

William Horwath

List of Publications by Year in descending order

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Version: 2024-02-01

122
papers

7,769
citations

66315

42
h-index

54882

84
g-index

125
all docs

125
docs citations

125
times ranked

8459
citing authors

#	ARTICLE	IF	CITATIONS
1	Acid fumigation of soils to remove carbonates prior to total organic carbon or CARBON-13 isotopic analysis. Soil Science Society of America Journal, 2001, 65, 1853-1856.	1.2	948
2	Spectrophotometric Determination of Nitrate with a Single Reagent. Analytical Letters, 2003, 36, 2713-2722.	1.0	787
3	Ammonia oxidation pathways and nitrifier denitrification are significant sources of N ₂ O and NO under low oxygen availability. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 6328-6333.	3.3	632
4	Changes in Soil Chemical Properties Resulting from Organic and Low-Input Farming Practices. Agronomy Journal, 1998, 90, 662-671.	0.9	332
5	Decomposition of rice straw and microbial carbon use efficiency under different soil temperatures and moistures. Soil Biology and Biochemistry, 2000, 32, 1773-1785.	4.2	299
6	Cover cropping affects soil N ₂ O and CO ₂ emissions differently depending on type of irrigation. Agriculture, Ecosystems and Environment, 2010, 137, 251-260.	2.5	178
7	Regulation of extracellular protease activity in soil in response to different sources and concentrations of nitrogen and carbon. Soil Biology and Biochemistry, 2008, 40, 3040-3048.	4.2	152
8	Nitrogen, weeds and water as yield-limiting factors in conventional, low-input, and organic tomato systems. Agriculture, Ecosystems and Environment, 1999, 73, 257-270.	2.5	149
9	Mineral control of organic carbon mineralization in a range of temperate conifer forest soils. Global Change Biology, 2006, 12, 834-847.	4.2	148
10	Rice Yield and Nitrogen Utilization Efficiency under Alternative Straw Management Practices. Agronomy Journal, 2000, 92, 1096-1103.	0.9	142
11	Structural stability of coprecipitated natural organic matter and ferric iron under reducing conditions. Organic Geochemistry, 2012, 48, 81-89.	0.9	134
12	Soil moisture and plant residue addition interact in their effect on extracellular enzyme activity. Pedobiologia, 2011, 54, 71-78.	0.5	124
13	Soil microbial biomass size and soil carbon influence the priming effect from carbon inputs depending on nitrogen availability. Soil Biology and Biochemistry, 2018, 119, 41-49.	4.2	124
14	Methane pool and flux dynamics in a rice field following straw incorporation. Soil Biology and Biochemistry, 1999, 31, 1313-1322.	4.2	118
15	Role of Mineral-Nitrogen in Residue Decomposition and Stable Soil Organic Matter Formation. Soil Science Society of America Journal, 2005, 69, 1730-1736.	1.2	112
16	Removal of inorganic mercury and methylmercury from surface waters following coagulation of dissolved organic matter with metal-based salts. Science of the Total Environment, 2011, 409, 631-637.	3.9	105
17	Relationship between carbon and nitrogen availability and extracellular enzyme activities in soil. Pedobiologia, 2009, 53, 87-98.	0.5	100
18	A genomic perspective on stoichiometric regulation of soil carbon cycling. ISME Journal, 2017, 11, 2652-2665.	4.4	97

