James Anthony Ippolito

List of Publications by Year
in descending order

136 papers	6,614 citations	87888 38 h-index	71685 76 g-index
139 all docs	139 docs citations	139 times ranked	5738 citing authors

#	Article	IF	Citations
1	Biochar: A Synthesis of Its Agronomic Impact beyond Carbon Sequestration. Journal of Environmental Quality, 2012, 41, 973-989.	2.0	738
2	Biochar, soil and land-use interactions that reduce nitrate leaching and N2O emissions: A meta-analysis. Science of the Total Environment, 2019, 651, 2354-2364.	8.0	339
3	Feedstock choice, pyrolysis temperature and type influence biochar characteristics: a comprehensive meta-data analysis review. Biochar, 2020, 2, 421-438.	12.6	333
4	How biochar works, and when it doesn't: A review of mechanisms controlling soil and plant responses to biochar. GCB Bioenergy, 2021, 13, 1731-1764.	5.6	286
5	Biochars Impact on Soil-Moisture Storage in an Ultisol and Two Aridisols. Soil Science, 2012, 177, 310-320.	0.9	273
6	Environmental Benefits of Biochar. Journal of Environmental Quality, 2012, 41, 967-972.	2.0	270
7	Drinking Water Treatment Residuals: A Review of Recent Uses. Journal of Environmental Quality, 2011, 40, 1-12.	2.0	264
8	Physical Disintegration of Biochar: An Overlooked Process. Environmental Science and Technology Letters, 2014, 1, 326-332.	8.7	245
9	Contrasting effects of biochar versus manure on soil microbial communities and enzyme activities in an Aridisol. Chemosphere, 2016, 142, 145-152.	8.2	181
10	Biochar and Manure Affect Calcareous Soil and Corn Silage Nutrient Concentrations and Uptake. Journal of Environmental Quality, 2012, 41, 1033-1043.	2.0	170
11	Addition of activated switchgrass biochar to an aridic subsoil increases microbial nitrogen cycling gene abundances. Applied Soil Ecology, 2013, 65, 65-72.	4.3	170
12	BIOCHAR AS A TOOL TO REDUCE THE AGRICULTURAL GREENHOUSE-GAS BURDEN â€“ KNOWNS, UNKNOWNS AND FUTURE RESEARCH NEEDS. Journal of Environmental Engineering and Landscape Management, 2017, 25, 114-139.	1.0	144
13	Phosphorus Retention Mechanisms of a Water Treatment Residual. Journal of Environmental Quality, 2003, 32, 1857-1864.	2.0	122
14	Wheat straw biochar reduces environmental cadmium bioavailability. Environment International, 2019, 126, 69-75.	10.0	122
15	Effectiveness of Recovered Magnesium Phosphates as Fertilizers in Neutral and Slightly Alkaline Soils. Agronomy Journal, 2009, 101, 323-329.	1.8	118
16	Switchgrass Biochar Affects Two Aridisols. Journal of Environmental Quality, 2012, 41, 1123-1130.	2.0	97
17	Selenium adsorption to aluminum-based water treatment residuals. Journal of Colloid and Interface Science, 2009, 338, 48-55.	9.4	95
18	Macroscopic and Molecular Investigations of Copper Sorption by a Steam-Activated Biochar. Journal of Environmental Quality, 2012, 41, 1150-1156.	2.0	92

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19	Remediation of an acidic mine spoil: Miscanthus biochar and lime amendment affects metal availability, plant growth, and soil enzyme activity. Chemosphere, 2018, 205, 709-718.	8.2	91
20	Biochar and Manure Effects on Net Nitrogen Mineralization and Greenhouse Gas Emissions from Calcareous Soil under Corn. Soil Science Society of America Journal, 2014, 78, 1641-1655.	2.2	82
21	Zeolite Soil Application Method Affects Inorganic Nitrogen, Moisture, and Corn Growth. Soil Science, 2011, 176, 136-142.	0.9	76
22	Biochar compost blends facilitate switchgrass growth in mine soils by reducing Cd and Zn bioavailability. Biochar, 2019, 1, 97-114.	12.6	74
