David A Laird

List of Publications by Year
in descending order

62 papers	8,808 citations	87888 38 h-index	123424 61 g-index
63 all docs	63 docs citations	63 times ranked	8970 citing authors

#	Article	IF	Citations
1	Capture and Release of Orthophosphate by Fe-Modified Biochars: Mechanisms and Environmental Applications. ACS Sustainable Chemistry and Engineering, 2021, 9, 658-668.	6.7	33
2	Temperature Effects on Properties of Rice Husk Biochar and Calcinated Burkina Phosphate Rock. Agriculture (Switzerland), 2021, 11, 432.	3.1	6
3	Enhancing Biochar as Scaffolding for Slow Release of Nitrogen Fertilizer. ACS Sustainable Chemistry and Engineering, 2021, 9, 8222-8231.	6.7	34
4	Perennial cover crop influences on soil C and N and maize productivity. Nutrient Cycling in Agroecosystems, 2020, 116, 135-150.	2.2	6
5	Soil carbon increased by twice the amount of biochar carbon applied after 6Âyears: Field evidence of negative priming. GCB Bioenergy, 2020, 12, 240-251.	5.6	60
6	Strategic switchgrass (<i>Panicum virgatum</i>) production within row cropping systems: Regionalâ€scale assessment of soil erosion loss and water runoff impacts. GCB Bioenergy, 2020, 12, 955-967.	5.6	17
7	Estimating the organic oxygen content of biochar. Scientific Reports, 2020, 10, 13082.	3.3	50
8	Development of field mobile soil nitrate sensor technology to facilitate precision fertilizer management. Precision Agriculture, 2019, 20, 40-55.	6.0	35
9	Regenerating Agricultural Landscapes with Perennial Groundcover for Intensive Crop Production. Agronomy, 2019, 9, 458.	3.0	34
10	Effect of Biochar on Soil Greenhouse Gas Emissions at the Laboratory and Field Scales. Soil Systems, 2019, 3, 8.	2.6	80
11	Adsorption behaviour and mechanisms of cadmium and nickel on rice straw biochars in single- and binary-metal systems. Chemosphere, 2019, 218, 308-318.	8.2	147
12	Arsenic sorption on zero-valent iron-biochar complexes. Water Research, 2018, 137, 153-163.	11.3	234
13	Quantification and characterization of chemically-and thermally-labile and recalcitrant biochar fractions. Chemosphere, 2018, 194, 247-255.	8.2	19
14	Sorption of ammonium and nitrate to biochars is electrostatic and pH-dependent. Scientific Reports, 2018, 8, 17627.	3.3	140
15	Quantitative mechanisms of cadmium adsorption on rice straw- and swine manure-derived biochars. Environmental Science and Pollution Research, 2018, 25, 32418-32432.	5.3	33
16	Perennial biomass crop establishment, community characteristics, and productivity in the upper US Midwest: Effects of cropping systems seed mixtures and biochar applications. European Journal of Agronomy, 2018, 101, 121-128.	4.1	15
17	Impact of Pyrolysis Temperature and Feedstock on Surface Charge and Functional Group Chemistry of Biochars. Journal of Environmental Quality, 2018, 47, 452-461.	2.0	111
18	Long term biochar effects on corn yield, soil quality and profitability in the US Midwest. Field Crops Research, 2018, 227, 30-40.	5.1	41

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19	Impact of six lignocellulosic biochars on C and N dynamics of two contrasting soils. GCB Bioenergy, 2017, 9, 1279-1291.	5.6	28
20	Impact of Biochar Organic and Inorganic Carbon on Soil CO 2 and N 2 O Emissions. Journal of Environmental Quality, 2017, 46, 505-513.	2.0	28
21	Commentary on â€˜Current economic obstacles to biochar use in agriculture and climate change mitigationâ€™ regarding uncertainty, context-specificity and alternative value sources. Carbon Management, 2017, 8, 215-217.	2.4	7
22	Establishment of Perennial Groundcovers for Maize-Based Bioenergy Production Systems. Agronomy Journal, 2017, 109, 822-835.	1.8	13
23	Aluminum and iron biomass pretreatment impacts on biochar anion exchange capacity. Carbon, 2017, 118, 422-430.	10.3	62
24	Macroporous Carbon Supported Zerovalent Iron for Remediation of Trichloroethylene. ACS Sustainable Chemistry and Engineering, 2017, 5, 1586-1593.	6.7	63
25	Temperature and reaction atmosphere effects on the properties of corn stover biochar. Environmental Progress and Sustainable Energy, 2017, 36, 696-707.	2.3	17
26	Characterization and quantification of biochar alkalinity. Chemosphere, 2017, 167, 367-373.	8.2	270
27	Sustainable Pyrolytic Production of Zerovalent Iron. ACS Sustainable Chemistry and Engineering, 2017, 5, 767-773.	6.7	41
28	Living Mulch for Sustainable Maize Stover Biomass Harvest. Crop Science, 2017, 57, 3273-3290.	1.8	11
29	A model for mechanistic and system assessments of biochar effects on soils and crops and tradeâ€offs. GCB Bioenergy, 2016, 8, 1028-1045.	5.6	45
30	Comparison of the Physical and Chemical Properties of Laboratory and Fieldâ€Aged Biochars. Journal of Environmental Quality, 2016, 45, 1627-1634.	2.0	35
31	Corn and soil response to biochar application and stover harvest. Field Crops Research, 2016, 187, 96-106.	5.1	54
32	Anion exchange capacity of biochar. Green Chemistry, 2015, 17, 4628-4636.	9.0	160
33	Vertical Distribution of Structural Components in Corn Stover. Agriculture (Switzerland), 2014, 4, 274-287.	3.1	3
34	Producing energy while sequestering carbon? The relationship between biochar and agricultural productivity. Biomass and Bioenergy, 2014, 63, 167-176.	5.7	45
35	Biochar impact on Midwestern Mollisols and maize nutrient availability. Geoderma, 2014, 230-231, 340-347.	5.1	147
36	Assessing potential of biochar for increasing waterâ€holding capacity of sandy soils. GCB Bioenergy, 2013, 5, 132-143.	5.6	394