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19	The effect of rice straw on the priming of soil organic matter and methane production in peat soils. <i>Soil Biology and Biochemistry</i> , 2015, 81, 98-107.	4.2	93
20	Warming increases microbial residue contribution to soil organic carbon in an alpine meadow. <i>Soil Biology and Biochemistry</i> , 2019, 135, 13-19.	4.2	88
21	Immobilization of Fertilizer Nitrogen in Rice. <i>Soil Science Society of America Journal</i> , 2001, 65, 1143-1152.	1.2	84
22	The source of microbial C has little impact on soil organic matter stabilisation in forest ecosystems. <i>Ecology Letters</i> , 2012, 15, 1257-1265.	3.0	82
23	Growth decline and divergent tree ring isotopic composition ($\delta^{13}\text{C}$ and $\delta^{18}\text{O}$) contradict predictions of CO_2 stimulation in high altitudinal forests. <i>Global Change Biology</i> , 2013, 19, 1748-1758.	4.2	79
24	Soil Mineralogy Affects Conifer Forest Soil Carbon Source Utilization and Microbial Priming. <i>Soil Science Society of America Journal</i> , 2007, 71, 1141-1150.	1.2	78
25	Significance of organic nitrogen uptake from plant residues by soil microorganisms as affected by carbon and nitrogen availability. <i>Soil Biology and Biochemistry</i> , 2009, 41, 1281-1288.	4.2	78
26	Tree growth acceleration and expansion of alpine forests: The synergistic effect of atmospheric and edaphic change. <i>Science Advances</i> , 2016, 2, e1501302.	4.7	74
27	Unprecedented carbon accumulation in mined soils: the synergistic effect of resource input and plant species invasion. <i>Ecological Applications</i> , 2013, 23, 1345-1356.	1.8	72
28	Defining a realistic control for the chloroform fumigation-incubation method using microscopic counting and ^{14}C -substrates. <i>Canadian Journal of Soil Science</i> , 1996, 76, 459-467.	0.5	67
29	Explaining Global Increases in Water Use Efficiency: Why Have We Overestimated Responses to Rising Atmospheric CO_2 in Natural Forest Ecosystems?. <i>PLoS ONE</i> , 2013, 8, e53089.	1.1	64
30	Greenhouse gas emissions from green waste composting windrow. <i>Waste Management</i> , 2017, 59, 70-79.	3.7	63
31	Stabilization of C-Carbon and Immobilization of N-Nitrogen from Rice Straw in Humic Fractions. <i>Soil Science Society of America Journal</i> , 2003, 67, 806.	1.2	63
32	Competitive interactions between native and exotic earthworm species as influenced by habitat quality in a California grassland. <i>Applied Soil Ecology</i> , 2006, 32, 38-53.	2.1	58
33	Integrating effects of species composition and soil properties to predict shifts in montane forest carbon-water relations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E4219-E4226.	3.3	58
34	Nitrogen Dynamics and Fertilizer Use Efficiency in Rice following Straw Incorporation and Winter Flooding. <i>Agronomy Journal</i> , 2001, 93, 1346-1354.	0.9	55
35	Case study on potential agricultural responses to climate change in a California landscape. <i>Climatic Change</i> , 2011, 109, 407-427.	1.7	53
36	CARBON CYCLING AND FORMATION OF SOIL ORGANIC MATTER. , 2007, , 303-339.		52

