native Grass-Based Pastures in Southern Australia. <i>PLoS ONE</i> , 2015, 10, e0136157.	2.5	43
47	Vulnerability of seagrass blue carbon to microbial attack following exposure to warming and oxygen. <i>Science of the Total Environment</i> , 2019, 686, 264-275.	8.0	42
48	Identifying sources and processes influencing nitrogen export to a small stream using dual isotopes of nitrate. <i>Water Resources Research</i> , 2013, 49, 5715-5731.	4.2	38
49	Exploring drivers of litter decomposition in a greening Arctic: results from a transplant experiment across a treeline. <i>Ecology</i> , 2018, 99, 2284-2294.	3.2	38
50	Microbial degradation of organic carbon sorbed to phyllosilicate clays with and without hydrous iron oxide coating. <i>European Journal of Soil Science</i> , 2015, 66, 83-94.	3.9	36
51	The soil carbon erosion paradox. <i>Nature Climate Change</i> , 2017, 7, 317-319.	18.8	35
52	Ramped thermal analysis for isolating biologically meaningful soil organic matter fractions with distinct residence times. <i>Soil</i> , 2020, 6, 131-144.	4.9	32
53	Soil organic carbon fractions in the Great Plains of the United States: an application of mid-infrared spectroscopy. <i>Biogeochemistry</i> , 2021, 156, 97-114.	3.5	31
54	Declines in soil carbon storage under no tillage can be alleviated in the long run. <i>Geoderma</i> , 2022, 425, 116028.	5.1	28

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55	Redefining the inert organic carbon pool. <i>Soil Biology and Biochemistry</i> , 2016, 92, 149-152.	8.8	27
56	Post-wildfire Erosion in Mountainous Terrain Leads to Rapid and Major Redistribution of Soil Organic Carbon. <i>Frontiers in Earth Science</i> , 2017, 5, .	1.8	27
57	Soil carbon pools and fluxes vary across a burn severity gradient three years after wildfire in Sierra Nevada mixed-conifer forest. <i>Geoderma</i> , 2019, 333, 10-22.	5.1	27
58	Is Standardization Necessary for Sharing of a Large Mid-Infrared Soil Spectral Library?. <i>Sensors</i> , 2020, 20, 6729.	3.8	26
59	Drivers and modelling of blue carbon stock variability in sediments of southeastern Australia. <i>Biogeosciences</i> , 2020, 17, 2041-2059.	3.3	24
60	Carbon sequestration under subtropical perennial pastures I: Overall trends. <i>Soil Research</i> , 2013, 51, 760.	1.1	21
61	Decreased Soil Organic Matter in a Long-Term Soil Warming Experiment Lowers Soil Water Holding Capacity and Affects Soil Thermal and Hydrological Buffering. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020, 125, e2019JG005158.	3.0	21
62	Carbon sequestration under subtropical perennial pastures II: Carbon dynamics. <i>Soil Research</i> , 2013, 51, 771.	1.1	20
63	Delayed impact of natural climate solutions. <i>Global Change Biology</i> , 2021, 27, 215-217.	9.5	20
64	Is demineralization with dilute hydrofluoric acid a viable method for isolating mineral stabilized soil organic matter?. <i>Geoderma</i> , 2017, 304, 4-11.	5.1	19
65	Patterns and predictors of soil organic carbon storage across a continental-scale network. <i>Biogeochemistry</i> , 2021, 156, 75-96.	3.5	19
66	Assessing soil carbon vulnerability in the Western USA by geospatial modeling of pyrogenic and particulate carbon stocks. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017, 122, 354-369.	3.0	17
67	Biogeochemistry of Decomposition and Detrital Processing. , 2003, , 249-316.		16
68	Soil organic carbon estimation using VNIR-SWIR spectroscopy: The effect of multiple sensors and scanning conditions. <i>Soil and Tillage Research</i> , 2021, 211, 105017.	5.6	16
69	Soil Carbon Dioxide Production and Climatic Sensitivity in Contrasting California Ecosystems. <i>Soil Science Society of America Journal</i> , 2010, 74, 1356-1366.	2.2	15
70	Fine grinding is needed to maintain the high accuracy of mid-infrared diffuse reflectance spectroscopy for soil property estimation. <i>Soil Science Society of America Journal</i> , 2021, 85, 263-272.	2.2	15
71	Allocation into soil organic matter fractions of ¹⁴ C captured via photosynthesis by two perennial grass pastures. <i>Soil Research</i> , 2013, 51, 748.	1.1	14
72	Losses of mineral soil carbon largely offset biomass accumulation 15 years after whole-tree harvest in a northern hardwood forest. <i>Biogeochemistry</i> , 2019, 144, 1-14.	3.5	14

