Martin G De Kauwe

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Evaluation of 11 terrestrial carbonâ€“nitrogen cycle models against observations from two temperate <scp>F</scp>reeâ€<scp>A</scp>ir <scp>CO</scp>₂<scp> E</scp>nrichment studies. New Phytologist, 2014, 202, 803-822.	7.3	378
2	Forest water use and water use efficiency at elevated <scp><scp>CO₂</scp></scp>: a modelâ€data intercomparison at two contrasting temperate forest <scp>FACE</scp> sites. Global Change Biology, 2013, 19, 1759-1779.	9.5	314
3	Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO₂. New Phytologist, 2021, 229, 2413-2445.	7.3	286
4	Where does the carbon go? A modelâ€“data intercomparison of vegetation carbon allocation and turnover processes at two temperate forest freeâ€air CO₂ enrichment sites. New Phytologist, 2014, 203, 883-899.	7.3	263
5	Using ecosystem experiments to improve vegetation models. Nature Climate Change, 2015, 5, 528-534.	18.8	249
6	Trees tolerate an extreme heatwave via sustained transpirational cooling and increased leaf thermal tolerance. Global Change Biology, 2018, 24, 2390-2402.	9.5	242
7	Frequency of Sahelian storm initiation enhanced over mesoscale soil-moisture patterns. Nature Geoscience, 2011, 4, 430-433.	12.9	240
8	Robust Future Changes in Meteorological Drought in <scp>CMIP6</scp> Projections Despite Uncertainty in Precipitation. Geophysical Research Letters, 2020, 47, e2020GL087820.	4.0	239
9	The fate of carbon in a mature forest under carbon dioxide enrichment. Nature, 2020, 580, 227-231.	27.8	218
10	Anthropogenic climate change has driven over 5 million km2 of drylands towards desertification. Nature Communications, 2020, 11, 3853.	12.8	215
11	Modelâ€“data synthesis for the next generation of forest freeâ€air <scp>CO</scp>₂ enrichment (<scp>FACE</scp>) experiments. New Phytologist, 2016, 209, 17-28.	7.3	178
12	Amazon forest response to CO2 fertilization dependent on plant phosphorus acquisition. Nature Geoscience, 2019, 12, 736-741.	12.9	177
13	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
14	Acclimation and adaptation components of the temperature dependence of plant photosynthesis at the global scale. New Phytologist, 2019, 222, 768-784.	7.3	171
15	Mechanisms of woody-plant mortality under rising drought, CO2 and vapour pressure deficit. Nature Reviews Earth & Environment, 2022, 3, 294-308.	29.7	163
16	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
17	A test of an optimal stomatal conductance scheme within the CABLE land surface model. Geoscientific Model Development, 2015, 8, 431-452.	3.6	156
18	How do leaf and ecosystem measures of waterâ€use efficiency compare?. New Phytologist, 2017, 216, 758-770.	7.3	156

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19	The impact of alternative traitâ€scaling hypotheses for the maximum photosynthetic carboxylation rate (<i>V</i>_{cmax}) on global gross primary production. New Phytologist, 2017, 215, 1370-1386.	7.3	126
20	Assimilating canopy reflectance data into an ecosystem model with an Ensemble Kalman Filter. Remote Sensing of Environment, 2008, 112, 1347-1364.	11.0	123
21	Xylem embolism refilling and resilience against droughtâ€induced mortality in woody plants: processes and tradeâ€offs. Ecological Research, 2018, 33, 839-855.	1.5	116
22	Towards physiologically meaningful waterâ€use efficiency estimates from eddy covariance data. Global Change Biology, 2018, 24, 694-710.	9.5	105
23	Predicting longâ€term carbon sequestration in response to CO₂ enrichment: How and why do current ecosystem models differ?. Global Biogeochemical Cycles, 2015, 29, 476-495.	4.9	99
24	Comprehensive ecosystem modelâ€data synthesis using multiple data sets at two temperate forest freeâ€air CO₂ enrichment experiments: Model performance at ambient CO₂ concentration. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 937-964.	3.0	95