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37	Evaluation of Modified Boehm Titration Methods for Use with Biochars. Journal of Environmental Quality, 2013, 42, 1771-1778.	2.0	92
38	Real-Time Sensing of Soil Nitrate Concentration in the Parts per Million Range While the Soil is in Motion. Applied Spectroscopy, 2013, 67, 1106-1110.	2.2	4
39	Quantitative Prediction of Biochar Soil Amendments by Near-Infrared Reflectance Spectroscopy. Soil Science Society of America Journal, 2013, 77, 1784-1794.	2.2	9
40	Extent of Pyrolysis Impacts on Fast Pyrolysis Biochar Properties. Journal of Environmental Quality, 2012, 41, 1115-1122.	2.0	80
41	Environmental Benefits of Biochar. Journal of Environmental Quality, 2012, 41, 967-972.	2.0	270
42	Vertical Distribution of Corn Stover Dry Mass Grown at Several US Locations. Bioenergy Research, 2011, 4, 11-21.	3.9	43
43	Bio-oil and bio-char production from corn cobs and stover by fast pyrolysis. Biomass and Bioenergy, 2010, 34, 67-74.	5.7	573
44	Impact of biochar amendments on the quality of a typical Midwestern agricultural soil. Geoderma, 2010, 158, 443-449.	5.1	1,043
45	Review of the pyrolysis platform for coproducing bioâ€oil and biochar. Biofuels, Bioproducts and Biorefining, 2009, 3, 547-562.	3.7	554
46	Distinguishing black carbon from biogenic humic substances in soil clay fractions. Geoderma, 2008, 143, 115-122.	5.1	50
47	The Charcoal Vision: A Winâ€"Winâ€"Win Scenario for Simultaneously Producing Bioenergy, Permanently Sequestering Carbon, while Improving Soil and Water Quality. Agronomy Journal, 2008, 100, 178.	1.8	261
48	The Charcoal Vision: A Winâ€"Winâ€"Win Scenario for Simultaneously Producing Bioenergy, Permanently Sequestering Carbon, while Improving Soil and Water Quality. Agronomy Journal, 2008, 100, 178-181.	1.8	497
49	Triazine Soil Interactions. , 2008, , 275-299.		20
50	Role of Smectite Quasicrystal Dynamics in Adsorption of Dinitrophenol. Soil Science Society of America Journal, 2008, 72, 347-354.	2.2	10
51	Influence of layer charge on swelling of smectites. Applied Clay Science, 2006, 34, 74-87.	5.2	300
52	Exchangeable Cation Hydration Properties Strongly Influence Soil Sorption of Nitroaromatic Compounds. Soil Science Society of America Journal, 2006, 70, 1470-1479.	2.2	46
53	INFLUENCE OF SOIL MOISTURE ON NEAR-INFRARED REFLECTANCE SPECTROSCOPIC MEASUREMENT OF SOIL PROPERTIES. Soil Science, 2005, 170, 244-255.	0.9	115
54	Spectroscopic Study of Carbaryl Sorption on Smectite from Aqueous Suspension. Environmental Science & Technology, 2005, 39, 9123-9129.	10.0	42

#	ARTICLE	IF	CITATIONS
55	Carbon Sequestration in Clay Mineral Fractions from ¹⁴Câ€Labeled Plant Residues. Soil Science Society of America Journal, 2003, 67, 1715-1720.	2.2	44
56	NEAR-INFRARED REFLECTANCE SPECTROSCOPIC ANALYSIS OF SOIL C AND N. Soil Science, 2002, 167, 110-116.	0.9	337
57	Nearâ€Infrared Reflectance Spectroscopyâ€“Principal Components Regression Analyses of Soil Properties. Soil Science Society of America Journal, 2001, 65, 480-490.	2.2	1,444
58	Relationship Between Cation Exchange Selectivity and Crystalline Swelling in Expanding 2:1 Phyllosilicates. Clays and Clay Minerals, 1997, 45, 681-689.	1.3	64
59	Model for Crystalline Swelling of 2:1 Phyllosilicates. Clays and Clay Minerals, 1996, 44, 553-559.	1.3	118
60	Interactions Between Atrazine and Smectite Surfaces. ACS Symposium Series, 1996, , 86-100.	0.5	24
61	Hysteresis in Crystalline Swelling of Smectites. Journal of Colloid and Interface Science, 1995, 171, 240-245.	9.4	89
62	Sorption of atrazine on Soil Clay Components. Environmental Science & Technology, 1994, 28, 1054-1061.	10.0	153