Lucas A Cernusak

List of Publications by Year
in descending order

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129	9,416	38720 50	42364 92
papers	citations	h-index	g-index

138	138	138	9786
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A metaâ€analysis of responses of C₃ plants to atmospheric CO₂: doseâ€“response curves for 85 traits ranging from the molecular to the wholeâ€plant level. New Phytologist, 2022, 233, 1560-1596.	3.5	55
2	Red light shines a path forward on leaf minimum conductance. New Phytologist, 2022, 233, 5-7.	3.5	1
3	Tropical tree growth sensitivity to climate is driven by species intrinsic growth rate and leaf traits. Global Change Biology, 2022, 28, 1414-1432.	4.2	16
4	Forest system hydraulic conductance: partitioning tree and soil components. New Phytologist, 2022, 233, 1667-1681.	3.5	6
5	Thirty-eight years of CO₂ fertilization has outpaced growing aridity to drive greening of Australian woody ecosystems. Biogeosciences, 2022, 19, 491-515.	1.3	13
6	Delayed greening during leaf expansion under ambient and elevated CO₂ in tropical tree seedlings. Austral Ecology, 2022, 47, 530-540.	0.7	3
7	Effect of climate change on regeneration of plants from seeds in tropical wet forests. , 2022, , 157-168.		1
8	Do ²H and ¹⁸O in leaf water reflect environmental drivers differently?. New Phytologist, 2022, 235, 41-51.	3.5	29
9	Bridge to the future: Important lessons from 20Âyears of ecosystem observations made by the OzFlux network. Global Change Biology, 2022, 28, 3489-3514.	4.2	14
10	Nitrogen concentration and physical properties are key drivers of woody tissue respiration. Annals of Botany, 2022, 129, 633-646.	1.4	4
11	Predicted alteration of vertebrate communities in response to climateâ€induced elevational shifts. Diversity and Distributions, 2022, 28, 1180-1190.	1.9	6
12	Towards speciesâ€level forecasts of droughtâ€induced tree mortality risk. New Phytologist, 2022, 235, 94-110.	3.5	12
13	Drought reduces the growth and health of tropical rainforest understory plants. Forest Ecology and Management, 2022, 511, 120128.	1.4	5
14	The Role of Hydraulic Failure in a Massive Mangrove Die-Off Event. Frontiers in Plant Science, 2022, 13, 822136.	1.7	3
15	Epiphytic antâ€plant obtains nitrogen from both native and invasive ant inhabitants. Biotropica, 2022, 54, 556-560.	0.8	2
16	Functional susceptibility of tropical forests to climate change. Nature Ecology and Evolution, 2022, 6, 878-889.	3.4	8
17	Tropical tree mortality has increased with rising atmospheric water stress. Nature, 2022, 608, 528-533.	13.7	74
18	Carbon Isotope Effects in Relation to CO2 Assimilation by Tree Canopies. Tree Physiology, 2022, , 291-310.	0.9	7

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19	Pantropical modelling of canopy functional traits using Sentinel-2 remote sensing data. Remote Sensing of Environment, 2021, 252, 112122.	4.6	38
20	Leaf manganese concentrations as a tool to assess belowground plant functioning in phosphorus-impoverished environments. Plant and Soil, 2021, 461, 43-61.	1.8	52
21	On the use of leaf water to determine plant water source: A proof of concept. Hydrological Processes, 2021, 35, e14073.	1.1	20
22	A reporting format for leaf-level gas exchange data and metadata. Ecological Informatics, 2021, 61, 101232.	2.3	22
23	Global climate and nutrient controls of photosynthetic capacity. Communications Biology, 2021, 4, 462.	2.0	23
24	Assessing the Australian Termite Diversity Anomaly: How Habitat and Rainfall Affect Termite Assemblages. Frontiers in Ecology and Evolution, 2021, 9, .	1.1	12
25	Living on the edge: A continentalâ€scale assessment of forest vulnerability to drought. Global Change Biology, 2021, 27, 3620-3641.	4.2	50
26	Oxygen isotope exchange between water and carbon dioxide in soils is controlled by pH, nitrate and microbial biomass through links to carbonic anhydrase activity. Soil, 2021, 7, 145-159.	2.2	4
27	Lianas and trees exhibit divergent intrinsic waterâ€use efficiency along elevational gradients in South American and African tropical forests. Global Ecology and Biogeography, 2021, 30, 2259-2272.	2.7	7
28	Stability of tropical forest tree carbonâ€water relations in a rainfall exclusion treatment through shifts in effective water uptake depth. Global Change Biology, 2021, 27, 6454-6466.	4.2	17
29	Understanding how ozone impacts plant water-use efficiency. Tree Physiology, 2021, 41, 2229-2233.	1.4	4
30	AusTraits, a curated plant trait database for the Australian flora. Scientific Data, 2021, 8, 254.	2.4	73
31	Predicting species abundance by implementing the ecological niche theory. Ecography, 2021, 44, 1723-1730.	2.1	10
32	Gas exchange and waterâ€use efficiency in plant canopies. Plant Biology, 2020, 22, 52-67.	1.8	53
33	Coupled rainfall and water vapour stable isotope time series reveal tropical atmospheric processes on multiple timescales. Hydrological Processes, 2020, 34, 111-124.	1.1	12
34	The handbook for standardized field and laboratory measurements in terrestrial climate change experiments and observational studies (ClimEx). Methods in Ecology and Evolution, 2020, 11, 22-37.	2.2	68
35	Plant responses to rising vapor pressure deficit. New Phytologist, 2020, 226, 1550-1566.	3.5	814
36	The effects of an experimental drought on the ecophysiology and fruiting phenology of a tropical rainforest palm. Journal of Plant Ecology, 2020, 13, 744-753.	1.2	7

