Johannes Lehmann

List of Publications by Citations

316 papers	45,774 citations	86 h-index	211 g-index
337 ext. papers	52,419 ext. citations	7.3 avg, IF	7.96 L-index

#	Paper	IF	Citations
316	Persistence of soil organic matter as an ecosystem property. *Nature*, **2011**, 478, 49-56	50.4	3282
315	Biochar effects on soil biota – A review. *Soil Biology and Biochemistry*, **2011**, 43, 1812-1836	7.5	2707
314	Bio-char Sequestration in Terrestrial Ecosystems – A Review. *Mitigation and Adaptation Strategies for Global Change*, **2006**, 11, 403-427	3.9	1780
313	Ameliorating physical and chemical properties of highly weathered soils in the tropics with charcoal – a review. *Biology and Fertility of Soils*, **2002**, 35, 219-230	6.1	1676
312	A handful of carbon. *Nature*, **2007**, 447, 143-4	50.4	1624
311	The contentious nature of soil organic matter. *Nature*, **2015**, 528, 60-8	50.4	1532
310	Black Carbon Increases Cation Exchange Capacity in Soils. *Soil Science Society of America Journal*, **2006**, 70, 1719-1730	2.5	1307
309	Sustainable biochar to mitigate global climate change. *Nature Communications*, **2010**, 1, 56	17.4	1300
308	Nutrient availability and leaching in an archaeological Anthrosol and a Ferralsol of the Central Amazon basin: fertilizer, manure and charcoal amendments. *Plant and Soil*, **2003**, 249, 343-357	4.2	1162
307	Bio-energy in the black. *Frontiers in Ecology and the Environment*, **2007**, 5, 381-387	5.5	1103
306	Climate-smart soils. *Nature*, **2016**, 532, 49-57	50.4	883
305	The knowns, known unknowns and unknowns of sequestration of soil organic carbon. *Agriculture, Ecosystems and Environment*, **2013**, 164, 80-99	5.7	834
304	Long term effects of manure, charcoal and mineral fertilization on crop production and fertility on a highly weathered Central Amazonian upland soil. *Plant and Soil*, **2007**, 291, 275-290	4.2	832
303	Maize yield and nutrition during 4 years after biochar application to a Colombian savanna oxisol. *Plant and Soil*, **2010**, 333, 117-128	4.2	811
302	Oxidation of black carbon by biotic and abiotic processes. *Organic Geochemistry*, **2006**, 37, 1477-1488	3.1	783
301	Mycorrhizal responses to biochar in soil – concepts and mechanisms. *Plant and Soil*, **2007**, 300, 9-20	4.2	730
300	An investigation into the reactions of biochar in soil. *Soil Research*, **2010**, 48, 501	1.8	687

299	Life cycle assessment of biochar systems: estimating the energetic, economic, and climate change potential. *Environmental Science & Technology*, **2010**, 44, 827-33	10.3	644
298	Adsorption of copper and zinc by biochars produced from pyrolysis of hardwood and corn straw in aqueous solution. *Bioresource Technology*, **2011**, 102, 8877-84	11	642
297	Biological nitrogen fixation by common beans (Phaseolus vulgaris L.) increases with bio-char additions. *Biology and Fertility of Soils*, **2007**, 43, 699-708	6.1	641
296	Natural oxidation of black carbon in soils: Changes in molecular form and surface charge along a climosequence. *Geochimica Et Cosmochimica Acta*, **2008**, 72, 1598-1610	5.5	634
295	Characterization of biochars to evaluate recalcitrance and agronomic performance. *Bioresource Technology*, **2012**, 114, 644-53	11	617
294	Fate of soil-applied black carbon: downward migration, leaching and soil respiration. *Global Change Biology*, **2010**, 16, 1366-1379	11.4	515
293	Factors controlling humification and mineralization of soil organic matter in the tropics. *Geoderma*, **1997**, 79, 117-161	6.7	485
292	Review of the pyrolysis platform for coproducing bio-oil and biochar. *Biofuels, Bioproducts and Biorefining*, **2009**, 3, 547-562	5.3	473
291	Corn growth and nitrogen nutrition after additions of biochars with varying properties to a temperate soil. *Biology and Fertility of Soils*, **2012**, 48, 271-284	6.1	456
290	Black carbon affects the cycling of non-black carbon in soil. *Organic Geochemistry*, **2010**, 41, 206-213	3.1	425