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37	Short-term dynamics of soil carbon, microbial biomass, and soil enzyme activities as compared to longer-term effects of tillage in irrigated row crops. <i>Biology and Fertility of Soils</i> , 2009, 46, 65-72.	2.3	52
38	Stabilization of Fertilizer Nitrogen ¹⁵ into Humic Substances in Aerobic vs. Waterlogged Soil Following Straw Incorporation. <i>Soil Science Society of America Journal</i> , 2001, 65, 499-510.	1.2	48
39	Nitrate Removal Effectiveness of a Riparian Buffer along a Small Agricultural Stream in Western Oregon. <i>Journal of Environmental Quality</i> , 2003, 32, 162-170.	1.0	48
40	The soil matrix increases microbial C stabilization in temperate and tropical forest soils. <i>Biogeochemistry</i> , 2015, 122, 35-45.	1.7	48
41	Linking Remote Sensing and Dendrochronology to Quantify Climate-Induced Shifts in High-Elevation Forests Over Space and Time. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2019, 124, 166-183.	1.3	48
42	Implications of Using On-Farm Flood Flow Capture To Recharge Groundwater and Mitigate Flood Risks Along the Kings River, CA. <i>Environmental Science & Technology</i> , 2014, 48, 13601-13609.	4.6	46
43	Litter type and soil minerals control temperate forest soil carbon response to climate change. <i>Global Change Biology</i> , 2008, 14, 2064-2080.	4.2	44
44	Investigating amino acid utilization by soil microorganisms using compound specific stable isotope analysis. <i>Soil Biology and Biochemistry</i> , 2014, 74, 100-105.	4.2	44
45	Nitrogen Dynamics in Humic Fractions under Alternative Straw Management in Temperate Rice. <i>Soil Science Society of America Journal</i> , 2002, 66, 478-488.	1.2	39
46	Denitrification and Nitrate Consumption in an Herbaceous Riparian Area and Perennial Ryegrass Seed Cropping System. <i>Soil Science Society of America Journal</i> , 2008, 72, 1299-1310.	1.2	38
47	Iron: The Forgotten Driver of Nitrous Oxide Production in Agricultural Soil. <i>PLoS ONE</i> , 2013, 8, e60146.	1.1	38
48	Deep vadose zone hydrology demonstrates fate of nitrate in eastern San Joaquin Valley. <i>California Agriculture</i> , 2005, 59, 124-132.	0.5	38
49	Soil Carbon and Nitrogen Storage in Upper Montane Riparian Meadows. <i>Ecosystems</i> , 2011, 14, 1217-1231.	1.6	37
50	Abiotic solubilization of soil organic matter, a less-seen aspect of dissolved organic matter production. <i>Soil Biology and Biochemistry</i> , 2012, 50, 12-21.	4.2	37
51	Iron-mediated stabilization of soil carbon amplifies the benefits of ecological restoration in degraded lands. <i>Ecological Applications</i> , 2015, 25, 1226-1234.	1.8	37
52	Ryegrass straw component decomposition during mesophilic and thermophilic incubations. <i>Biology and Fertility of Soils</i> , 1996, 21, 227-232.	2.3	36
53	Short-term nitrogen-15 recovery vs. long-term total soil N gains in conventional and alternative cropping systems. <i>Soil Biology and Biochemistry</i> , 2002, 34, 43-50.	4.2	36
54	Influence of rice straw on priming of soil C for dissolved organic C and CH ₄ production. <i>Plant and Soil</i> , 2017, 417, 231-241.	1.8	36

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55	Eliminating interference from iron(III) for ultraviolet absorbance measurements of dissolved organic matter. <i>Chemosphere</i> , 2010, 78, 1409-1415.	4.2	32
56	Isotopic and nutritional evidence for species- and site-specific responses to N deposition and elevated CO ₂ in temperate forests. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2015, 120, 1110-1123.	1.3	32
57	Effect of iron oxide on nitrification in two agricultural soils with different pH. <i>Biogeosciences</i> , 2016, 13, 5609-5617.	1.3	31
58	Integrating Soil Biological and Chemical Indices to Predict Net Nitrogen Mineralization across California Agricultural Systems. <i>Soil Science Society of America Journal</i> , 2016, 80, 1675-1687.	1.2	31
59	Short-term soil carbon dynamics of humic fractions in low-input and organic cropping systems. <i>Geoderma</i> , 2003, 114, 319-331.	2.3	30
60	The temperature sensitivity of organic carbon mineralization is affected by exogenous carbon inputs and soil organic carbon content. <i>European Journal of Soil Biology</i> , 2017, 81, 69-75.	1.4	30
61	Role of green waste compost in the production of N ₂ O from agricultural soils. <i>Soil Biology and Biochemistry</i> , 2015, 83, 57-65.	4.2	29
62	The solubility of carbon inputs affects the priming of soil organic matter. <i>Plant and Soil</i> , 2017, 410, 129-138.	1.8	27
63	Aluminum- and iron-based coagulation for in-situ removal of dissolved organic carbon, disinfection byproducts, mercury and other constituents from agricultural drain water. <i>Ecological Engineering</i> , 2019, 134, 26-38.	1.6	27
64	Climatic sensitivity, water-use efficiency, and growth decline in boreal jack pine (<i>Pinus</i>) Tj ETQq0 0 0 rBT /Overlock 10 Tf 50 387 T 121, 2761-2774.	1.3	26
65	Plant-microbe interactions regulate carbon and nitrogen accumulation in forest soils. <i>Forest Ecology and Management</i> , 2017, 384, 415-423.	1.4	26
66	Soil nitrous oxide emissions in forage systems fertilized with liquid dairy manure and inorganic fertilizers. <i>Agriculture, Ecosystems and Environment</i> , 2016, 225, 160-172.	2.5	25
67	Conservation tillage and cover cropping influence soil properties in San Joaquin Valley cotton-tomato crop. <i>California Agriculture</i> , 2006, 60, 146-153.	0.5	25
68	Quantifying the Effects of Green Waste Compost Application, Water Content and Nitrogen Fertilization on Nitrous Oxide Emissions in 10 Agricultural Soils. <i>Journal of Environmental Quality</i> , 2013, 42, 912-918.	1.0	24
69	Parent material and conifer biome influence microbial residue accumulation in forest soils. <i>Soil Biology and Biochemistry</i> , 2017, 107, 1-9.	4.2	24
70	Nitrogen Management and Methane Emissions in Direct-Seeded Rice Systems. <i>Agronomy Journal</i> , 2014, 106, 968-980.	0.9	23
71	Quantifying the impact of drought on soil-plant interactions: a seasonal analysis of biotic and abiotic controls of carbon and nutrient dynamics in high-altitudinal grasslands. <i>Plant and Soil</i> , 2015, 389, 59-71.	1.8	23
72	Nitrous oxide uptake in rewetted wetlands with contrasting soil organic carbon contents. <i>Soil Biology and Biochemistry</i> , 2016, 100, 110-117.	4.2	23