25	Land surface models systematically overestimate the intensity, duration and magnitude of seasonal-scale evaporative droughts. Environmental Research Letters, 2016, 11, 104012.	5.2	88
26	Observed and modelled historical trends in the waterâ€use efficiency of plants and ecosystems. Global Change Biology, 2019, 25, 2242-2257.	9.5	85
27	Identifying areas at risk of droughtâ€induced tree mortality across Southâ€Eastern Australia. Global Change Biology, 2020, 26, 5716-5733.	9.5	79
28	Using models to guide field experiments: <i>a priori</i> predictions for the <scp>CO</scp>₂ response of a nutrientâ€and waterâ€limited native Eucalypt woodland. Global Change Biology, 2016, 22, 2834-2851.	9.5	77
29	Do land surface models need to include differential plant species responses to drought? Examining model predictions across a mesic-xeric gradient in Europe. Biogeosciences, 2015, 12, 7503-7518.	3.3	73
30	Satellite based estimates underestimate the effect of CO2 fertilization on net primary productivity. Nature Climate Change, 2016, 6, 892-893.	18.8	69
31	Impact of the representation of stomatal conductance on model projections of heatwave intensity. Scientific Reports, 2016, 6, 23418.	3.3	68
32	Decadal biomass increment in early secondary succession woody ecosystems is increased by CO2 enrichment. Nature Communications, 2019, 10, 454.	12.8	68
33	The optimal stomatal response to atmospheric CO2 concentration: Alternative solutions, alternative interpretations. Agricultural and Forest Meteorology, 2013, 182-183, 200-203.	4.8	65
34	Desiccation time during drought is highly predictable across species of <i>Eucalyptus</i> from contrasting climates. New Phytologist, 2019, 224, 632-643.	7.3	65
35	RAMI4PILPS: An intercomparison of formulations for the partitioning of solar radiation in land surface models. Journal of Geophysical Research, 2011, 116, .	3.3	63
36	Evaluating CMIP5 Model Agreement for Multiple Drought Metrics. Journal of Hydrometeorology, 2018, 19, 969-988.	1.9	59

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37	Plant profit maximization improves predictions of European forest responses to drought. New Phytologist, 2020, 226, 1638-1655.	7.3	59
38	Ideas and perspectives: how coupled is the vegetation to the boundary layer?. Biogeosciences, 2017, 14, 4435-4453.	3.3	57
39	Examining the evidence for decoupling between photosynthesis and transpiration during heat extremes. Biogeosciences, 2019, 16, 903-916.	3.3	54
40	Temperature responses of photosynthesis and respiration in evergreen trees from boreal to tropical latitudes. New Phytologist, 2022, 234, 353-374.	7.3	52
41	Implementation of an optimal stomatal conductance scheme in the Australian Community Climate Earth Systems Simulator (ACCESS1.3b). Geoscientific Model Development, 2015, 8, 3877-3889.	3.6	51
42	Evaluating the Contribution of Landâ€Atmosphere Coupling to Heat Extremes in CMIP5 Models. Geophysical Research Letters, 2018, 45, 9003-9012.	4.0	50
43	Rainfall manipulation experiments as simulated by terrestrial biosphere models: Where do we stand?. Global Change Biology, 2020, 26, 3336-3355.	9.5	50
44	ï»¿ RETRACTED ARTICLE: A constraint on historic growth in global photosynthesis due to increasing CO2. Nature, 2021, 600, 253-258.	27.8	50
45	Challenges and opportunities in land surface modelling of savanna ecosystems. Biogeosciences, 2017, 14, 4711-4732.	3.3	45
46	Beyond ecosystem modeling: A roadmap to community cyberinfrastructure for ecological dataâ€model integration. Global Change Biology, 2021, 27, 13-26.	9.5	44
47	Annual precipitation explains variability in dryland vegetation greenness globally but not locally. Global Change Biology, 2021, 27, 4367-4380.	9.5	44
