Lucas Cr Silva

List of Publications by Year
in descending order

89 papers	3,916 citations	136950 32 h-index	133252 59 g-index
90 all docs	90 docs citations	90 times ranked	5332 citing authors

#	Article	IF	Citations
1	Ecological thresholds at the savanna–forest boundary: how plant traits, resources and fire govern the distribution of tropical biomes. Ecology Letters, 2012, 15, 759-768.	6.4	649
2	Use of Chemical and Physical Characteristics To Investigate Trends in Biochar Feedstocks. Journal of Agricultural and Food Chemistry, 2013, 61, 2196-2204.	5.2	333
3	Probing for the influence of atmospheric CO_2 and climate change on forest ecosystems across biomes. Global Ecology and Biogeography, 2013, 22, 83-92.	5.8	157
4	Recent Widespread Tree Growth Decline Despite Increasing Atmospheric CO2. PLoS ONE, 2010, 5, e11543.	2.5	134
5	Can savannas become forests? A coupled analysis of nutrient stocks and fire thresholds in central Brazil. Plant and Soil, 2013, 373, 829-842.	3.7	132
6	Expansion of gallery forests into central Brazilian savannas. Global Change Biology, 2008, 14, 2108-2118.	9.5	125
7	Depth of water uptake in woody plants relates to groundwater level and vegetation structure along a topographic gradient in a neotropical savanna. Environmental and Experimental Botany, 2012, 77, 259-266.	4.2	124
8	Cerrado vegetation and global change: the role of functional types, resource availability and disturbance in regulating plant community responses to rising CO2 levels and climate warming. Theoretical and Experimental Plant Physiology, 2014, 26, 19-38.	2.4	91
9	Bark water uptake promotes localized hydraulic recovery in coastal redwood crown. Plant, Cell and Environment, 2016, 39, 320-328.	5.7	84
10	Growth decline and divergent tree ring isotopic composition ($δ^{13}C$ and $δ^{18}O$) contradict predictions of CO_2 stimulation in high altitudinal forests. Global Change Biology, 2013, 19, 1748-1758.	9.5	79
11	North America's oldest boreal trees are more efficient water users due to increased [CO_2], but do not grow faster. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2749-2754.	7.1	76
12	Tree growth acceleration and expansion of alpine forests: The synergistic effect of atmospheric and edaphic change. Science Advances, 2016, 2, e1501302.	10.3	74
13	Past century changes in *Araucaria angustifolia* (Bertol.) Kuntze water use efficiency and growth in forest and grassland ecosystems of southern Brazil: implications for forest expansion. Global Change Biology, 2009, 15, 2387-2396.	9.5	73
14	Unprecedented carbon accumulation in mined soils: the synergistic effect of resource input and plant species invasion. Ecological Applications, 2013, 23, 1345-1356.	3.8	72
15	Explaining Global Increases in Water Use Efficiency: Why Have We Overestimated Responses to Rising Atmospheric CO2 in Natural Forest Ecosystems?. PLoS ONE, 2013, 8, e53089.	2.5	64
16	Northward migrating trees establish in treefall gaps at the northern limit of the temperate–boreal ecotone, Ontario, Canada. Oecologia, 2010, 164, 1095-1106.	2.0	62
17	Mechanisms of Araucaria (Atlantic) Forest Expansion into Southern Brazilian Grasslands. Ecosystems, 2011, 14, 1354-1371.	3.4	61
18	Integrating effects of species composition and soil properties to predict shifts in montane forest carbon–water relations. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E4219-E4226.	7.1	58