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73	Denitrification in Cultivated and Noncultivated Riparian Areas of Grass Cropping Systems. <i>Journal of Environmental Quality</i> , 1998, 27, 225-231.	1.0	22
74	Knife-injected anhydrous ammonia increases yield-scaled N ₂ O emissions compared to broadcast or band-applied ammonium sulfate in wheat. <i>Agriculture, Ecosystems and Environment</i> , 2015, 212, 148-157.	2.5	22
75	Soil carbon and nitrogen storage in alluvial wet meadows of the Southern Sierra Nevada Mountains, USA. <i>Journal of Soils and Sediments</i> , 2014, 14, 34-43.	1.5	21
76	Effects of ferric sulfate and polyaluminum chloride coagulation enhanced treatment wetlands on <i>Typha</i> growth, soil and water chemistry. <i>Science of the Total Environment</i> , 2019, 648, 116-124.	3.9	21
77	Experimental Dosing of Wetlands with Coagulants Removes Mercury from Surface Water and Decreases Mercury Bioaccumulation in Fish. <i>Environmental Science & Technology</i> , 2015, 49, 6304-6311.	4.6	20
78	Wetlands receiving water treated with coagulants improve water quality by removing dissolved organic carbon and disinfection byproduct precursors. <i>Science of the Total Environment</i> , 2018, 622-623, 603-613.	3.9	20
79	Nitrogen Dynamics in Humic Fractions under Alternative Straw Management in Temperate Rice. <i>Soil Science Society of America Journal</i> , 2002, 66, 478.	1.2	20
80	Microbial C and N dynamics during mesophilic and thermophilic incubations of ryegrass. <i>Biology and Fertility of Soils</i> , 1996, 22, 1-9.	2.3	19
81	A soil carbon proxy to predict CH ₄ and N ₂ O emissions from rewetted agricultural peatlands. <i>Agriculture, Ecosystems and Environment</i> , 2016, 220, 64-75.	2.5	19
82	Sediment accretion and carbon storage in constructed wetlands receiving water treated with metal-based coagulants. <i>Ecological Engineering</i> , 2018, 111, 176-185.	1.6	19
83	Structural equation modeling reveals iron (hydr)oxides as a strong mediator of N mineralization in California agricultural soils. <i>Geoderma</i> , 2018, 315, 120-129.	2.3	19
84	Warming yields distinct accumulation patterns of microbial residues in dry and wet alpine grasslands on the Qinghai-Tibetan Plateau. <i>Biology and Fertility of Soils</i> , 2020, 56, 881-892.	2.3	19
85	Influence of Agricultural Managed Aquifer Recharge (AgMAR) and Stratigraphic Heterogeneities on Nitrate Reduction in the Deep Subsurface. <i>Water Resources Research</i> , 2021, 57, e2020WR029148.	1.7	17
86	Coping With Extreme Events: Growth and Water Use Efficiency of Trees in Western Mexico During the Driest and Wettest Periods of the Past One Hundred Sixty Years. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2019, 124, 3419-3431.	1.3	16
87	From Trees to Ecosystems: Spatiotemporal Scaling of Climatic Impacts on Montane Landscapes Using Dendrochronological, Isotopic, and Remotely Sensed Data. <i>Global Biogeochemical Cycles</i> , 2020, 34, e2019GB006325.	1.9	16
88	Mitigation of Shallow Groundwater Nitrate in a Poorly Drained Riparian Area and Adjacent Cropland. <i>Journal of Environmental Quality</i> , 2007, 36, 628-637.	1.0	15
89	Using multielement isotopic analysis to decipher drought impacts and adaptive management in ancient agricultural systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E4807-8.	3.3	15
90	Estimating Annual Soil Carbon Loss in Agricultural Peatland Soils Using a Nitrogen Budget Approach. <i>PLoS ONE</i> , 2015, 10, e0121432.	1.1	15