48	Gross primary production responses to warming, elevated <scp>CO</scp>₂, and irrigation: quantifying the drivers of ecosystem physiology in a semiarid grassland. Global Change Biology, 2017, 23, 3092-3106.	9.5	43
49	Advances in Land Surface Modelling. Current Climate Change Reports, 2021, 7, 45-71.	8.6	43
50	Challenging terrestrial biosphere models with data from the longâ€term multifactor Prairie Heating and <scp>CO</scp>₂ Enrichment experiment. Global Change Biology, 2017, 23, 3623-3645.	9.5	42
51	The Nonradiative Effect Dominates Local Surface Temperature Change Caused by Afforestation in China. Journal of Climate, 2019, 32, 4445-4471.	3.2	42
52	Biochemical photosynthetic responses to temperature: how do interspecific differences compare with seasonal shifts?. Tree Physiology, 2013, 33, 793-806.	3.1	39
53	To what extent can rising [CO₂] ameliorate plant drought stress?. New Phytologist, 2021, 231, 2118-2124.	7.3	39
54	Effects of mesophyll conductance on vegetation responses to elevated CO₂ concentrations in a land surface model. Global Change Biology, 2019, 25, 1820-1838.	9.5	38

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55	Low phosphorus supply constrains plant responses to elevated CO₂: A metaâ€analysis. Global Change Biology, 2020, 26, 5856-5873.	9.5	37
56	Patterns of postâ€drought recovery are strongly influenced by drought duration, frequency, postâ€drought wetness, and bioclimatic setting. Global Change Biology, 2021, 27, 4630-4643.	9.5	37
57	Modelling evapotranspiration during precipitation deficits: identifying critical processes in a land surface model. Hydrology and Earth System Sciences, 2016, 20, 2403-2419.	4.9	33
58	A model inter-comparison study to examine limiting factors in modelling Australian tropical savannas. Biogeosciences, 2016, 13, 3245-3265.	3.3	32
59	Mesophyll conductance in land surface models: effects on photosynthesis and transpiration. Plant Journal, 2020, 101, 858-873.	5.7	30
60	New developments in the effort to model ecosystems under water stress. New Phytologist, 2016, 212, 5-7.	7.3	28
61	Applying the Concept of Ecohydrological Equilibrium to Predict Steady State Leaf Area Index. Journal of Advances in Modeling Earth Systems, 2018, 10, 1740-1758.	3.8	24
62	Incorporating non-stomatal limitation improves the performance of leaf and canopy models at high vapour pressure deficit. Tree Physiology, 2019, 39, 1961-1974.	3.1	24
63	Influence of sun zenith angle on canopy clumping and the resulting impacts on photosynthesis. Agricultural and Forest Meteorology, 2020, 291, 108065.	4.8	24
64	Interannual variability of ecosystem iso/anisohydry is regulated by environmental dryness. New Phytologist, 2021, 229, 2562-2575.	7.3	23
65	Carbon dioxide and water use in forests. Nature, 2013, 499, 287-289.	27.8	22
66	A reporting format for leaf-level gas exchange data and metadata. Ecological Informatics, 2021, 61, 101232.	5.2	22
67	Decoupling between ecosystem photosynthesis and transpiration: a last resort against overheating. Environmental Research Letters, 2022, 17, 044013.	5.2	22
68	Does predictability of fluxes vary between FLUXNET sites?. Biogeosciences, 2018, 15, 4495-4513.	3.3	21
69	Assessing the representation of the Australian carbon cycle in global vegetation models. Biogeosciences, 2021, 18, 5639-5668.	3.3	21
70	Drought Impacts on Australian Vegetation During the Millennium Drought Measured With Multisource Spaceborne Remote Sensing. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2019JG005145.	3.0	20
71	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
72	Quantifying Land Surface Temperature Variability for Two Sahelian Mesoscale Regions during the Wet Season. Journal of Hydrometeorology, 2013, 14, 1605-1619.	1.9	19

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73	Exploring how groundwater buffers the influence of heatwaves on vegetation function during multi-year droughts. Earth System Dynamics, 2021, 12, 919-938.	7.1	18
