Alistair Rogers

List of Publications by Year
in descending order

86 papers	12,412 citations	47006 47 h-index	53230 85 g-index
97 all docs	97 docs citations	97 times ranked	12734 citing authors

#	Article	IF	Citations
1	Reducing model uncertainty of climate change impacts on high latitude carbon assimilation. Global Change Biology, 2022, 28, 1222-1247.	9.5	6
2	New calculations for photosynthesis measurement systems: what's the impact for physiologists and modelers?. New Phytologist, 2022, 233, 592-598.	7.3	4
3	Monitoring leaf phenology in moist tropical forests by applying a superpixel-based deep learning method to time-series images of tree canopies. ISPRS Journal of Photogrammetry and Remote Sensing, 2022, 183, 19-33.	11.1	15
4	Late-day measurement of excised branches results in uncertainty in the estimation of two stomatal parameters derived from response curves in<i>Populus deltoides</i>Bartr.ÂÃ—Â<i>Populus nigra</i>L.. Tree Physiology, 2022, 42, 1377-1395.	3.1	8
5	An improved representation of the relationship between photosynthesis and stomatal conductance leads to more stable estimation of conductance parameters and improves the goodnessâ€•ofâ€•fit across diverse data sets. Global Change Biology, 2022, 28, 3537-3556.	9.5	9
6	One Stomatal Model to Rule Them All? Toward Improved Representation of Carbon and Water Exchange in Global Models. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	20
7	Implementation and evaluation of the unified stomatal optimization approach in the Functionally Assembled Terrestrial Ecosystem Simulator (FATES). Geoscientific Model Development, 2022, 15, 4313-4329.	3.6	5
8	Multiâ€•hypothesis comparison of Farquhar and Collatz photosynthesis models reveals the unexpected influence of empirical assumptions at leaf and global scales. Global Change Biology, 2021, 27, 804-822.	9.5	22
9	Triose phosphate utilization limitation: an unnecessary complexity in terrestrial biosphere model representation of photosynthesis. New Phytologist, 2021, 230, 17-22.	7.3	11
10	The effects of rising CO₂ concentrations on terrestrial systems: scaling it up. New Phytologist, 2021, 229, 2383-2385.	7.3	3
11	Seasonal trends in photosynthesis and leaf traits in scarlet oak. Tree Physiology, 2021, 41, 1413-1424.	3.1	17
12	A reporting format for leaf-level gas exchange data and metadata. Ecological Informatics, 2021, 61, 101232.	5.2	22
13	Source:sink imbalance detected with leafâ€•and canopyâ€•level spectroscopy in a fieldâ€•grown crop. Plant, Cell and Environment, 2021, 44, 2466-2479.	5.7	15
14	Hydraulic architecture explains species moisture dependency but not mortality rates across a tropical rainfall gradient. Biotropica, 2021, 53, 1213-1225.	1.6	6
15	Detection of the metabolic response to drought stress using hyperspectral reflectance. Journal of Experimental Botany, 2021, 72, 6474-6489.	4.8	23
16	A best-practice guide to predicting plant traits from leaf-level hyperspectral data using partial least squares regression. Journal of Experimental Botany, 2021, 72, 6175-6189.	4.8	74
17	The importance of independent replication of treatments in plant science. Journal of Experimental Botany, 2021, 72, 5270-5274.	4.8	9
18	Spectroscopy outperforms leaf trait relationships for predicting photosynthetic capacity across different forest types. New Phytologist, 2021, 232, 134-147.	7.3	19