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91	Interactive effects of land-use change and topography on asymbiotic nitrogen fixation in the Brazilian Atlantic Forest. <i>Biogeochemistry</i> , 2019, 142, 137-153.	1.7	15
92	Stabilization of ¹³ C-Carbon and Immobilization of ¹⁵ N-Nitrogen from Rice Straw in Humic Fractions. <i>Soil Science Society of America Journal</i> , 2003, 67, 806-816.	1.2	14
93	Comparison of isotope methods for partitioning methane production and soil C priming effects during anaerobic decomposition of rice residue in soil. <i>Soil Biology and Biochemistry</i> , 2016, 95, 51-59.	4.2	14
94	Two Decades of Experimental Manipulation Reveal Potential for Enhanced Biomass Accumulation and Water Use Efficiency in Ponderosa Pine Plantations Across Climate Gradients. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2019, 124, 2321-2334.	1.3	12
95	Fate of Nitrogen-15 in a Perennial Ryegrass Seed Field and Herbaceous Riparian Area. <i>Soil Science Society of America Journal</i> , 2006, 70, 909-919.	1.2	11
96	Crop Residue Biomass Effects on Agricultural Runoff. <i>Applied and Environmental Soil Science</i> , 2013, 2013, 1-8.	0.8	11
97	Precipitation Events and Management Practices Affect Greenhouse Gas Emissions from Vineyards in a Mediterranean Climate. <i>Soil Science Society of America Journal</i> , 2017, 81, 138-152.	1.2	11
98	Nitrogen Fertilization Had No Effect on CH ₄ and N ₂ O Emissions in Rice Planted in Rewetted Peatlands. <i>Soil Science Society of America Journal</i> , 2017, 81, 224-232.	1.2	11
99	Effect of reduction of aggregate size on the priming effect in a Mollisol under different soil managements. <i>European Journal of Soil Science</i> , 2019, 70, 765-775.	1.8	11
100	Residue decomposition and priming of soil organic carbon following different NPK fertilizer histories. <i>Soil Science Society of America Journal</i> , 2020, 84, 1898-1909.	1.2	10
101	Nitrogen Dynamics in Irrigated Forage Systems Fertilized with Liquid Dairy Manure. <i>Agronomy Journal</i> , 2012, 104, 897-907.	0.9	9
102	Stand age affects emissions of N ₂ O in flood-irrigated alfalfa: a comparison of field measurements, DNDC model simulations and IPCC Tier 1 estimates. <i>Nutrient Cycling in Agroecosystems</i> , 2016, 106, 335-345.	1.1	9
103	Soil Microbial Biomass Size and Nitrogen Availability Regulate the Incorporation of Residue Carbon into Dissolved Organic Pool and Microbial Biomass. <i>Soil Science Society of America Journal</i> , 2019, 83, 1083-1092.	1.2	9
104	Fire Affects Asymbiotic Nitrogen Fixation in Southern Amazon Forests. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020, 125, e2019JG005383.	1.3	9
105	Reducing greenhouse gas emissions and stabilizing nutrients from dairy manure using chemical coagulation. <i>Journal of Environmental Quality</i> , 2021, 50, 375-383.	1.0	9
106	Soil sampling protocol reliably estimates preplant NO ₃ ⁻ in SDI tomatoes. <i>California Agriculture</i> , 2015, 69, 222-229.	0.5	9
107	Mercury sequestration and transformation in chemically enhanced treatment wetlands. <i>Chemosphere</i> , 2019, 217, 496-506.	4.2	8
108	Long-Term Wood Micro-Density Variation in Alpine Forests at Central Mexico and Their Spatial Links with Remotely Sensed Information. <i>Forests</i> , 2020, 11, 452.	0.9	8

