

Martin G De Kauwe

List of Publications by Year in descending order

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Version: 2024-02-01

98
papers

7,096
citations

61984

43
h-index

62596

80
g-index

161
all docs

161
docs citations

161
times ranked

8215
citing authors

#	ARTICLE	IF	CITATIONS
1	Red light shines a path forward on leaf minimum conductance. <i>New Phytologist</i> , 2022, 233, 5-7.	7.3	1
2	Temperature responses of photosynthesis and respiration in evergreen trees from boreal to tropical latitudes. <i>New Phytologist</i> , 2022, 234, 353-374.	7.3	52
3	Thirty-eight years of CO ₂ fertilization has outpaced growing aridity to drive greening of Australian woody ecosystems. <i>Biogeosciences</i> , 2022, 19, 491-515.	3.3	13
4	One Stomatal Model to Rule Them All? Toward Improved Representation of Carbon and Water Exchange in Global Models. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	3.8	20
5	A flux tower dataset tailored for land model evaluation. <i>Earth System Science Data</i> , 2022, 14, 449-461.	9.9	11
6	Assessing the potential for crop albedo enhancement in reducing heatwave frequency, duration, and intensity under future climate change. <i>Weather and Climate Extremes</i> , 2022, 35, 100415.	4.1	2
7	Decoupling between ecosystem photosynthesis and transpiration: a last resort against overheating. <i>Environmental Research Letters</i> , 2022, 17, 044013.	5.2	22
8	Mechanisms of woody-plant mortality under rising drought, CO ₂ and vapour pressure deficit. <i>Nature Reviews Earth & Environment</i> , 2022, 3, 294-308.	29.7	163
9	Bridge to the future: Important lessons from 20 years of ecosystem observations made by the OzFlux network. <i>Global Change Biology</i> , 2022, 28, 3489-3514.	9.5	14
10	Reconciling historical changes in the hydrological cycle over land. <i>Npj Climate and Atmospheric Science</i> , 2022, 5, .	6.8	7
11	Examining the role of environmental memory in the predictability of carbon and water fluxes across Australian ecosystems. <i>Biogeosciences</i> , 2022, 19, 1913-1932.	3.3	6
12	Towards species-level forecasts of drought-induced tree mortality risk. <i>New Phytologist</i> , 2022, 235, 94-110.	7.3	12
13	Predicting resilience through the lens of competing adjustments to vegetation function. <i>Plant, Cell and Environment</i> , 2022, 45, 2744-2761.	5.7	8
14	How do groundwater dynamics influence heatwaves in southeast Australia?. <i>Weather and Climate Extremes</i> , 2022, 37, 100479.	4.1	3
15	Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO ₂ . <i>New Phytologist</i> , 2021, 229, 2413-2445.	7.3	286
16	Beyond ecosystem modeling: A roadmap to community cyberinfrastructure for ecological data-model integration. <i>Global Change Biology</i> , 2021, 27, 13-26.	9.5	44
17	Interannual variability of ecosystem iso/anisohydry is regulated by environmental dryness. <i>New Phytologist</i> , 2021, 229, 2562-2575.	7.3	23
18	Evaluating a land surface model at a water-limited site: implications for land surface contributions to droughts and heatwaves. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 447-471.	4.9	15