289	Quantifying the total and bioavailable polycyclic aromatic hydrocarbons and dioxins in biochars. *Environmental Science & Technology*, **2012**, 46, 2830-8	10.3	410
288	Biochar and denitrification in soils: when, how much and why does biochar reduce N□O emissions?. *Scientific Reports*, **2013**, 3, 1732	4.9	399
287	Nitrogen retention and plant uptake on a highly weathered central Amazonian Ferralsol amended with compost and charcoal. *Journal of Plant Nutrition and Soil Science*, **2008**, 171, 893-899	2.3	399
286	Energy balance and emissions associated with biochar sequestration and pyrolysis bioenergy production. *Environmental Science & Technology*, **2008**, 42, 4152-8	10.3	392
285	Spatial complexity of soil organic matter forms at nanometre scales. *Nature Geoscience*, **2008**, 1, 238-242	18.3	314
284	Effects of chemical, biological, and physical aging as well as soil addition on the sorption of pyrene to activated carbon and biochar. *Environmental Science & Technology*, **2011**, 45, 10445-53	10.3	283
283	Temperature sensitivity of black carbon decomposition and oxidation. *Environmental Science & Technology*, **2010**, 44, 3324-31	10.3	283
282	Australian climate□carbon cycle feedback reduced by soil black carbon. *Nature Geoscience*, **2008**, 1, 832-835	18.3	279

281	Black carbon decomposition under varying water regimes. *Organic Geochemistry*, **2009**, 40, 846-853	3.1	276
280	Reversibility of Soil Productivity Decline with Organic Matter of Differing Quality Along a Degradation Gradient. *Ecosystems*, **2008**, 11, 726-739	3.9	259
279	Organic matter stabilization in soil microaggregates: implications from spatial heterogeneity of organic carbon contents and carbon forms. *Biogeochemistry*, **2007**, 85, 45-57	3.8	253
278	Stability of biomass-derived black carbon in soils. *Geochimica Et Cosmochimica Acta*, **2008**, 72, 6069-6078	5.5	242
277	Rapid electron transfer by the carbon matrix in natural pyrogenic carbon. *Nature Communications*, **2017**, 8, 14873	17.4	223
276	Quantitative assessment of microbial necromass contribution to soil organic matter. *Global Change Biology*, **2019**, 25, 3578-3590	11.4	223
275	Ageing of black carbon along a temperature gradient. *Chemosphere*, **2009**, 75, 1021-7	8.4	218
274	Bacterial community composition in Brazilian Anthrosols and adjacent soils characterized using culturing and molecular identification. *Microbial Ecology*, **2009**, 58, 23-35	4.4	215
273	Abundant and stable char residues in soils: implications for soil fertility and carbon sequestration. *Environmental Science & Technology*, **2012**, 46, 9571-6	10.3	188
272	Double-funneling of trees: Stemflow and root-induced preferential flow1 Associate Editor: Tim Moore.. *Ecoscience*, **2006**, 13, 324-333	1.1	183
271	Near-edge X-ray absorption fine structure (NEXAFS) spectroscopy for mapping nano-scale distribution of organic carbon forms in soil: Application to black carbon particles. *Global Biogeochemical Cycles*, **2005**, 19,	5.9	178
270	The way forward in biochar research: targeting trade-offs between the potential wins. *GCB Bioenergy*, **2015**, 7, 1-13	5.6	177
269	Stability and stabilisation of biochar and green manure in soil with different organic carbon contents. *Soil Research*, **2010**, 48, 577	1.8	176
268	Soil Security: Solving the Global Soil Crisis. *Global Policy*, **2013**, 4, 434-441	1.8	173
267	Influences of non-herbaceous biochar on arbuscular mycorrhizal fungal abundances in roots and soils: Results from growth-chamber and field experiments. *Applied Soil Ecology*, **2010**, 46, 450-456	5	167
266	Nutrient leaching in a Colombian savanna Oxisol amended with biochar. *Journal of Environmental Quality*, **2012**, 41, 1076-86	3.4	166
265	Long-term impacts of anthropogenic perturbations on dynamics and speciation of organic carbon in tropical forest and subtropical grassland ecosystems. *Global Change Biology*, **2007**, 13, 511-530	11.4	166
264	Long-term black carbon dynamics in cultivated soil. *Biogeochemistry*, **2008**, 89, 295-308	3.8	165