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73	Subtropical giant podzol chronosequence reveals that soil carbon stabilisation is not governed by litter quality. <i>Biogeochemistry</i> , 2015, 124, 205-217.	3.5	13
74	Improving Soil Carbon Estimates by Linking Conceptual Pools Against Measurable Carbon Fractions in the DAYCENT Model Version 4.5. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	3.8	13
75	Soil Organic Carbon Development and Turnover in Natural and Disturbed Salt Marsh Environments. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL090287.	4.0	12
76	Abiotic dissolution and biological uptake of nitrous oxide in Mediterranean woodland and pasture soil. <i>Soil Biology and Biochemistry</i> , 2015, 82, 62-64.	8.8	11
77	Comment on "Climate legacies drive global soil carbon stocks in terrestrial ecosystems". <i>Science Advances</i> , 2018, 4, e1701482.	10.3	11
78	Evaluating three calibration transfer methods for predictions of soil properties using mid-infrared spectroscopy. <i>Soil Science Society of America Journal</i> , 2021, 85, 501-519.	2.2	11
79	A global soil spectral calibration library and estimation service. <i>Soil Security</i> , 2022, 7, 100061.	2.3	11
80	Whole Farm Net Greenhouse Gas Abatement from Establishing Kikuyu-Based Perennial Pastures in South-Western Australia. <i>Animals</i> , 2012, 2, 316-330.	2.3	9
81	Deciphering sedimentary organic matter sources: Insights from radiocarbon measurements and NMR spectroscopy. <i>Limnology and Oceanography</i> , 2015, 60, 739-753.	3.1	9
82	Climate-dependent topographic effects on pyrogenic soil carbon in southeastern Australia. <i>Geoderma</i> , 2018, 322, 121-130.	5.1	9
83	Differential production yet chemical similarity of dissolved organic matter across a chronosequence with contrasting nutrient availability in Hawaii. <i>Biogeochemistry</i> , 2013, 113, 259-269.	3.5	8
84	Can Agricultural Management Induced Changes in Soil Organic Carbon Be Detected Using Mid-Infrared Spectroscopy?. <i>Remote Sensing</i> , 2021, 13, 2265.	4.0	8
85	Pyrogenic carbon distribution in mineral topsoils of the northeastern United States. <i>Geoderma</i> , 2017, 296, 69-78.	5.1	7
86	Mid-infrared spectroscopy for planted forest soil and foliage nutrition predictions, New Zealand case study. <i>Trees, Forests and People</i> , 2022, 8, 100280.	1.9	6
87	The need for knowledge transfer and communication among stakeholders in the voluntary carbon market. <i>Biogeochemistry</i> , 2022, 161, 41-46.	3.5	6
88	A combined microbial and ecosystem metric of carbon retention efficiency explains land cover-dependent soil microbial biodiversity-ecosystem function relationships. <i>Biogeochemistry</i> , 2021, 153, 1-15.	3.5	5
89	Controls on the Spatial Distribution of Near-Surface Pyrogenic Carbon on Hillslopes 1 Year Following Wildfire. <i>Journal of Geophysical Research F: Earth Surface</i> , 2021, 126, e2020JF005996.	2.8	5
90	<i>Biogeochemistry of Decomposition and Detrital Processing</i> . , 2014, , 217-272.		4

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91	Dissolved organic matter retention in volcanic soils with contrasting mineralogy: a column sorption experiment. <i>Biogeochemistry</i> , 2017, 135, 293-306.	3.5	4
92	Divergent responses of organic matter composition to incubation temperature. <i>Geoderma</i> , 2015, 259-260, 279-287.	5.1	3