23	Hardwood Biochar Influences Calcareous Soil Physicochemical and Microbiological Status. Journal of Environmental Quality, 2014, 43, 681-689.	2.0	70
24	Coâ€Application Effects of Water Treatment Residuals and Biosolids on Two Range Grasses. Journal of Environmental Quality, 1999, 28, 1644-1650.	2.0	66
25	Biochars Reduce Mine Land Soil Bioavailable Metals. Journal of Environmental Quality, 2017, 46, 411-419.	2.0	65
26	Lead smelting effects heavy metal concentrations in soils, wheat, and potentially humans. Environmental Pollution, 2020, 257, 113641.	7.5	63
27	Influence of biochar on trace element uptake, toxicity and detoxification in plants and associated health risks: A critical review. Critical Reviews in Environmental Science and Technology, 2022, 52, 2803-2843.	12.8	63
28	An evaluation of carbon indicators of soil health in long-term agricultural experiments. Soil Biology and Biochemistry, 2022, 172, 108708.	8.8	63
29	Long-term impacts of infrequent biosolids applications on chemical and microbial properties of a semi-arid rangeland soil. Biology and Fertility of Soils, 2006, 42, 258-266.	4.3	58
30	Multi-year and multi-location soil quality and crop biomass yield responses to hardwood fast pyrolysis biochar. Geoderma, 2017, 289, 46-53.	5.1	54
31	GHG impacts of biochar: Predictability for the same biochar. Agriculture, Ecosystems and Environment, 2015, 207, 183-191.	5.3	48
32	Soil Health, Crop Productivity, Microbial Transport, and Mine Spoil Response to Biochars. Bioenergy Research, 2016, 9, 454-464.	3.9	48
33	The ratio of germanium to silicon in plant phytoliths: quantification of biological discrimination under controlled experimental conditions. Biogeochemistry, 2007, 86, 189-199.	3.5	45
34	Stabilizing effect of biochar on soil extracellular enzymes after a denaturing stress. Chemosphere, 2016, 142, 114-119.	8.2	45
35	Extractable Trace Elements in the Soil Profile after Years of Biosolids Application. Journal of Environmental Quality, 1998, 27, 801-805.	2.0	44
36	Biosolids Effect on Phosphorus, Copper, Zinc, Nickel, and Molybdenum Concentrations in Dryland Wheat. Journal of Environmental Quality, 1995, 24, 608-611.	2.0	42

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37	Reusing oil and gas produced water for agricultural irrigation: Effects on soil health and the soil microbiome. Science of the Total Environment, 2020, 722, 137888.	8.0	41
38	Nutrient Assessment of a Dryland Wheat Agroecosystem after 12 Years of Biosolids Applications. Agronomy Journal, 2007, 99, 715-722.	1.8	39
39	Effect of polymer materials on soil structure and organic carbon under drip irrigation. Geoderma, 2019, 340, 94-103.	5.1	37
40	Cadmium, copper, lead and zinc accumulation in wild plant species near a lead smelter. Ecotoxicology and Environmental Safety, 2020, 198, 110683.	6.0	36
41	Nitrogen Fertilizer Equivalency of Sewage Biosolids Applied to Dryland Winter Wheat. Journal of Environmental Quality, 2000, 29, 1345-1351.	2.0	35
42	Soil Properties Affecting Wheat Yields following Drilling-Fluid Application. Journal of Environmental Quality, 2005, 34, 1687-1696.	2.0	34
43	Carbonâ€sensitive pedotransfer functions for plant available water. Soil Science Society of America Journal, 2022, 86, 612-629.	2.2	33
44	Kinetics of Copper Desorption from Highly Calcareous Soils. Communications in Soil Science and Plant Analysis, 2006, 37, 797-809.	1.4	32
45	Phosphorus biogeochemistry across a precipitation gradient in grasslands of central North America. Journal of Arid Environments, 2010, 74, 954-961.	2.4	32
46	Cadmium foliar application affects wheat Cd, Cu, Pb and Zn accumulation. Environmental Pollution, 2020, 262, 114329.	7.5	30