263	Phosphorus speciation in manure and manure-amended soils using XANES spectroscopy. *Environmental Science & Technology*, **2005**, 39, 7485-91	10.3	163
262	Stability of black carbon in soils across a climatic gradient. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		162
261	Land use effects on soil organic matter properties of chromic luvisols in semi-arid northern Tanzania: carbon, nitrogen, lignin and carbohydrates. *Agriculture, Ecosystems and Environment*, **2000**, 78, 203-213	5.7	161
260	Activated carbon and biochar amendments decrease pore-water concentrations of polycyclic aromatic hydrocarbons (PAHs) in sewage sludge. *Bioresource Technology*, **2012**, 111, 84-91	11	159
259	Nitrogen dynamics following field application of biochar in a temperate North American maize-based production system. *Plant and Soil*, **2013**, 365, 239-254	4.2	158
258	CO2 efflux from Amazonian headwater streams represents a significant fate for deep soil respiration. *Geophysical Research Letters*, **2008**, 35,	4.9	158
257	Bio-Char Soil Management on Highly Weathered Soils in the Humid Tropics. *Books in Soils, Plants, and the Environment*, **2006**, 517-529		154
256	Adsorption and desorption of ammonium by maple wood biochar as a function of oxidation and pH. *Chemosphere*, **2015**, 138, 120-6	8.4	153
255	Carbon K-Edge NEXAFS and FTIR-ATR Spectroscopic Investigation of Organic Carbon Speciation in Soils. *Soil Science Society of America Journal*, **2005**, 69, 107-119	2.5	150
254	Comparison of Wet-Digestion and Dry-Ashing Methods for Total Elemental Analysis of Biochar. *Communications in Soil Science and Plant Analysis*, **2012**, 43, 1042-1052	1.5	145
253	Amazonian anthrosols support similar microbial communities that differ distinctly from those extant in adjacent, unmodified soils of the same mineralogy. *Microbial Ecology*, **2010**, 60, 192-205	4.4	144
252	Persistence of soil organic carbon caused by functional complexity. *Nature Geoscience*, **2020**, 13, 529-534	18.3	131
251	The concept and future prospects of soil health. *Nature Reviews Earth & Environment*, **2020**, 1, 544-553	30.2	130
250	The influence of feedstock and production temperature on biochar carbon chemistry: A solid-state 13C NMR study. *Biomass and Bioenergy*, **2014**, 60, 121-129	5.3	129
249	Carbon (1s) NEXAFS Spectroscopy of Biogeochemically Relevant Reference Organic Compounds. *Soil Science Society of America Journal*, **2009**, 73, 1817-1830	2.5	127
248	Long-term black carbon dynamics in cultivated soil. *Biogeochemistry*, **2009**, 92, 163-176	3.8	118
247	Medium-term effects of corn biochar addition on soil biota activities and functions in a temperate soil cropped to corn. *Soil Biology and Biochemistry*, **2014**, 72, 152-162	7.5	116
246	Monitoring the world's agriculture. *Nature*, **2010**, 466, 558-60	50.4	115

245	Ammonium, Nitrate, and Phosphate Sorption to and Solute Leaching from Biochars Prepared from Corn Stover (L.) and Oak Wood (spp.). *Journal of Environmental Quality*, **2013**, 42, 137-44	3.4	112
244	Micro- and nano-environments of carbon sequestration: Multi-element STXM–NEXAFS spectromicroscopy assessment of microbial carbon and mineral associations. *Chemical Geology*, **2012**, 329, 53-73	4.2	110
243	Long-term dynamics of phosphorus forms and retention in manure-amended soils. *Environmental Science & Technology*, **2005**, 39, 6672-80	10.3	103
242	Phosphorus forms and dynamics as influenced by land use changes in the sub-humid Ethiopian highlands. *Geoderma*, **2002**, 105, 21-48	6.7	102
241	Molecular signature and sources of biochemical recalcitrance of organic C in Amazonian Dark Earths. *Geochimica Et Cosmochimica Acta*, **2007**, 71, 2285-2298	5.5	99
240	Techno-economic assessment of biomass slow pyrolysis into different biochar and methanol concepts. *Fuel*, **2014**, 117, 742-748	7.1	98
239	Sorption and desorption of Pb(II) to biochar as affected by oxidation and pH. *Science of the Total Environment*, **2018**, 634, 188-194	10.2	93