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37	Isotopic and morphologic proxies for reconstructing light environment and leaf function of fossil leaves: a modern calibration in the Daintree Rainforest, Australia. American Journal of Botany, 2020, 107, 1165-1176.	0.8	10
38	Dynamic responses of gas exchange and photochemistry to heat interference during drought in wheat and sorghum. Functional Plant Biology, 2020, 47, 611.	1.1	8
39	Identifying areas at risk of droughtâ€induced tree mortality across Southâ€Eastern Australia. Global Change Biology, 2020, 26, 5716-5733.	4.2	79
40	Why are tropical conifers disadvantaged in fertile soils? Comparison of Podocarpus guatemalensis with an angiosperm pioneer, Ficus insipida. Tree Physiology, 2020, 40, 810-821.	1.4	5
41	Directional change in leaf dry matter Î´â€Š13C during leaf development is widespread in C3 plants. Annals of Botany, 2020, 126, 981-990.	1.4	19
42	Elevated temperature and carbon dioxide alter resource allocation to growth, storage and defence in cassava (Manihot esculenta). Environmental and Experimental Botany, 2020, 173, 103997.	2.0	10
43	Nitrogen and phosphorus constrain the CO2 fertilization of global plant biomass. Nature Climate Change, 2019, 9, 684-689.	8.1	269
44	Preface: advances in modelling photosynthetic processes in terrestrial plants. Photosynthesis Research, 2019, 141, 1-3.	1.6	3
45	Environmental impacts of abrasive blasting of transmission towers in protected areas. Journal of Environmental Management, 2019, 252, 109430.	3.8	3
46	Robust Response of Terrestrial Plants to Rising CO2. Trends in Plant Science, 2019, 24, 578-586.	4.3	57
47	Functional traits of lianas in an Australian lowland rainforest align with postâ€disturbance rather than dry season advantage. Austral Ecology, 2019, 44, 983-994.	0.7	8
48	Leaf:wood allometry and functional traits together explain substantial growth rate variation in rainforest trees. AoB PLANTS, 2019, 11, plz024.	1.2	21
49	tri-PRI: A three band reflectance index tracking dynamic photoprotective mechanisms in a mature eucalypt forest. Agricultural and Forest Meteorology, 2019, 272-273, 187-201.	1.9	15
50	Critical review: incorporating the arrangement of mitochondria and chloroplasts into models of photosynthesis and carbon isotope discrimination. Photosynthesis Research, 2019, 141, 5-31.	1.6	33
51	Two-Source Î´¹⁸O Method to Validate the CO¹⁸O-Photosynthetic Discrimination Model: Implications for Mesophyll Conductance. Plant Physiology, 2019, 181, 1175-1190.	2.3	18
52	Effect of Vapor Pressure Deficit on Gas Exchange in Wild-Type and Abscisic Acidâ€“Insensitive Plants. Plant Physiology, 2019, 181, 1573-1586.	2.3	29
53	Elevated temperature and CO2 cause differential growth stimulation and drought survival responses in eucalypt species from contrasting habitats. Tree Physiology, 2019, 39, 1806-1820.	1.4	17
54	Acclimation and adaptation components of the temperature dependence of plant photosynthesis at the global scale. New Phytologist, 2019, 222, 768-784.	3.5	171