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19	A Guide to Using GitHub for Developing and Versioning Data Standards and Reporting Formats. Earth and Space Science, 2021, 8, e2021EA001797.	2.6	7
20	Canopy Position Influences the Degree of Light Suppression of Leaf Respiration in Abundant Tree Genera in the Amazon Forest. Frontiers in Forests and Global Change, 2021, 4, .	2.3	3
21	Rapid estimation of photosynthetic leaf traits of tropical plants in diverse environmental conditions using reflectance spectroscopy. PLoS ONE, 2021, 16, e0258791.	2.5	8
22	The response of stomatal conductance to seasonal drought in tropical forests. Global Change Biology, 2020, 26, 823-839.	9.5	60
23	TRY plant trait database â€" enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	9.5	1,038
24	Stimulation of isoprene emissions and electron transport rates as key mechanisms of thermal tolerance in the tropical species <i>Vismia guianensis</i>. Global Change Biology, 2020, 26, 5928-5941.	9.5	20
25	Benchmarking and parameter sensitivity of physiological and vegetation dynamics using the Functionally Assembled Terrestrial Ecosystem Simulator (FATES) at Barro Colorado Island, Panama. Biogeosciences, 2020, 17, 3017-3044.	3.3	82
26	From the Arctic to the tropics: multibiome prediction of leaf mass per area using leaf reflectance. New Phytologist, 2019, 224, 1557-1568.	7.3	86
27	No evidence for triose phosphate limitation of lightâ€saturated leaf photosynthesis under current atmospheric CO 2 concentration. Plant, Cell and Environment, 2019, 42, 3241-3252.	5.7	25
28	Leaf reflectance spectroscopy captures variation in carboxylation capacity across species, canopy environment and leaf age in lowland moist tropical forests. New Phytologist, 2019, 224, 663-674.	7.3	55
29	The â€œoneâ€point methodâ€•for estimating maximum carboxylation capacity of photosynthesis: A cautionary tale. Plant, Cell and Environment, 2019, 42, 2472-2481.	5.7	21
30	Spectroscopy can predict key leaf traits associated with sourceâ€"sink balance and carbonâ€"nitrogen status. Journal of Experimental Botany, 2019, 70, 1789-1799.	4.8	72
31	Terrestrial biosphere models may overestimate Arctic <scp>CO</scp>₂ assimilation if they do not account for decreased quantum yield and convexity at low temperature. New Phytologist, 2019, 223, 167-179.	7.3	14
32	Acclimation and adaptation components of the temperature dependence of plant photosynthesis at the global scale. New Phytologist, 2019, 222, 768-784.	7.3	171
33	Global photosynthetic capacity is optimized to the environment. Ecology Letters, 2019, 22, 506-517.	6.4	153
34	Homoeostatic maintenance of nonstructural carbohydrates during the 2015â€"2016 El NiÃ±o drought across a tropical forest precipitation gradient. Plant, Cell and Environment, 2019, 42, 1705-1714.	5.7	29
35	Biological processes dominate seasonality of remotely sensed canopy greenness in an Amazon evergreen forest. New Phytologist, 2018, 217, 1507-1520.	7.3	66
36	Nutrient sink limitation constrains growth in two barley species with contrasting growth strategies. Plant Direct, 2018, 2, e00094.	1.9	11