238	Nanoscale Biogeocomplexity of the Organomineral Assemblage in Soil. *Soil Science Society of America Journal*, **2006**, 70, 1708-1718	2.5	92
237	Below-ground interactions in dryland agroforestry. *Forest Ecology and Management*, **1998**, 111, 157-169	3.9	90
236	Dynamics of microbial community composition and soil organic carbon mineralization in soil following addition of pyrogenic and fresh organic matter. *ISME Journal*, **2016**, 10, 2918-2930	11.9	90
235	DOC and DIC in Flowpaths of Amazonian Headwater Catchments with Hydrologically Contrasting Soils. *Biogeochemistry*, **2006**, 81, 45-57	3.8	89
234	Biochar effects on crop yields with and without fertilizer: A meta-analysis of field studies using separate controls. *Soil Use and Management*, **2020**, 36, 2-18	3.1	87
233	Towards a global-scale soil climate mitigation strategy. *Nature Communications*, **2020**, 11, 5427	17.4	87
232	Plant-soil interactions in multistrata agroforestry in the humid tropicsa. *Agroforestry Systems*, **2001**, 53, 85-102	2	86
231	Humic Substances Extracted by Alkali Are Invalid Proxies for the Dynamics and Functions of Organic Matter in Terrestrial and Aquatic Ecosystems. *Journal of Environmental Quality*, **2019**, 48, 207-216	3.4	85
230	C 1s K-edge near edge X-ray absorption fine structure (NEXAFS) spectroscopy for characterizing functional group chemistry of black carbon. *Organic Geochemistry*, **2011**, 42, 1055-1064	3.1	84
229	The carbon sequestration potential of terrestrial ecosystems. *Journal of Soils and Water Conservation*, **2018**, 73, 145A-152A	2.2	81
228	Modelling the long-term response to positive and negative priming of soil organic carbon by black carbon. *Biogeochemistry*, **2012**, 111, 83-95	3.8	80

227	Transport and retention of biochar particles in porous media: effect of pH, ionic strength, and particle size. *Ecohydrology*, **2010**, 3, 497-508	2.5	79
226	Long-term soil quality degradation along a cultivation chronosequence in western Kenya. *Agriculture, Ecosystems and Environment*, **2011**, 141, 86-99	5.7	77
225	Sulfur K-edge XANES Spectroscopy as a Tool for Understanding Sulfur Dynamics in Soil Organic Matter. *Soil Science Society of America Journal*, **2003**, 67, 1721-1731	2.5	77
224	Organic carbon fluxes within and streamwater exports from headwater catchments in the southern Amazon. *Hydrological Processes*, **2006**, 20, 2599-2614	3.3	76
223	Subsoil root activity in tree-based cropping systems. *Plant and Soil*, **2003**, 255, 319-331	4.2	76
222	Quantification and characterization of dissolved organic carbon from biochars. *Geoderma*, **2019**, 335, 161-169	6.7	74
221	Soil erosion, runoff and nutrient losses in an avocado (Persea americana Mill) hillside orchard under different groundcover management systems. *Plant and Soil*, **2013**, 368, 393-406	4.2	73
220	Towards sustainable land management in the drylands: Scientific connections in monitoring and assessing dryland degradation, climate change and biodiversity. *Land Degradation and Development* , **2011**, 22, 248-260	4.4	73
219	Nutrient availability at different altitudes in a tropical montane forest in Ecuador. *Journal of Tropical Ecology*, **2008**, 24, 397-406	1.3	73
218	Pyrogenic carbon additions to soil counteract positive priming of soil carbon mineralization by plants. *Soil Biology and Biochemistry*, **2014**, 73, 33-41	7.5	70
217	Ecotoxicological characterization of biochars: role of feedstock and pyrolysis temperature. *Science of the Total Environment*, **2015**, 512-513, 552-561	10.2	69
216	Partitioning the contributions of biochar properties to enhanced biological nitrogen fixation in common bean (Phaseolus vulgaris). *Biology and Fertility of Soils*, **2015**, 51, 479-491	6.1	69
215	Modeling black carbon degradation and movement in soil. *Plant and Soil*, **2011**, 345, 223-236	4.2	69
214	The impact of mound-building termites on surface soil properties in a secondary forest of Central Amazonia. *Applied Soil Ecology*, **2007**, 37, 267-276	5	69