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19	Soil-plant-atmosphere interactions: structure, function, and predictive scaling for climate change mitigation. Plant and Soil, 2021, 461, 5-27.	3.7	58
20	Understory species regulate litter decomposition and accumulation of C and N in forest soils: A long-term dual-isotope experiment. Forest Ecology and Management, 2014, 329, 318-327.	3.2	53
21	Assessing response of local moisture conditions in central Brazil to variability in regional monsoon intensity using speleothem 87Sr/86Sr values. Earth and Planetary Science Letters, 2017, 463, 310-322.	4.4	48
22	Linking Remote Sensing and Dendrochronology to Quantify Climate‐Induced Shifts in High‐Elevation Forests Over Space and Time. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 166-183.	3.0	48
23	Temperature gradients assist carbohydrate allocation within trees. Scientific Reports, 2017, 7, 3265.	3.3	47
24	Deciphering earth mound origins in central Brazil. Plant and Soil, 2010, 336, 3-14.	3.7	40
25	Do woody and herbaceous species compete for soil water across topographic gradients? Evidence for niche partitioning in a Neotropical savanna. South African Journal of Botany, 2014, 91, 14-18.	2.5	39
26	Florestas estacionais e áreas de ecótono no estado do Tocantins, Brasil: parâmetros estruturais, classificação das fitofisionomias florestais e subsídios para conservação. Acta Amazonica, 2013, 43, 261-290.	0.7	38
27	Climate warming alters nitrogen dynamics and total non-structural carbohydrate accumulations of perennial herbs of distinctive functional groups during the plant senescence in autumn in an alpine meadow of the Tibetan Plateau, China. Agricultural and Forest Meteorology, 2015, 200, 21-29.	4.8	38
28	Iron: The Forgotten Driver of Nitrous Oxide Production in Agricultural Soil. PLoS ONE, 2013, 8, e60146.	2.5	38
29	Iron‐mediated stabilization of soil carbon amplifies the benefits of ecological restoration in degraded lands. Ecological Applications, 2015, 25, 1226-1234.	3.8	37
30	How are soil carbon and tropical biodiversity related?. Environmental Conservation, 2016, 43, 231-241.	1.3	37
31	Long-term crop rotation diversification enhances maize drought resistance through soil organic matter. Environmental Research Letters, 2021, 16, 084067.	5.2	37
32	Evidence of shift in C4 species range in central Argentina during the late Holocene. Plant and Soil, 2011, 349, 261-279.	3.7	35
33	Productivity-efficiency tradeoffs in tropical gallery forest-savanna transitions: linking plant and soil processes through litter input and composition. Plant Ecology, 2015, 216, 775-787.	1.6	35
34	Caracterização da polpa do coquinho-azedo (Butia capitata var capitata). Revista Brasileira De Fruticultura, 2008, 30, 827-829.	0.5	32
35	Isotopic and nutritional evidence for species‐and site‐specific responses to N deposition and elevated CO_2 in temperate forests. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1110-1123.	3.0	32
36	Características funcionais de folhas de sol e sombra de espécies arbóreas em uma mata de galeria no Distrito Federal, Brasil. Acta Botanica Brasilica, 2010, 24, 640-647.	0.8	26