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37	Triose phosphate limitation in photosynthesis models reduces leaf photosynthesis and global terrestrial carbon storage. Environmental Research Letters, 2018, 13, 074025.	5.2	56
38	The multi-assumption architecture and testbed (MAAT v1.0): R code for generating ensembles with dynamic model structure and analysis of epistemic uncertainty from multiple sources. Geoscientific Model Development, 2018, 11, 3159-3185.	3.6	13
39	The phenology of leaf quality and its withinâ€canopy variation is essential for accurate modeling of photosynthesis in tropical evergreen forests. Global Change Biology, 2017, 23, 4814-4827.	9.5	33
40	A roadmap for improving the representation of photosynthesis in Earth system models. New Phytologist, 2017, 213, 22-42.	7.3	365
41	A global traitâ€based approach to estimate leaf nitrogen functional allocation from observations. Ecological Applications, 2017, 27, 1421-1434.	3.8	59
42	Terrestrial biosphere models underestimate photosynthetic capacity and CO₂ assimilation in the Arctic. New Phytologist, 2017, 216, 1090-1103.	7.3	59
43	A zero-power warming chamber for investigating plant responses to rising temperature. Biogeosciences, 2017, 14, 4071-4083.	3.3	3
44	A global scale mechanistic model of photosynthetic capacity (LUNA V1.0). Geoscientific Model Development, 2016, 9, 587-606.	3.6	88
45	Carbon sourceâ€“sink limitations differ between two species with contrasting growth strategies. Plant, Cell and Environment, 2016, 39, 2460-2472.	5.7	53
46	A test of the â€˜oneâ€point methodâ€™ for estimating maximum carboxylation capacity from fieldâ€measured, lightâ€saturated photosynthesis. New Phytologist, 2016, 210, 1130-1144.	7.3	159
47	How can we make plants grow faster? A sourceâ€“sink perspective on growth rate. Journal of Experimental Botany, 2016, 67, 31-45.	4.8	228
48	Scaling nitrogen and carbon interactions: what are the consequences of biological buffering?. Ecology and Evolution, 2015, 5, 2839-2850.	1.9	4
49	Globalâ€scale environmental control of plant photosynthetic capacity. Ecological Applications, 2015, 25, 2349-2365.	3.8	95
50	Optimal stomatal behaviour around the world. Nature Climate Change, 2015, 5, 459-464.	18.8	397
51	Quantitative Multilevel Analysis of Central Metabolism in Developing Oilseeds of Oilseed Rape during in Vitro Culture. Plant Physiology, 2015, 168, 828-848.	4.8	71
52	The use and misuse of V c,max in Earth System Models. Photosynthesis Research, 2014, 119, 15-29.	2.9	205
53	Minirhizotron imaging reveals that nodulation of field-grown soybean is enhanced by free-air CO2 enrichment only when combined with drought stress. Functional Plant Biology, 2013, 40, 137.	2.1	48
54	Inoculation of hybrid poplar with the endophytic bacterium <scp><i>E</i></scp><i>nterobacter</i> sp. 638 increases biomass but does not impact leaf level physiology. GCB Bioenergy, 2012, 4, 364-370.	5.6	47

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55	Inhibition of trehalose breakdown increases new carbon partitioning into cellulosic biomass in Nicotiana tabacum. Carbohydrate Research, 2011, 346, 595-601.	2.3	11
56	Growth at elevated ozone or elevated carbon dioxide concentration alters antioxidant capacity and response to acute oxidative stress in soybean (Glycine max). Journal of Experimental Botany, 2011, 62, 2667-2678.	4.8	100
57	The transcriptome of <i>Populus</i> in elevated CO₂ reveals increased anthocyanin biosynthesis during delayed autumnal senescence. New Phytologist, 2010, 186, 415-428.	7.3	73
58	Challenges in elevated CO2 experiments on forests. Trends in Plant Science, 2010, 15, 5-10.	8.8	46
59	Elevated CO2 effects on plant carbon, nitrogen, and water relations: six important lessons from FACE. Journal of Experimental Botany, 2009, 60, 2859-2876.	4.8	1,343
60	Will Elevated Carbon Dioxide Concentration Amplify the Benefits of Nitrogen Fixation in Legumes?. Plant Physiology, 2009, 151, 1009-1016.	4.8	220
61	Comparison of gas use efficiency and treatment uniformity in a forest ecosystem exposed to elevated [CO₂] using pure and prediluted freeâ€air CO₂ enrichment technology. Global Change Biology, 2009, 15, 388-395.	9.5	20
62	Gene expression profiling: opening the black box of plant ecosystem responses to global change. Global Change Biology, 2009, 15, 1201-1213.	9.5	35
63	Transcriptomic comparison in the leaves of two aspen genotypes having similar carbon assimilation rates but different partitioning patterns under elevated [CO₂]. New Phytologist, 2009, 182, 891-911.	7.3	50
64	Poplar and its Bacterial Endophytes: Coexistence and Harmony. Critical Reviews in Plant Sciences, 2009, 28, 346-358.	5.7	97
65	Enzyme Kinetics: Theory and Practice. , 2009, , 71-103.		30
66	Next generation of elevated [CO₂] experiments with crops: a critical investment for feeding the future world. Plant, Cell and Environment, 2008, 31, 1317-1324.	5.7	154
67	Connecting genes, coexpression modules, and molecular signatures to environmental stress phenotypes in plants. BMC Systems Biology, 2008, 2, 16.	3.0	102
68	Targets for Crop Biotechnology in a Future High-CO₂ and High-O₃ World. Plant Physiology, 2008, 147, 13-19.	4.8	164
69	The response of photosynthesis and stomatal conductance to rising [CO2]: mechanisms and environmental interactions. Plant, Cell and Environment, 2007, 30, 258-270.	5.7	1,810
70	Parallel determination of enzyme activities and in vivo fluxes in Brassica napus embryos grown on organic or inorganic nitrogen source. Phytochemistry, 2007, 68, 2232-2242.	2.9	106
71	Increased C availability at elevated carbon dioxide concentration improves N assimilation in a legume. Plant, Cell and Environment, 2006, 29, 1651-1658.	5.7	172
72	Hourly and seasonal variation in photosynthesis and stomatal conductance of soybean grown at future CO2and ozone concentrations for 3 years under fully open-air field conditions. Plant, Cell and Environment, 2006, 29, 2077-2090.	5.7	132