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55	Stem diameter growth rates in a fireâ€prone savanna correlate with photosynthetic rate and branchâ€scale biomass allocation, but not specific leaf area. Austral Ecology, 2019, 44, 339-350.	0.7	17
56	The validity of optimal leaf traits modelled on environmental conditions. New Phytologist, 2019, 221, 1409-1423.	3.5	38
57	Automated calibration of laser spectrometer measurements of Î´ 18 O and Î´ 2 H values in water vapour using a Dew Point Generator. Rapid Communications in Mass Spectrometry, 2018, 32, 1008-1014.	0.7	2
58	Relative roles of termites and saprotrophic microbes as drivers of wood decay: A wood block test. Austral Ecology, 2018, 43, 257-267.	0.7	26
59	A continentalâ€scale assessment of variability in leaf traits: Within species, across sites and between seasons. Functional Ecology, 2018, 32, 1492-1506.	1.7	48
60	The role of topography and plant functional traits in determining tropical reforestation success. Journal of Applied Ecology, 2018, 55, 1029-1039.	1.9	23
61	Climate and soils together regulate photosynthetic carbon isotope discrimination within C₃ plants worldwide. Global Ecology and Biogeography, 2018, 27, 1056-1067.	2.7	85
62	Unsaturation of vapour pressure inside leaves of two conifer species. Scientific Reports, 2018, 8, 7667.	1.6	80
63	Infidelity in the outback: climate signal recorded in Î”¹⁸O of leaf but not branch cellulose of eucalypts across an Australian aridity gradient. Tree Physiology, 2017, 37, 554-564.	1.4	23
64	Relationship between leaf functional traits and productivity in Aquilaria crassna (Thymelaeaceae) plantations: a tool to aid in the early selection of high-yielding trees. Tree Physiology, 2017, 37, 645-653.	1.4	12
65	Optimal climate for large trees at high elevations drives patterns of biomass in remote forests of Papua New Guinea. Global Change Biology, 2017, 23, 4873-4883.	4.2	33
66	Inferring foliar water uptake using stable isotopes of water. Oecologia, 2017, 184, 763-766.	0.9	47
67	Identifying drivers of leaf water and cellulose stable isotope enrichment in Eucalyptus in northern Australia. Oecologia, 2017, 183, 31-43.	0.9	8
68	Plant functional groups within a tropical forest exhibit different wood functional anatomy. Functional Ecology, 2017, 31, 582-591.	1.7	27
69	Effects of forest thinning on soil-plant carbon and nitrogen dynamics. Plant and Soil, 2017, 411, 437-449.	1.8	48
70	Isoscapes: a new dimension in community ecology. Tree Physiology, 2016, 36, 1456-1459.	1.4	13
71	Stable isotopes in leaf water of terrestrial plants. Plant, Cell and Environment, 2016, 39, 1087-1102.	2.8	256
72	Two tropical conifers show strong growth and water-use efficiency responses to altered CO₂concentration. Annals of Botany, 2016, 118, 1113-1125.	1.4	19