213	Optimal bioenergy power generation for climate change mitigation with or without carbon sequestration. *Nature Communications*, **2016**, 7, 13160	17.4	68
212	Atrazine leaching from biochar-amended soils. *Chemosphere*, **2014**, 95, 346-52	8.4	67
211	Sulphur speciation and turnover in soils: evidence from sulphur K-edge XANES spectroscopy and isotope dilution studies. *Soil Biology and Biochemistry*, **2006**, 38, 1000-1007	7.5	66
210	The Vertical Pattern of Rooting and Nutrient Uptake at Different Altitudes of a South Ecuadorian Montane Forest. *Plant and Soil*, **2006**, 286, 287-299	4.2	65

209	Effect of biochars, activated carbon and multiwalled carbon nanotubes on phytotoxicity of sediment contaminated by inorganic and organic pollutants. *Ecological Engineering*, **2013**, 60, 50-59	3.9	63
208	Sulfur forms in organic substrates affecting S mineralization in soil. *Geoderma*, **2013**, 200-201, 156-164	6.7	61
207	Recycling slaughterhouse waste into fertilizer: how do pyrolysis temperature and biomass additions affect phosphorus availability and chemistry?. *Journal of the Science of Food and Agriculture*, **2015**, 95, 281-8	4.3	59
206	Soil Organic Matter Dynamics in the Subhumid Agroecosystems of the Ethiopian Highlands. *Soil Science Society of America Journal*, **2002**, 66, 969-978	2.5	58
205	Phosphorus availability to beans via interactions between mycorrhizas and biochar. *Plant and Soil*, **2015**, 395, 105-123	4.2	57
204	Soil Organic Matter Dynamics in the Subhumid Agroecosystems of the Ethiopian Highlands. *Soil Science Society of America Journal*, **2002**, 66, 969	2.5	57
203	Soil Organic Matter Composition in the Subhumid Ethiopian Highlands as Influenced by Deforestation and Agricultural Management. *Soil Science Society of America Journal*, **2002**, 66, 68-82	2.5	56
202	Phosphorus availability from bone char in a P-fixing soil influenced by root-mycorrhizae-biochar interactions. *Plant and Soil*, **2016**, 408, 95-105	4.2	56
201	Short-term mesofauna responses to soil additions of corn stover biochar and the role of microbial biomass. *Applied Soil Ecology*, **2015**, 89, 10-17	5	55
200	Carbon mineralizability determines interactive effects on mineralization of pyrogenic organic matter and soil organic carbon. *Environmental Science & Technology*, **2014**, 48, 13727-34	10.3	55
199	Indigenous African soil enrichment as a climate-smart sustainable agriculture alternative. *Frontiers in Ecology and the Environment*, **2016**, 14, 71-76	5.5	54
198	Community Markets for Conservation (COMACO) links biodiversity conservation with sustainable improvements in livelihoods and food production. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 13957-62	11.5	53
197	Comment on "Fire-derived charcoal causes loss of forest humus". *Science*, **2008**, 321, 1295; author reply 1295	33.3	53
196	Sulfur fractions in particle-size separates of the sub-humid Ethiopian highlands as influenced by land use changes. *Geoderma*, **2001**, 102, 41-59	6.7	53
195	Decomposition and nutrient release from leaves, twigs and roots of three alley-cropped tree legumes in central Togo. *Agroforestry Systems*, **1995**, 29, 21-36	2	53
194	Simultaneous Quantification of Electron Transfer by Carbon Matrices and Functional Groups in Pyrogenic Carbon. *Environmental Science & Technology*, **2018**, 52, 8538-8547	10.3	52
193	Aggregate size distribution in a biochar-amended tropical Ultisol under conventional hand-hoe tillage. *Soil and Tillage Research*, **2017**, 165, 190-197	6.5	51
192	Climate change impact of biochar cook stoves in western Kenyan farm households: system dynamics model analysis. *Environmental Science & Technology*, **2011**, 45, 3687-94	10.3	51

191	Synergies between mycorrhizal fungi and soil microbial communities increase plant nitrogen acquisition. *Communications Biology*, **2019**, 2, 233	6.7	49
190	Weed composition and cover after three years of soil fertility management in the central Brazilian Amazon: Compost, fertilizer, manure and charcoal applications. *Weed Biology and Management*, **2005**, 5, 69-76	1.4	48