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73	Does elevated atmospheric [CO2] alter diurnal C uptake and the balance of C and N metabolites in growing and fully expanded soybean leaves?. Journal of Experimental Botany, 2006, 58, 579-591.	4.8	102
74	Photosynthesis, Productivity, and Yield of Maize Are Not Affected by Open-Air Elevation of CO2 Concentration in the Absence of Drought. Plant Physiology, 2006, 140, 779-790.	4.8	451
75	The Effects of Elevated CO2 Concentration on Soybean Gene Expression. An Analysis of Growing and Mature Leaves. Plant Physiology, 2006, 142, 135-147.	4.8	142
76	The Response of Foliar Carbohydrates to Elevated [CO2]. , 2006, , 293-308.		21
77	Anthropogenic Changes in Tropospheric Composition Increase Susceptibility of Soybean to Insect Herbivory. Environmental Entomology, 2005, 34, 479-485.	1.4	115
78	Leaf photosynthesis and carbohydrate dynamics of soybeans grown throughout their life-cycle under Free-Air Carbon dioxide Enrichment. Plant, Cell and Environment, 2004, 27, 449-458.	5.7	182
79	Testing the â€œsourceâ€"sinkâ€•hypothesis of down-regulation of photosynthesis in elevated [CO2] in the field with single gene substitutions in Glycine max. Agricultural and Forest Meteorology, 2004, 122, 85-94.	4.8	311
80	RISING ATMOSPHERIC CARBON DIOXIDE: Plants FACE the Future. Annual Review of Plant Biology, 2004, 55, 591-628.	18.7	1,472
81	Is stimulation of leaf photosynthesis by elevated carbon dioxide concentration maintained in the long term? A test with Lolium perenne grown for 10 years at two nitrogen fertilization levels under F ree A ir C O2 E nrichment (FACE). Plant, Cell and Environment, 2003, 26, 705-714.	5.7	172
82	Variation in acclimation of photosynthesis in Trifolium repens after eight years of exposure to Free Air CO2 Enrichment (FACE). Journal of Experimental Botany, 2003, 54, 2769-2774.	4.8	60
83	Photosynthetic acclimation of Pinus taeda (loblolly pine) to long-term growth in elevated p CO2 (FACE). Plant, Cell and Environment, 2002, 25, 851-858.	5.7	132
84	Possible explanation of the disparity between the in vitro and in vivo measurements of Rubisco activity: a study in loblolly pine grown in elevated pCO2. Journal of Experimental Botany, 2001, 52, 1555-1561.	4.8	37
85	A mechanistic evaluation of photosynthetic acclimation at elevated CO2. Global Change Biology, 2000, 6, 1005-1011.	9.5	123
86	Acclimation of Photosynthesis to Elevated CO2under Low-Nitrogen Nutrition Is Affected by the Capacity for Assimilate Utilization. Perennial Ryegrass under Free-Air CO2 Enrichment. Plant Physiology, 1998, 118, 683-689.	4.8	190