74	Low sensitivity of gross primary production to elevated CO₂ in a mature eucalypt woodland. Biogeosciences, 2020, 17, 265-279.	3.3	17
75	Comment on â€œMycorrhizal association as a primary control of the CO ₂ fertilization effectâ€ Science, 2017, 355, 358-358.	12.6	16
76	Evaluating a land surface model at a water-limited site: implications for land surface contributions to droughts and heatwaves. Hydrology and Earth System Sciences, 2021, 25, 447-471.	4.9	15
77	Improvement of modeling plant responses to low soil moisture in JULESvn4.9 and evaluation against flux tower measurements. Geoscientific Model Development, 2021, 14, 3269-3294.	3.6	15
78	FluxnetLSM R package (v1.0): a community tool for processing FLUXNET data for use in land surface modelling. Geoscientific Model Development, 2017, 10, 3379-3390.	3.6	14
79	Bridge to the future: Important lessons from 20Âyears of ecosystem observations made by the OzFlux network. Global Change Biology, 2022, 28, 3489-3514.	9.5	14
80	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
81	Thirty-eight years of CO₂ fertilization has outpaced growing aridity to drive greening of Australian woody ecosystems. Biogeosciences, 2022, 19, 491-515.	3.3	13
82	Towards speciesâ€level forecasts of droughtâ€induced tree mortality risk. New Phytologist, 2022, 235, 94-110.	7.3	12
83	Inferring the effects of sink strength on plant carbon balance processes from experimental measurements. Biogeosciences, 2018, 15, 4003-4018.	3.3	11
84	How representative are FLUXNET measurements of surface fluxes during temperature extremes?. Biogeosciences, 2019, 16, 1829-1844.	3.3	11
85	A flux tower dataset tailored for land model evaluation. Earth System Science Data, 2022, 14, 449-461.	9.9	11
86	Predicting resilience through the lens of competing adjustments to vegetation function. Plant, Cell and Environment, 2022, 45, 2744-2761.	5.7	8
87	Evaluation of the CABLEv2.3.4 Land Surface Model Coupled to NUâ€WRFv3.9.1.1 in Simulating Temperature and Precipitation Means and Extremes Over CORDEX AustralAsia Within a WRF Physics Ensemble. Journal of Advances in Modeling Earth Systems, 2019, 11, 4466-4488.	3.8	7
88	Reconciling historical changes in the hydrological cycle over land. Npj Climate and Atmospheric Science, 2022, 5, .	6.8	7
89	Disentangling the Regional Climate Impacts of Competing Vegetation Responses to Elevated Atmospheric CO 2. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034108.	3.3	6
90	Examining the role of environmental memory in the predictability of carbon and water fluxes across Australian ecosystems. Biogeosciences, 2022, 19, 1913-1932.	3.3	6

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91	The quasi-equilibrium framework revisited: analyzing long-term CO₂ enrichment responses in plantâ€“soil models. Geoscientific Model Development, 2019, 12, 2069-2089.	3.6	5
92	How do groundwater dynamics influence heatwaves in southeast Australia?. Weather and Climate Extremes, 2022, 37, 100479.	4.1	3
93	Examining the sensitivity of the terrestrial carbon cycle to the expression of El NiÃ±o. Biogeosciences, 2021, 18, 2181-2203.	3.3	2
94	Assessing the potential for crop albedo enhancement in reducing heatwave frequency, duration, and intensity under future climate change. Weather and Climate Extremes, 2022, 35, 100415.	4.1	2
95	Assimilating MODIS reflectance data into an ecosystem model to improve estimates of terrestrial carbon flux: recent progress. , 2007, , .		1
96	Red light shines a path forward on leaf minimum conductance. New Phytologist, 2022, 233, 5-7.	7.3	1
97	Assimilating Earth Observation Data into Land Surface Models. , 2008, , .		0
98	Estimating the Spatial Exchange of Carbon through the Assimilation of Earth Observation Derived Products using an Ensemble Kalman Filter. , 2008, , .		0