47	Biosolids Impact Soil Phosphorus Accountability, Fractionation, and Potential Environmental Risk. Journal of Environmental Quality, 2007, 36, 764-772.	2.0	29
48	Effects of Modifiers on the Growth, Photosynthesis, and Antioxidant Enzymes of Cotton Under Cadmium Toxicity. Journal of Plant Growth Regulation, 2019, 38, 1196-1205.	5.1	28
49	Distribution and Mineralization of Biosolids Nitrogen Applied to Dryland Wheat. Journal of Environmental Quality, 1996, 25, 796-801.	2.0	27
50	Sewage Biosolids Cumulative Effects on Extractableâ€Soil and Grain Elemental Concentrations. Journal of Environmental Quality, 1997, 26, 1696-1702.	2.0	27
51	Phytostabilization of acidic mine tailings with biochar, biosolids, lime, and locally-sourced microbial inoculum: Do amendment mixtures influence plant growth, tailing chemistry, and microbial composition?. Applied Soil Ecology, 2021, 165, 103962.	4.3	27
52	Analysis of total metals in waste molding and core sands from ferrous and non-ferrous foundries. Journal of Environmental Management, 2012, 110, 77-81.	7.8	26
53	Development of vegetation based soil quality indices for mineralized terrane in arid and semi-arid regions. Ecological Indicators, 2012, 20, 65-74.	6.3	26
54	Innovative approach for recycling phosphorous from agro-wastewaters using water treatment residuals (WTR). Chemosphere, 2017, 168, 234-243.	8.2	26

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55	Influence of long-term nitrogen fertilization on crop and soil micronutrients in a no-till maize cropping system. Field Crops Research, 2018, 228, 170-182.	5.1	26
56	Soil health management practices and crop productivity. Agricultural and Environmental Letters, 2020, 5, e20023.	1.2	25
57	Mechanism of adsorption of cadmium and lead ions by iron-activated biochar. BioResources, 2019, 14, 842-857.	1.0	24
58	Phosphorus Fractions in Soils of Taylor Valley, Antarctica. Soil Science Society of America Journal, 2006, 70, 806-815.	2.2	23
59	Remediation of organic halogen- contaminated wetland soils using biochar. Science of the Total Environment, 2019, 696, 134087.	8.0	22
60	Fifteen years of wheat yield, N uptake, and soil nitrateâ€“N dynamics in a biosolids-amended agroecosystem. Agriculture, Ecosystems and Environment, 2010, 139, 116-120.	5.3	21
61	Greenhouse Gas Emissions from an Irrigated Dairy Forage Rotation as Influenced by Fertilizer and Manure Applications. Soil Science Society of America Journal, 2017, 81, 537-545.	2.2	21
62	Phytostabilization of Zn and Cd in Mine Soil Using Corn in Combination with Biochars and Manure-Based Compost. Environments - MDPI, 2019, 6, 69.	3.3	21
63	AMENDMENT EFFECTS ON pH AND SALT CONTENT OF BAUXITE RESIDUE. Soil Science, 2005, 170, 832-841.	0.9	20
64	Biosolids Affect Soil Barium in a Dryland Wheat Agroecosystem. Journal of Environmental Quality, 2006, 35, 2333-2341.	2.0	20
65	Biosolids application to no-till dryland agroecosystems. Agriculture, Ecosystems and Environment, 2012, 150, 72-81.	5.3	20
66	Lead source and bioaccessibility in windowsill dusts within a Pb smelting-affected area. Environmental Pollution, 2020, 266, 115110.	7.5	20
67	Biochars reduce irrigation water sodium adsorption ratio. Biochar, 2021, 3, 77-87.	12.6	20
68	Water Treatment Residuals and Biosolids Longâ€Term Coâ€Applications Effects to Semiâ€Arid Grassland Soils and Vegetation. Soil Science Society of America Journal, 2009, 73, 1880-1889.	2.2	18
69	Copper Impacts on Corn, Soil Extractability, and the Soil Bacterial Community. Soil Science, 2010, 175, 586-592.	0.9	18