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109	Testing protocol ensures the authenticity of organic fertilizers. <i>California Agriculture</i> , 2013, 67, 210-216.	0.5	7
110	Investigating the Temporal Effects of Metal-Based Coagulants to Remove Mercury from Solution in the Presence of Dissolved Organic Matter. <i>Environmental Management</i> , 2016, 57, 220-228.	1.2	7
111	Cover Crop Development Related to Nitrate Uptake and Cumulative Temperature. <i>Crop Science</i> , 2017, 57, 971-982.	0.8	7
112	Impact of Composting Food Waste with Green Waste on Greenhouse Gas Emissions from Compost Windrows. <i>Compost Science and Utilization</i> , 2019, 27, 35-45.	1.2	6
113	Strategies for Managing Soil Organic Matter to Supply Plant Nutrients. <i>Advances in Agroecology</i> , 2004, , .	0.3	6
114	Greenhouse Gas Emissions from Rice Cropping Systems. <i>ACS Symposium Series</i> , 2011, , 67-89.	0.5	5
115	Direct green waste land application: How to reduce its impacts on greenhouse gas and volatile organic compound emissions?. <i>Waste Management</i> , 2016, 52, 318-325.	3.7	4
116	Effects of Positively Charged Dicyandiamide and Nitrogen Fertilizer Sources on Nitrous Oxide Emissions in Irrigated Corn. <i>Journal of Environmental Quality</i> , 2017, 46, 1123-1130.	1.0	4
117	Predictable Oxygen Isotope Exchange Between Plant Lipids and Environmental Water: Implications for Ecosystem Water Balance Reconstruction. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2018, 123, 2941-2954.	1.3	4
118	Exposure to Light Elicits a Spectrum of Chemical Changes in Soil. <i>Journal of Geophysical Research F: Earth Surface</i> , 2019, 124, 2288-2310.	1.0	4
119	Sequestration and Transformation in Chemically Enhanced Treatment Wetlands: DOC, DBPPs, and Nutrients. <i>Journal of Environmental Engineering, ASCE</i> , 2019, 145, .	0.7	3
120	Chemically Enhanced Treatment Wetland to Improve Water Quality and Mitigate Land Subsidence in the Sacramento-San Joaquin Delta: Cost and Design Considerations. <i>San Francisco Estuary and Watershed Science</i> , 2019, 17, .	0.2	2
121	Topographic attributes override impacts of agronomic practices on prokaryotic community structure. <i>Applied Soil Ecology</i> , 2022, 175, 104446.	2.1	2
122	Rice Drain Management to Reduce Seepage Exports in the Sacramento-San Joaquin Delta, California. <i>Journal of Environmental Quality</i> , 2018, 47, 1186-1195.	1.0	1