189	Organic matter stabilization in a Xanthic Ferralsol of the central Amazon as affected by single trees: chemical characterization of density, aggregate, and particle size fractions. *Geoderma*, **2001**, 99, 147-168	6.7	48
188	Biochar One way forward for soil carbon in offset mechanisms in Africa?. *Environmental Science and Policy*, **2009**, 12, 1024-1027	6.2	47
187	Ammonium retention by oxidized biochars produced at different pyrolysis temperatures and residence times. *RSC Advances*, **2016**, 6, 41907-41913	3.7	46
186	Biofuels from pyrolysis in perspective: trade-offs between energy yields and soil-carbon additions. *Environmental Science & Technology*, **2014**, 48, 6492-9	10.3	45
185	Soil organic C stabilization and thresholds in C saturation. *Soil Biology and Biochemistry*, **2009**, 41, 2100-2104	7.5	45
184	Nitrogen transfer between high- and low-quality leaves on a nutrient-poor Oxisol determined by 15N enrichment. *Soil Biology and Biochemistry*, **2005**, 37, 787-794	7.5	45
183	Soil macrofauna abundance under dominant tree species increases along a soil degradation gradient. *Soil Biology and Biochemistry*, **2017**, 112, 35-46	7.5	43
182	Modeling the impact of natural resource-based poverty traps on food security in Kenya: The Crops, Livestock and Soils in Smallholder Economic Systems (CLASSES) model *Food Security*, **2012**, 4, 423-439	6.7	43
181	Micro- and nano-environments of C sequestration in soil: a multi-elemental STXM-NEXAFS assessment of black C and organomineral associations. *Science of the Total Environment*, **2012**, 438, 372-88	10.2	43
180	Termite (Insecta: Isoptera) Species Composition in a Primary Rain Forest and Agroforests in Central Amazonia. *Biotropica*, **2009**, 41, 226-233	2.3	43
179	Sorption properties for black carbon (wood char) after long term exposure in soils. *Organic Geochemistry*, **2014**, 70, 53-61	3.1	42
178	Root Morphology and Anchorage of Six Native Tree Species from a Tropical Montane Forest and an Elfin Forest in Ecuador. *Plant and Soil*, **2006**, 279, 173-185	4.2	42
177	Land use effects on amino sugar signature of chromic Luvisol in the semi-arid part of northern Tanzania. *Biology and Fertility of Soils*, **2001**, 33, 33-40	6.1	42
176	Fluorescence index as an indicator of dissolved organic carbon quality in hydrologic flowpaths of forested tropical watersheds. *Biogeochemistry*, **2011**, 105, 149-157	3.8	41
175	Biological carbon sequestration must and can be a win-win approach. *Climatic Change*, **2009**, 97, 459-463	4.5	41
174	Biomass availability, energy consumption and biochar production in rural households of Western Kenya. *Biomass and Bioenergy*, **2011**, 35, 3537-3546	5.3	41

173	Stream Discharge in Tropical Headwater Catchments as a Result of Forest Clearing and Soil Degradation. *Earth Interactions*, **2012**, 16, 1-18	1.5	41
172	Soil Organic Matter Composition in the Subhumid Ethiopian Highlands as Influenced by Deforestation and Agricultural Management. *Soil Science Society of America Journal*, **2002**, 66, 68	2.5	41
171	Microplastic effects on carbon cycling processes in soils. *PLoS Biology*, **2021**, 19, e3001130	9.7	41
170	Enhanced Cu and Cd sorption after soil aging of woodchip-derived biochar: What were the driving factors?. *Chemosphere*, **2019**, 216, 463-471	8.4	41
169	Microbial Response to Charcoal Amendments of Highly Weathered Soils and Amazonian Dark Earths in Central Amazonia Preliminary Results **2004**, 195-212		40
168	Interactive priming of soil N transformations from combining biochar and urea inputs: A 15N isotope tracer study. *Soil Biology and Biochemistry*, **2019**, 131, 166-175	7.5	40
167	Carbon and nitrogen mineralization in cultivated and natural savanna soils of Northern Tanzania. *Biology and Fertility of Soils*, **2001**, 33, 301-309	6.1	39
166	Soil organic sulfur forms and dynamics in the Great Plains of North America as influenced by long-term cultivation and climate. *Geoderma*, **2006**, 133, 160-172	6.7	38