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73	Leaf vein fraction influences the PÃ©clet effect and ¹⁸O enrichment in leaf water. Plant, Cell and Environment, 2016, 39, 2414-2427.	2.8	41
74	Significant Difference in Hydrogen Isotope Composition Between Xylem and Tissue Water in Populus Euphratica. Plant, Cell and Environment, 2016, 39, 1848-1857.	2.8	135
75	The benefits of recycling: how photosynthetic bark can increase drought tolerance. New Phytologist, 2015, 208, 995-997.	3.5	58
76	Global variability in leaf respiration in relation to climate, plant functional types and leaf traits. New Phytologist, 2015, 206, 614-636.	3.5	350
77	Beyond tree-ring widths: stable isotopes sharpen the focus on climate responses of temperate forest trees. Tree Physiology, 2015, 35, 1-3.	1.4	44
78	Optimal stomatal behaviour around the world. Nature Climate Change, 2015, 5, 459-464.	8.1	397
79	Fire in Australian savannas: from leaf to landscape. Global Change Biology, 2015, 21, 62-81.	4.2	88
80	Tropical languor. Nature Geoscience, 2015, 8, 4-5.	5.4	6
81	The relationship of leaf photosynthetic traits â€“ V_{cmax} and J_{max} â€“ to leaf nitrogen, leaf phosphorus, and specific leaf area: a metaâ€analysis and modeling study. Ecology and Evolution, 2014, 4, 3218-3235.	0.8	338
82	Microwave extractionâ€“isotope ratio infrared spectroscopy (MEâ€IRIS): a novel technique for rapid extraction and inâ€line analysis of Î´¹⁸O and Î´²H values of water in plants, soils and insects. Rapid Communications in Mass Spectrometry, 2014, 28, 2151-2161.	0.7	44
83	Environmental and physiological determinants of carbon isotope discrimination in terrestrial plants. New Phytologist, 2013, 200, 950-965.	3.5	475
84	Tropical forest responses to increasing atmospheric CO2: current knowledge and opportunities for future research. Functional Plant Biology, 2013, 40, 531.	1.1	118
85	Abundance and distribution of leaf wax n-alkanes in leaves of Acacia and Eucalyptus trees along a strong humidity gradient in northern Australia. Organic Geochemistry, 2013, 62, 62-67.	0.9	106
86	Leaf water deuterium enrichment shapes leaf wax n-alkane Î´D values of angiosperm plants II: Observational evidence and global implications. Geochimica Et Cosmochimica Acta, 2013, 111, 50-63.	1.6	188
87	The multifaceted relationship between leaf water ¹⁸<scp>O</scp> enrichment and transpiration rate. Plant, Cell and Environment, 2013, 36, 1239-1241.	2.8	37
88	Direct quantification of leaf transpiration isotopic composition. Agricultural and Forest Meteorology, 2012, 154-155, 127-135.	1.9	87
89	Ternary effects on the gas exchange of isotopologues of carbon dioxide. Plant, Cell and Environment, 2012, 35, 1221-1231.	2.8	157
90	Photosynthetic physiology of eucalypts along a sub-continental rainfall gradient in northern Australia. Agricultural and Forest Meteorology, 2011, 151, 1462-1470.	1.9	101

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91	A sub-continental scale living laboratory: Spatial patterns of savanna vegetation over a rainfall gradient in northern Australia. Agricultural and Forest Meteorology, 2011, 151, 1417-1428.	1.9	123
92	Stable Isotopes Reveal the Contribution of Corticular Photosynthesis to Growth in Branches of Eucalyptus miniata. Plant Physiology, 2011, 155, 515-523.	2.3	64
93	Transpiration modulates phosphorus acquisition in tropical tree seedlings. Tree Physiology, 2011, 31, 878-885.	1.4	61
94	Responses of Legume Versus Nonlegume Tropical Tree Seedlings to Elevated CO2 Concentration Â. Plant Physiology, 2011, 157, 372-385.	2.3	64
95	SPECIALâ€"Savanna Patterns of Energy and Carbon Integrated across the Landscape. Bulletin of the American Meteorological Society, 2011, 92, 1467-1485.	1.7	52
96	Podocarpaceae in Tropical Forests: A Synthesis. Smithsonian Contributions To Botany, 2011, , 189-195.	0.7	11
97	Ecology of the Podocarpaceae in Tropical Forests. Smithsonian Contributions To Botany, 2011, , viii-207.	0.7	16
98	Zea mays rhizosphere respiration, but not soil organic matter decomposition was stable across a temperature gradient. Soil Biology and Biochemistry, 2010, 42, 2030-2033.	4.2	10
99	Leaf nitrogen to phosphorus ratios of tropical trees: experimental assessment of physiological and environmental controls. New Phytologist, 2010, 185, 770-779.	3.5	113
100	Photosynthesis and water-use efficiency of seedlings from northern Australian monsoon forest, savanna and swamp habitats grown in a common garden. Functional Plant Biology, 2010, 37, 1050.	1.1	24
101	Nitrogen to phosphorus ratio of plant biomass versus soil solution in a tropical pioneer tree, Ficus insipida. Journal of Experimental Botany, 2010, 61, 3735-3748.	2.4	73
102	Storage and transpiration have negligible effects on Â13C of stem CO2 efflux in large conifer trees. Tree Physiology, 2009, 29, 1563-1574.	1.4	49
103	Transpiration efficiency over an annual cycle, leaf gas exchange and wood carbon isotope ratio of three tropical tree species. Tree Physiology, 2009, 29, 1153-1161.	1.4	16
104	Physiological and isotopic (Î´¹³C and Î´¹⁸O) responses of three tropical tree species to water and nutrient availability. Plant, Cell and Environment, 2009, 32, 1441-1455.	2.8	81
105	A new method to measure carbon isotope composition of CO₂ respired by trees: stem CO₂ equilibration. Functional Ecology, 2009, 23, 1050-1058.	1.7	17
106	Plant Î´¹⁵N Correlates with the Transpiration Efficiency of Nitrogen Acquisition in Tropical Trees. Plant Physiology, 2009, 151, 1667-1676.	2.3	53
107	Why are non-photosynthetic tissues generally 13C enriched compared with leaves in C3 plants? Review and synthesis of current hypotheses. Functional Plant Biology, 2009, 36, 199.	1.1	348
108	Oxygen isotope composition of CAM and C₃Clusia species: nonâ€steadyâ€state dynamics control leaf water ¹⁸O enrichment in succulent leaves. Plant, Cell and Environment, 2008, 31, 1644-1662.	2.8	24