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37	Climatic sensitivity, water‐use efficiency, and growth decline in boreal jack pine (<i>Pinus) Tj ETQq1 1 0.784314 rgBT /Overlock 10 T 121, 2761-2774.	3.0	26
38	Survival and growth of native Tachigali vulgaris and exotic Eucalyptus urophyllaÃ—Eucalyptus grandis trees in degraded soils with biochar amendment in southern Amazonia. Forest Ecology and Management, 2016, 368, 173-182.	3.2	26
39	Plant-microbe interactions regulate carbon and nitrogen accumulation in forest soils. Forest Ecology and Management, 2017, 384, 415-423.	3.2	26
40	Better estimates of soil carbon from geographical data: a revised global approach. Mitigation and Adaptation Strategies for Global Change, 2019, 24, 355-372.	2.1	26
41	Not all forests are expanding over central Brazilian savannas. Plant and Soil, 2010, 333, 431-442.	3.7	24
42	Estimates of soil carbon concentration in tropical and temperate forest and woodland from available <scp>GIS</scp> data on three continents. Global Ecology and Biogeography, 2013, 22, 461-469.	5.8	24
43	Quantifying the Effects of Green Waste Compost Application, Water Content and Nitrogen Fertilization on Nitrous Oxide Emissions in 10 Agricultural Soils. Journal of Environmental Quality, 2013, 42, 912-918.	2.0	24
44	CaracterizaÃ§Ã£o quÃmica da amÃªndoa de coquinho-azedo (Butia capitata var capitata). Revista Brasileira De Fruticultura, 2008, 30, 549-552.	0.5	23
45	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. Plant and Soil, 2015, 389, 59-71.	3.7	23
46	SobrevivÃªncia e crescimento de seis espÃ©cies arbÃ³reas submetidas a quatro tratamentos em Ã¡rea minerada no cerrado. Revista Arvore, 2008, 32, 731-740.	0.5	22
47	Reconstruction of Holocene coupling between the South American Monsoon System and local moisture variability from speleothem Î´18O and 87Sr/86Sr records. Quaternary Science Reviews, 2019, 210, 51-63.	3.0	22
48	Carbon isotopic signatures of soil organic matter correlate with leaf area index across woody biomes. Journal of Ecology, 2014, 102, 1606-1611.	4.0	21
49	Effects of ferric sulfate and polyaluminum chloride coagulation enhanced treatment wetlands on Typha growth, soil and water chemistry. Science of the Total Environment, 2019, 648, 116-124.	8.0	21
50	Sixteen hundred years of increasing tree cover prior to modern deforestation in Southern Amazon and Central Brazilian savannas. Global Change Biology, 2021, 27, 136-150.	9.5	21
51	A new hypothesis for the origin of Amazonian Dark Earths. Nature Communications, 2021, 12, 127.	12.8	21
52	Characterization of Winery Wastewater for Reuse in California. American Journal of Enology and Viticulture, 2015, 66, 302-310.	1.7	20
53	Impact of root growth and hydraulic conductance on canopy carbon-water relations of young walnut trees (Juglans regia L.) under drought. Scientia Horticulturae, 2017, 226, 342-352.	3.6	20
54	Recruitment patterns and northward tree migration through gap dynamics in an old-growth white pine forest in northern Ontario. Plant Ecology, 2012, 213, 1699-1714.	1.6	19

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55	Climate-induced reversal of tree growth patterns at a tropical treeline. Science Advances, 2021, 7, .	10.3	19
56	Importance of climate-driven forest–savanna biome shifts in anthropological and ecological research. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E3831-2.	7.1	18
57	The oldest extant tropical peatland in the world: a major carbon reservoir for at least 47‰000 years. Environmental Research Letters, 2020, 15, 114027.	5.2	18
58	Historical links and new frontiers in the study of forest-atmosphere interactions. Community Ecology, 2013, 14, 208-218.	0.9	17
59	Carbon dioxide level and form of soil nitrogen regulate assimilation of atmospheric ammonia in young trees. Scientific Reports, 2015, 5, 13141.	3.3	17
60	From air to land: understanding water resources through plant-based multidisciplinary research. Trends in Plant Science, 2015, 20, 399-401.	8.8	16
61	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. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 3419-3431.	3.0	16
62	From Trees to Ecosystems: Spatiotemporal Scaling of Climatic Impacts on Montane Landscapes Using Dendrochronological, Isotopic, and Remotely Sensed Data. Global Biogeochemical Cycles, 2020, 34, e2019GB006325.	4.9	16
63	Using multielement isotopic analysis to decipher drought impacts and adaptive management in ancient agricultural systems. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E4807-8.	7.1	15
64	Interactive effects of land-use change and topography on asymbiotic nitrogen fixation in the Brazilian Atlantic Forest. Biogeochemistry, 2019, 142, 137-153.	3.5	15
65	A record of vapour pressure deficit preserved in wood and soil across biomes. Scientific Reports, 2021, 11, 662.	3.3	15
66	Two Decades of Experimental Manipulation Reveal Potential for Enhanced Biomass Accumulation and Water Use Efficiency in Ponderosa Pine Plantations Across Climate Gradients. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 2321-2334.	3.0	12
67	A State Factor Model for Ecosystem Carbon–Water Relations. Trends in Plant Science, 2020, 25, 652-660.	8.8	12
68	Beyond total carbon: conversion of amazon forest to pasture alters indicators of soil C cycling. Biogeochemistry, 2021, 152, 179-194.	3.5	12
69	Nitrogen Fertilization Had No Effect on CH_4 and N_2O Emissions in Rice Planted in Rewetted Peatlands. Soil Science Society of America Journal, 2017, 81, 224-232.	2.2	11
70	Fertilidade química de um substrato tratado com lodo de esgoto e composto de resíduos domésticos. Revista Brasileira De Engenharia Agricola E Ambiental, 2010, 14, 538-544.	1.1	10
71	Old Trees: Large and Small. Science, 2013, 339, 904-905.	12.6	10
72	Evolução da qualidade do substrato de uma área minerada no cerrado revegetada com Stylosanthes spp. Revista Brasileira De Engenharia Agricola E Ambiental, 2010, 14, 835-841.	1.1	9