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19	Disentangling the Regional Climate Impacts of Competing Vegetation Responses to Elevated Atmospheric CO ₂ . <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034108.	3.3	6
20	Examining the sensitivity of the terrestrial carbon cycle to the expression of El Niño. <i>Biogeosciences</i> , 2021, 18, 2181-2203.	3.3	2
21	A reporting format for leaf-level gas exchange data and metadata. <i>Ecological Informatics</i> , 2021, 61, 101232.	5.2	22
22	Advances in Land Surface Modelling. <i>Current Climate Change Reports</i> , 2021, 7, 45-71.	8.6	43
23	Improvement of modeling plant responses to low soil moisture in JULESv4.9 and evaluation against flux tower measurements. <i>Geoscientific Model Development</i> , 2021, 14, 3269-3294.	3.6	15
24	Annual precipitation explains variability in dryland vegetation greenness globally but not locally. <i>Global Change Biology</i> , 2021, 27, 4367-4380.	9.5	44
25	Patterns of post-drought recovery are strongly influenced by drought duration, frequency, post-drought wetness, and bioclimatic setting. <i>Global Change Biology</i> , 2021, 27, 4630-4643.	9.5	37
26	To what extent can rising [CO ₂] ameliorate plant drought stress?. <i>New Phytologist</i> , 2021, 231, 2118-2124.	7.3	39
27	Exploring how groundwater buffers the influence of heatwaves on vegetation function during multi-year droughts. <i>Earth System Dynamics</i> , 2021, 12, 919-938.	7.1	18
28	Assessing the representation of the Australian carbon cycle in global vegetation models. <i>Biogeosciences</i> , 2021, 18, 5639-5668.	3.3	21
29	RETRACTED ARTICLE: A constraint on historic growth in global photosynthesis due to increasing CO ₂ . <i>Nature</i> , 2021, 600, 253-258.	27.8	50
30	Mesophyll conductance in land surface models: effects on photosynthesis and transpiration. <i>Plant Journal</i> , 2020, 101, 858-873.	5.7	30
31	Plant profit maximization improves predictions of European forest responses to drought. <i>New Phytologist</i> , 2020, 226, 1638-1655.	7.3	59
32	Low phosphorus supply constrains plant responses to elevated CO ₂ : A meta-analysis. <i>Global Change Biology</i> , 2020, 26, 5856-5873.	9.5	37
33	Anthropogenic climate change has driven over 5 million km ² of drylands towards desertification. <i>Nature Communications</i> , 2020, 11, 3853.	12.8	215
34	Robust Future Changes in Meteorological Drought in CMIP6 Projections Despite Uncertainty in Precipitation. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087820.	4.0	239
35	Influence of sun zenith angle on canopy clumping and the resulting impacts on photosynthesis. <i>Agricultural and Forest Meteorology</i> , 2020, 291, 108065.	4.8	24
36	Identifying areas at risk of drought-induced tree mortality across South-Eastern Australia. <i>Global Change Biology</i> , 2020, 26, 5716-5733.	9.5	79

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37	The fate of carbon in a mature forest under carbon dioxide enrichment. <i>Nature</i> , 2020, 580, 227-231.	27.8	218
38	Rainfall manipulation experiments as simulated by terrestrial biosphere models: Where do we stand?. <i>Global Change Biology</i> , 2020, 26, 3336-3355.	9.5	50
39	Drought Impacts on Australian Vegetation During the Millennium Drought Measured With Multisource Spaceborne Remote Sensing. <i>Journal of Geophysical Research C: Biogeosciences</i> , 2020, 125, e2019JG005145.	3.0	20
40	Low sensitivity of gross primary production to elevated CO ₂ in a mature eucalypt woodland. <i>Biogeosciences</i> , 2020, 17, 265-279.	3.3	17
41	Amazon forest response to CO ₂ fertilization dependent on plant phosphorus acquisition. <i>Nature Geoscience</i> , 2019, 12, 736-741.	12.9	177
42	Desiccation time during drought is highly predictable across species of <i>Eucalyptus</i> from contrasting climates. <i>New Phytologist</i> , 2019, 224, 632-643.	7.3	65
43	Incorporating non-stomatal limitation improves the performance of leaf and canopy models at high vapour pressure deficit. <i>Tree Physiology</i> , 2019, 39, 1961-1974.	3.1	24
44	How representative are FLUXNET measurements of surface fluxes during temperature extremes?. <i>Biogeosciences</i> , 2019, 16, 1829-1844.	3.3	11
45	The quasi-equilibrium framework revisited: analyzing long-term CO ₂ enrichment responses in plant-soil models. <i>Geoscientific Model Development</i> , 2019, 12, 2069-2089.	3.6	5
46	The Nonradiative Effect Dominates Local Surface Temperature Change Caused by Afforestation in China. <i>Journal of Climate</i> , 2019, 32, 4445-4471.	3.2	42
47	Examining the evidence for decoupling between photosynthesis and transpiration during heat extremes. <i>Biogeosciences</i> , 2019, 16, 903-916.	3.3	54
48	Observed and modelled historical trends in the water-use efficiency of plants and ecosystems. <i>Global Change Biology</i> , 2019, 25, 2242-2257.	9.5	85
49	Decadal biomass increment in early secondary succession woody ecosystems is increased by CO ₂ enrichment. <i>Nature Communications</i> , 2019, 10, 454.	12.8	68
50	Effects of mesophyll conductance on vegetation responses to elevated CO ₂ concentrations in a land surface model. <i>Global Change Biology</i> , 2019, 25, 1820-1838.	9.5	38
51	Evaluation of the CABLEv2.3.4 Land Surface Model Coupled to NUI-WRFv3.9.1.1 in Simulating Temperature and Precipitation Means and Extremes Over CORDEX AustralAsia Within a WRF Physics Ensemble. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 4466-4488.	3.8	7
52	Acclimation and adaptation components of the temperature dependence of plant photosynthesis at the global scale. <i>New Phytologist</i> , 2019, 222, 768-784.	7.3	171
53	Trees tolerate an extreme heatwave via sustained transpirational cooling and increased leaf thermal tolerance. <i>Global Change Biology</i> , 2018, 24, 2390-2402.	9.5	242
54	Xylem embolism refilling and resilience against drought-induced mortality in woody plants: processes and trade-offs. <i>Ecological Research</i> , 2018, 33, 839-855.	1.5	116