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109	Conifers, Angiosperm Trees, and Lianas: Growth, Whole-Plant Water and Nitrogen Use Efficiency, and Stable Isotope Composition (Î´ Â13C and Î´ Â18O) of Seedlings Grown in a Tropical Environment Â. Plant Physiology, 2008, 148, 642-659.	2.3	80
110	Transpiration efficiency of a tropical pioneer tree (Ficus insipida) in relation to soil fertility. Journal of Experimental Botany, 2007, 58, 3549-3566.	2.4	101
111	Heavy Water Fractionation during Transpiration. Plant Physiology, 2007, 143, 11-18.	2.3	373
112	Savanna fires and their impact on net ecosystem productivity in North Australia. Global Change Biology, 2007, 13, 990-1004.	4.2	192
113	Modelling advection and diffusion of water isotopologues in leaves. Plant, Cell and Environment, 2007, 30, 892-909.	2.8	117
114	Large variation in whole-plant water-use efficiency among tropical tree species. New Phytologist, 2007, 173, 294-305.	3.5	99
115	Savanna fires and their impact on net ecosystem productivity in North Australia. Global Change Biology, 2007, .	4.2	0
116	Stem and leaf gas exchange and their responses to fire in a north Australian tropical savanna. Plant, Cell and Environment, 2006, 29, 632-646.	2.8	73
117	On the isotopic composition of leaf water in the non-steady state. Functional Plant Biology, 2005, 32, 293.	1.1	261
118	Nocturnal stomatal conductance and implications for modelling Î´18O of leaf-respired CO2 in temperate tree species. Functional Plant Biology, 2005, 32, 1107.	1.1	67
119	Factors Affecting the Oxygen Isotope Ratio of Plant Organic Material. , 2005, , 9-28.		22
120	Environmental and physiological controls over oxygen and carbon isotope composition of Tasmanian blue gum, Eucalyptus globulus. Tree Physiology, 2005, 25, 129-146.	1.4	209
121	Measurement and Interpretation of the Oxygen Isotope Composition of Carbon Dioxide Respired by Leaves in the Dark. Plant Physiology, 2004, 136, 3350-3363.	2.3	67
122	Oxygen and carbon isotope composition of parasitic plants and their hosts in southwestern Australia. Oecologia, 2004, 139, 199-213.	0.9	53
123	Water Relations Link Carbon and Oxygen Isotope Discrimination to Phloem Sap Sugar Concentration in Eucalyptus globulus. Plant Physiology, 2003, 131, 1544-1554.	2.3	108
124	Oxygen isotope composition of phloem sap in relation to leaf water in Ricinus communis. Functional Plant Biology, 2003, 30, 1059.	1.1	100
125	Diurnal variation in the stable isotope composition of water and dry matter in fruiting Lupinus angustifolius under field conditions. Plant, Cell and Environment, 2002, 25, 893-907.	2.8	167
126	Carbon isotope discrimination in photosynthetic bark. Oecologia, 2001, 128, 24-35.	0.9	76

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127	Responses of foliar Â13C, gas exchange and leaf morphology to reduced hydraulic conductivity in Pinus monticola branches. Tree Physiology, 2001, 21, 1215-1222.	1.4	35
128	Photosynthetic refixation in branches of Western White Pine. Functional Ecology, 2000, 14, 300-311.	1.7	112
129	CO2Diffusion in Douglas Fir Bark. Journal of Sustainable Forestry, 1999, 10, 107-113.	0.6	2