70	Macroscopic and microscopic variation in recovered magnesium phosphate materials: Implications for phosphorus removal processes and product re-use. Bioresource Technology, 2010, 101, 877-885.	9.6	18
71	Selecting soil hydraulic properties as indicators of soil health: Measurement response to management and site characteristics. Soil Science Society of America Journal, 2022, 86, 1206-1226.	2.2	18
72	Water Treatment Residuals and Biosolids Coapplications Affect Semiarid Rangeland Phosphorus Cycling. Soil Science Society of America Journal, 2008, 72, 711-719.	2.2	17

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73	Biochar research activities and their relation to development and environmental quality. A meta-analysis. Agronomy for Sustainable Development, 2017, 37, 1.	5.3	17
74	Soil Quality Improvement through Conversion to Sprinkler Irrigation. Soil Science Society of America Journal, 2017, 81, 1505-1516.	2.2	17
75	Solubilization of organic phosphorus sources by cyanobacteria and a commercially available bacterial consortium. Applied Soil Ecology, 2021, 162, 103900.	4.3	17
76	Long-term biosolids land application influences soil health. Science of the Total Environment, 2021, 791, 148344.	8.0	17
77	Linking soil microbial community structure to potential carbon mineralization: A continental scale assessment of reduced tillage. Soil Biology and Biochemistry, 2022, 168, 108618.	8.8	17
78	Atmospheric deposition of arsenic, cadmium, copper, lead, and zinc near an operating and an abandoned lead smelter. Journal of Environmental Quality, 2020, 49, 1667-1678.	2.0	16
79	Soilâ€“Plant Nutrient Interactions on Manureâ€Enriched Calcareous Soils. Agronomy Journal, 2014, 106, 73-80.	1.8	15
80	Biochar Immobilizes and Degrades 2,4,6â€Trichlorophenol in Soils. Environmental Toxicology and Chemistry, 2019, 38, 1364-1371.	4.3	15
81	Municipal biosolids â€" A resource for sustainable communities. Current Opinion in Environmental Science and Health, 2020, 14, 56-62.	4.1	15
82	Modified nitric acid plant tissue digest method. Communications in Soil Science and Plant Analysis, 2000, 31, 2473-2482.	1.4	14
83	Termination of Sewage Biosolids Application Affects Wheat Yield and Other Agronomic Characteristics. Agronomy Journal, 2003, 95, 1288-1294.	1.8	14
84	Phosphorus Sorption Characteristics in Aluminumâ€based Water Treatment Residuals Reacted with Dairy Wastewater: 1. Isotherms, XRD, and SEMâ€EDS Analysis. Journal of Environmental Quality, 2018, 47, 538-545.	2.0	14
85	Expanding the Analytical Window for Biochar Speciation: Molecular Comparison of Solvent Extraction and Water-Soluble Fractions of Biochar by FT-ICR Mass Spectrometry. Analytical Chemistry, 2021, 93, 15365-15372.	6.5	13
86	Fate of Biosolids Trace Metals in a Dryland Wheat Agroecosystem. Journal of Environmental Quality, 2008, 37, 2135-2144.	2.0	12
87	Fate of biosolids Cu and Zn in a semi-arid grassland. Agriculture, Ecosystems and Environment, 2009, 131, 325-332.	5.3	12
88	Phosphorus Losses from an Irrigated Watershed in the Northwestern United States: Case Study of the Upper Snake Rock Watershed. Journal of Environmental Quality, 2015, 44, 552-559.	2.0	12
89	Phosphorus Sorption to Aluminumâ€based Water Treatment Residuals Reacted with Dairy Wastewater: 2. Xâ€Ray Absorption Spectroscopy. Journal of Environmental Quality, 2018, 47, 546-553.	2.0	12
90	Biochar, Manure, and Sawdust Alter Longâ€Term Water Retention Dynamics in Degraded Soil. Soil Science Society of America Journal, 2019, 83, 1491-1501.	2.2	12