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55	Towards physiologically meaningful water-use efficiency estimates from eddy covariance data. <i>Global Change Biology</i> , 2018, 24, 694-710.	9.5	105
56	Does predictability of fluxes vary between FLUXNET sites?. <i>Biogeosciences</i> , 2018, 15, 4495-4513.	3.3	21
57	Inferring the effects of sink strength on plant carbon balance processes from experimental measurements. <i>Biogeosciences</i> , 2018, 15, 4003-4018.	3.3	11
58	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. <i>Geoscientific Model Development</i> , 2018, 11, 3159-3185.	3.6	13
59	Applying the Concept of Ecohydrological Equilibrium to Predict Steady State Leaf Area Index. <i>Journal of Advances in Modeling Earth Systems</i> , 2018, 10, 1740-1758.	3.8	24
60	Evaluating CMIP5 Model Agreement for Multiple Drought Metrics. <i>Journal of Hydrometeorology</i> , 2018, 19, 969-988.	1.9	59
61	Evaluating the Contribution of Land-Atmosphere Coupling to Heat Extremes in CMIP5 Models. <i>Geophysical Research Letters</i> , 2018, 45, 9003-9012.	4.0	50
62	Challenging terrestrial biosphere models with data from the long-term multifactor Prairie Heating and CO_2 Enrichment experiment. <i>Global Change Biology</i> , 2017, 23, 3623-3645.	9.5	42
63	Comment on "Mycorrhizal association as a primary control of the CO_2 fertilization effect". <i>Science</i> , 2017, 355, 358-358.	12.6	16
64	How do leaf and ecosystem measures of water-use efficiency compare?. <i>New Phytologist</i> , 2017, 216, 758-770.	7.3	156
65	Gross primary production responses to warming, elevated CO_2 , and irrigation: quantifying the drivers of ecosystem physiology in a semiarid grassland. <i>Global Change Biology</i> , 2017, 23, 3092-3106.	9.5	43
66	The impact of alternative trait-scaling hypotheses for the maximum photosynthetic carboxylation rate (V_{cmax}) on global gross primary production. <i>New Phytologist</i> , 2017, 215, 1370-1386.	7.3	126
67	FluxnetLSM R package (v1.0): a community tool for processing FLUXNET data for use in land surface modelling. <i>Geoscientific Model Development</i> , 2017, 10, 3379-3390.	3.6	14
68	Ideas and perspectives: how coupled is the vegetation to the boundary layer?. <i>Biogeosciences</i> , 2017, 14, 4435-4453.	3.3	57
69	Challenges and opportunities in land surface modelling of savanna ecosystems. <i>Biogeosciences</i> , 2017, 14, 4711-4732.	3.3	45
70	A model inter-comparison study to examine limiting factors in modelling Australian tropical savannas. <i>Biogeosciences</i> , 2016, 13, 3245-3265.	3.3	32
71	Land surface models systematically overestimate the intensity, duration and magnitude of seasonal-scale evaporative droughts. <i>Environmental Research Letters</i> , 2016, 11, 104012.	5.2	88
72	Modelling evapotranspiration during precipitation deficits: identifying critical processes in a land surface model. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 2403-2419.	4.9	33