165	How biochar works, and when it doesn't: A review of mechanisms controlling soil and plant responses to biochar. *GCB Bioenergy*, **2021**, 13, 1731	5.6	38
164	Short-term influence of biochar and fertilizer-biochar blends on soil nutrients, fauna and maize growth. *Biology and Fertility of Soils*, **2019**, 55, 661-673	6.1	37
163	Sulphur speciation and biogeochemical cycling in long-term arable cropping of subtropical soils: evidence from wet-chemical reduction and S K-edge XANES spectroscopy. *European Journal of Soil Science*, **2005**, 56, 621-634	3.4	37
162	Technologies and perspectives for achieving carbon neutrality. *Innovation(China)*, **2021**, 2, 100180	17.8	37
161	Water use efficiency and uptake patterns in a runoff agroforestry system in an arid environment. *Agroforestry Systems*, **2000**, 49, 223-243	2	36
160	Soil Biodiversity Effects from Field to Fork. *Trends in Plant Science*, **2018**, 23, 17-24	13.1	36
159	Anthropogenic soils in the Central Amazon: from categories to a continuum. *Area*, **2011**, 43, 264-273	1.7	35
158	Nutrient constraints to tropical agroecosystem productivity in long-term degrading soils. *Global Change Biology*, **2008**, 14, 2810-2822	11.4	35
157	RAPID WATER FLOW AND TRANSPORT OF INORGANIC AND ORGANIC NITROGEN IN A HIGHLY AGGREGATED TROPICAL SOIL. *Soil Science*, **2004**, 169, 330-341	0.9	35
156	Atmospheric SO2 emissions since the late 1800s change organic sulfur forms in humic substance extracts of soils. *Environmental Science & Technology*, **2008**, 42, 3550-5	10.3	34

155	Litterfall production and fluvial export in headwater catchments of the southern Amazon. *Journal of Tropical Ecology*, **2007**, 23, 329-335	1.3	34
154	Pruning effects on root distribution and nutrient dynamics in an acacia hedgerow planting in northern Kenya. *Agroforestry Systems*, **2000**, 50, 59-75	2	34
153	Ammonia and nitrous oxide emissions from a field Ultisol amended with tithonia green manure, urea, and biochar. *Biology and Fertility of Soils*, **2019**, 55, 135-148	6.1	34
152	Stimulating nitrate removal processes of restored wetlands. *Environmental Science & Technology*, **2014**, 48, 7365-73	10.3	33
151	Influence of activated carbon and biochar on phytotoxicity of air-dried sewage sludges to Lepidium sativum. *Ecotoxicology and Environmental Safety*, **2012**, 80, 321-6	7	33
150	Charcoal quality does not change over a century in a tropical agro-ecosystem. *Soil Biology and Biochemistry*, **2011**, 43, 1992-1994	7.5	33
149	Fine root turnover of irrigated hedgerow intercropping in Northern Kenya. *Plant and Soil*, **1998**, 198, 19-31	4.2	33
148	Soil microbial activities in tree-based cropping systems and natural forests of the Central Amazon, Brazil. *Biology and Fertility of Soils*, **2003**, 38, 1-9	6.1	33
147	N2O and CH4 emission from soil amended with steam-activated biochar. *Journal of Plant Nutrition and Soil Science*, **2014**, 177, 34-38	2.3	32
146	Storm pulses of dissolved CO2 in a forested headwater Amazonian stream explored using hydrograph separation. *Water Resources Research*, **2007**, 43,	5.4	32
145	Soil fungal taxonomic and functional community composition as affected by biochar properties. *Soil Biology and Biochemistry*, **2018**, 126, 159-167	7.5	32
144	Runoff sources and land cover change in the Amazon: an end-member mixing analysis from small watersheds. *Biogeochemistry*, **2011**, 105, 7-18	3.8	31
143	Effects of Arbuscular Mycorrhizal Fungi on The Exotic Invasive Vine Pale Swallow-Wort (Vincetoxicum rossicum). *Invasive Plant Science and Management*, **2008**, 1, 142-152	1	31
142	Inorganic and organic phosphorus pools in earthworm casts (Glossoscolecidae) and a Brazilian rainforest Oxisol. *Soil Biology and Biochemistry*, **2006**, 38, 553-560	7.5	31
141	Growth and reproductive potential of the invasive exotic vine Vincetoxicum rossicum in northern New York State. *Canadian Journal of Botany*, **2006**, 84, 1771-1780		31
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