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91	Bioaccessibility, source and human health risk of Pb, Cd, Cu and Zn in windowsill dusts from an area affected by long-term Pb smelting. Science of the Total Environment, 2022, 842, 156707.	8.0	12
92	Combinations of water treatment residuals and biosolids affect two range grasses. Communications in Soil Science and Plant Analysis, 2002, 33, 831-844.	1.4	11
93	Chloride Versus Sulfate Salinity Effects on Alfalfa Shoot Growth and Ionic Balance. Soil Science Society of America Journal, 1999, 63, 111-116.	2.2	10
94	Phosphorus Extraction Methods for Water Treatment Residualâ€"Amended Soils. Communications in Soil Science and Plant Analysis, 2006, 37, 859-870.	1.4	10
95	Clinoptilolite Zeolite Influence on Nitrogen in a Manure-Amended Sandy Agricultural Soil. Communications in Soil Science and Plant Analysis, 2011, 42, 2370-2378.	1.4	10
96	Use of Standardized Procedures to Evaluate Metal Leaching from Waste Foundry Sands. Journal of Environmental Quality, 2013, 42, 615-620.	2.0	10
97	Mechanisms Responsible for Soil Phosphorus Availability Differences between Sprinkler and Furrow Irrigation. Journal of Environmental Quality, 2019, 48, 1370-1379.	2.0	10
98	Clinoptilolite Zeolite Influence on Inorganic Nitrogen in Silt Loam and Sandy Agricultural Soils. Soil Science, 2010, 175, 357-362.	0.9	9
99	Making Phosphorus Fertilizer from Dairy Wastewater with Aluminum Water Treatment Residuals. Soil Science Society of America Journal, 2019, 83, 649-657.	2.2	9
100	Wheat grain micronutrients and relationships with yield and protein in the U.S. Central Great Plains. Field Crops Research, 2022, 279, 108453.	5.1	9
101	Investigation of Copper Sorption by Sugar Beet Processing Lime Waste. Journal of Environmental Quality, 2013, 42, 919-924.	2.0	8
102	Metaâ€Analyses of Biosolids Effect in Dryland Wheat Agroecosystems. Journal of Environmental Quality, 2017, 46, 452-460.	2.0	8
103	Biochar for Mine-land Reclamation. , 2019, , 75-90.		7
104	Microbial response to designer biochar and compost treatments for mining impacted soils. Biochar, 2021, 3, 299-314.	12.6	7
105	Nutrient alterations following biochar application to a Cd-contaminated solution and soil. Biochar, 2021, 3, 457-468.	12.6	7
106	Soil fertility interactions with Sinorhizobium-legume symbiosis in a simulated Martian regolith; effects on nitrogen content and plant health. PLoS ONE, 2021, 16, e0257053.	2.5	7
107	Corn productivity and soil characteristic alterations following transition from conventional to conservation tillage. Soil and Tillage Research, 2022, 220, 105351.	5.6	7
108	Short- and Long-Term Biochar Cadmium and Lead Immobilization Mechanisms. Environments - MDPI, 2020, 7, 53.	3.3	6

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109	Phosphorus pools in Al and Fe-based water treatment residuals (WTRs) following mixing with agro-wastewater â€" A sequential extraction study. Environmental Technology and Innovation, 2020, 18, 100654.	6.1	6
110	Assessing modified aluminum-based water treatment residuals as a plant-available phosphorus source. Chemosphere, 2020, 247, 125949.	8.2	6
111	Water Treatment Residuals and Biosolids Coâ€applications Affect Phosphatases in a Semiâ€arid Rangeland Soil. Communications in Soil Science and Plant Analysis, 2008, 39, 2812-2826.	1.4	5
112	PREDICTING SOIL-EXTRACTABLE ZN, P, FE, AND CU IN A BIOSOLIDS-AMENDED DRYLAND WHEAT AGROECOSYSTEM. Soil Science, 2008, 173, 175-185.	0.9	5
113	Soil Carbon and Nitrogen Transformations under Soybean as Influenced by Organic Farming. Agronomy Journal, 2018, 110, 1883-1892.	1.8	5
114	Soil health changes following transition from an annual cropping to perennial managementâ€intensive grazing agroecosystem. , 2021, 4, e20181.		5