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73	Modelâ€‘data synthesis for the next generation of forest freeâ€‘air CO_2 enrichment (FACE) experiments. <i>New Phytologist</i> , 2016, 209, 17-28.	7.3	178
74	Satellite based estimates underestimate the effect of CO_2 fertilization on net primary productivity. <i>Nature Climate Change</i> , 2016, 6, 892-893.	18.8	69
75	New developments in the effort to model ecosystems under water stress. <i>New Phytologist</i> , 2016, 212, 5-7.	7.3	28
76	Impact of the representation of stomatal conductance on model projections of heatwave intensity. <i>Scientific Reports</i> , 2016, 6, 23418.	3.3	68
77	Using models to guide field experiments: <i>a priori</i> predictions for the CO_2 response of a nutrient- and water-limited native Eucalypt woodland. <i>Global Change Biology</i> , 2016, 22, 2834-2851.	9.5	77
78	A test of the â€‘oneâ€‘point methodâ€™™ for estimating maximum carboxylation capacity from field-measured, light-saturated photosynthesis. <i>New Phytologist</i> , 2016, 210, 1130-1144.	7.3	159
79	Predicting long-term carbon sequestration in response to CO_2 enrichment: How and why do current ecosystem models differ?. <i>Global Biogeochemical Cycles</i> , 2015, 29, 476-495.	4.9	99
80	Do land surface models need to include differential plant species responses to drought? Examining model predictions across a mesic-xeric gradient in Europe. <i>Biogeosciences</i> , 2015, 12, 7503-7518.	3.3	73
81	Implementation of an optimal stomatal conductance scheme in the Australian Community Climate Earth Systems Simulator (ACCESS1.3b). <i>Geoscientific Model Development</i> , 2015, 8, 3877-3889.	3.6	51
82	Using ecosystem experiments to improve vegetation models. <i>Nature Climate Change</i> , 2015, 5, 528-534.	18.8	249
83	A test of an optimal stomatal conductance scheme within the CABLE land surface model. <i>Geoscientific Model Development</i> , 2015, 8, 431-452.	3.6	156
84	Where does the carbon go? A modelâ€‘data intercomparison of vegetation carbon allocation and turnover processes at two temperate forest freeâ€‘air CO_2 enrichment sites. <i>New Phytologist</i> , 2014, 203, 883-899.	7.3	263
85	Evaluation of 11 terrestrial carbon-nitrogen cycle models against observations from two temperate $\text{F}_A\text{CO}_2\text{E}$ enrichment studies. <i>New Phytologist</i> , 2014, 202, 803-822.	7.3	378
86	Comprehensive ecosystem modelâ€‘data synthesis using multiple data sets at two temperate forest freeâ€‘air CO_2 enrichment experiments: Model performance at ambient CO_2 concentration. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2014, 119, 937-964.	3.0	95
87	Carbon dioxide and water use in forests. <i>Nature</i> , 2013, 499, 287-289.	27.8	22
88	Biochemical photosynthetic responses to temperature: how do interspecific differences compare with seasonal shifts?. <i>Tree Physiology</i> , 2013, 33, 793-806.	3.1	39
89	The optimal stomatal response to atmospheric CO_2 concentration: Alternative solutions, alternative interpretations. <i>Agricultural and Forest Meteorology</i> , 2013, 182-183, 200-203.	4.8	65
90	Forest water use and water use efficiency at elevated CO_2 : a modelâ€‘data intercomparison at two contrasting temperate forest FACE sites. <i>Global Change Biology</i> , 2013, 19, 1759-1779.	9.5	314

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91	Quantifying Land Surface Temperature Variability for Two Sahelian Mesoscale Regions during the Wet Season. Journal of Hydrometeorology, 2013, 14, 1605-1619.	1.9	19
92	RAMI4PILPS: An intercomparison of formulations for the partitioning of solar radiation in land surface models. Journal of Geophysical Research, 2011, 116, .	3.3	63
93	An assessment of the MODIS collection 5 leaf area index product for a region of mixed coniferous forest. Remote Sensing of Environment, 2011, 115, 767-780.	11.0	173
94	Frequency of Sahelian storm initiation enhanced over mesoscale soil-moisture patterns. Nature Geoscience, 2011, 4, 430-433.	12.9	240
95	Assimilating canopy reflectance data into an ecosystem model with an Ensemble Kalman Filter. Remote Sensing of Environment, 2008, 112, 1347-1364.	11.0	123
96	Assimilating Earth Observation Data into Land Surface Models. , 2008, , .		0
97	Estimating the Spatial Exchange of Carbon through the Assimilation of Earth Observation Derived Products using an Ensemble Kalman Filter. , 2008, , .		0
98	Assimilating MODIS reflectance data into an ecosystem model to improve estimates of terrestrial carbon flux: recent progress. , 2007, , .		1