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73	The scientific value of the largest remaining old-growth red pine forests in North America. Biodiversity and Conservation, 2013, 22, 1847-1861.	2.6	9
74	Fire Affects Asymbiotic Nitrogen Fixation in Southern Amazon Forests. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2019JG005383.	3.0	9
75	Litter and soil biogeochemical parameters as indicators of sustainable logging in Central Amazonia. Science of the Total Environment, 2020, 714, 136780.	8.0	9
76	Testing protocol ensures the authenticity of organic fertilizers. California Agriculture, 2013, 67, 210-216.	0.8	7
77	Carbon sequestration beyond tree longevity. Science, 2017, 355, 1141-1141.	12.6	7
78	A simple procedure for the purification of active fractions in aqueous extracts of plants with allelopathic properties. Acta Botanica Brasilica, 2013, 27, 50-53.	0.8	6
79	Expanding the geography of evapotranspiration: An improved method to quantify land-to-air water fluxes in tropical and subtropical regions. PLoS ONE, 2017, 12, e0180055.	2.5	6
80	A generalizable framework for enhanced natural climate solutions. Plant and Soil, 2022, 479, 3-24.	3.7	6
81	Carbon stocks in umbric ferralsols driven by plant productivity and geomorphic processes, not by mineral protection. Earth Surface Processes and Landforms, 2022, 47, 491-508.	2.5	5
82	Seasonal variation in groundwater depth does not explain structure and diversity of tropical savannas. Journal of Vegetation Science, 2015, 26, 404-406.	2.2	4
83	Soil–Plant–Atmosphere Interactions. Developments in Soil Science, 2018, , 29-60.	0.5	4
84	Predictable Oxygen Isotope Exchange Between Plant Lipids and Environmental Water: Implications for Ecosystem Water Balance Reconstruction. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 2941-2954.	3.0	4
85	Exposure to Light Elicits a Spectrum of Chemical Changes in Soil. Journal of Geophysical Research F: Earth Surface, 2019, 124, 2288-2310.	2.8	4
86	Reply to: Evidence confirms an anthropic origin of Amazonian Dark Earths. Nature Communications, 2022, 13, .	12.8	2
87	Atmospheric factors outweigh species traits and soil properties in explaining spatiotemporal variation in water-use efficiency of tropical and subtropical forest species. Agricultural and Forest Meteorology, 2022, 323, 109056.	4.8	1
88	Natural history and evolution of the Kwongan â€" a global biodiversity hotspot. Trends in Plant Science, 2014, 19, 686.	8.8	0
89	VariaÃ§Ãµes ambientais e relaÃ§Ãµes florÃsticas no cerrado sensu stricto sobre areia (Neossolo) Tj ETQq1 1 0.784314 rgBT /Overlock Neotropical Biology, 2012, 8, .	0.1	0