115	Lead smelting alters wheat flour heavy metal concentrations and health risks. Journal of Environmental Quality, 2021, 50, 454-464.	2.0	5
116	Long-Term Biosolids Applications to Overgrazed Rangelands Improve Soil Health. Agronomy, 2021, 11, 1339.	3.0	5
117	Physicochemical disintegration of biochar: a potentially important process for long-term cadmium and lead sorption. Biochar, 2021, 3, 511-518.	12.6	5
118	The Partnerships for Data Innovations (PDI): Facilitating data stewardship and catalyzing research engagement in the digital age. Agricultural and Environmental Letters, 2021, 6, e20055.	1.2	5
119	Continuous biosolids application affects grain elemental concentrations in a dryland-wheat agroecosystem. Agriculture, Ecosystems and Environment, 2009, 129, 340-343.	5.3	4
120	Learning Gains and Response to Digital Lessons on Soil Genesis and Development. Journal of Geoscience Education, 2011, 59, 194-204.	1.4	4
121	Copper and Zinc Speciation in a Biosolids-Amended, Semiarid Grassland Soil. Journal of Environmental Quality, 2014, 43, 1576-1584.	2.0	4
122	Path Analyses of Grain P, Zn, Cu, Fe, and Ni in a Biosolidsâ€Amended Dryland Wheat Agroecosystem. Journal of Environmental Quality, 2016, 45, 1400-1404.	2.0	4
123	Environmental Management of Biosolids and Water Treatment Residuals. Proceedings of the Water Environment Federation, 2001, 2001, 348-358.	0.0	3
124	Removal of Vegetative Clippings Reduces Dissolved Phosphorus Loss in Runoff. Communications in Soil Science and Plant Analysis, 2014, 45, 1555-1564.	1.4	3
125	Moving toward Sustainable Irrigation in a Southern Idaho Irrigation Project. Transactions of the ASABE, 2020, 63, 1441-1449.	1.1	3
126	Phosphorus removal from swine wastewater using aluminum-based water treatment residuals. Resources Conservation & Recycling X, 2020, 6, 100039.	4.2	3

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127	Furrow-irrigated corn residue management and tillage strategies for improved soil health. Soil and Tillage Research, 2022, 216, 105238.	5.6	3
128	Microbial Response to Phytostabilization in Mining Impacted Soils Using Maize in Conjunction with Biochar and Compost. Microorganisms, 2021, 9, 2545.	3.6	3
129	Improvements in soil properties under adaptive multiâ€paddock grazing relative to conventional grazing. Agronomy Journal, 0, , .	1.8	3
130	Uptake Coefficients for Biosolids-Amended Dryland Winter Wheat. Journal of Environmental Quality, 2015, 44, 286-292.	2.0	2
131	The Clean Water Act and biosolids: A 45â€year chronological review of biosolids land application research in Colorado. Journal of Environmental Quality, 2022, 51, 780-796.	2.0	2
132	Crossâ€linked polymers increase nutrient sorption in degraded soils. Agronomy Journal, 2021, 113, 1121-1135.	1.8	1
133	Metal contamination in soils and windowsill dusts: implication of multiple sources on dust metal accumulation within a city affected by Pb smelting. Environmental Science and Pollution Research, 2022, , 1.	5.3	1
134	THE EFFECT OF LONG-TERM WATER TREATMENT RESIDUALS â€“ BIOSOLIDS CO-APPLICATIONS ON NATIVE RANGELAND SOIL. Proceedings of the Water Environment Federation, 2007, 2007, 812-827.	0.0	0
135	Soil-Plant-Microbial Relations in Hydrothermally Altered Soils of Northern California. Soil Science Society of America Journal, 2014, 78, 509-519.	2.2	0
136	Does Turbulent-flow Conditioning of Irrigation Water Influence Soil Chemical Processes: II. Long-term Soil and Crop Study. Communications in Soil Science and Plant Analysis, 2022, 53, 636-650.	1.4	0