Mathew Williams

List of Publications by Year
in descending order

181	13,850	24978 57	25716 108
papers	citations	h-index	g-index

185	185	185	15211
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	TRY plant trait database â€“ enhanced coverage and open access. Global Change Biology, 2020, 26, 119-188.	4.2	1,038
2	Net primary production of forests: a constant fraction of gross primary production?. Tree Physiology, 1998, 18, 129-134.	1.4	601
3	Modelling the soil-plant-atmosphere continuum in a Quercus-Acer stand at Harvard Forest: the regulation of stomatal conductance by light, nitrogen and soil/plant hydraulic properties. Plant, Cell and Environment, 1996, 19, 911-927.	2.8	510
4	Improving land surface models with FLUXNET data. Biogeosciences, 2009, 6, 1341-1359.	1.3	308
5	Long-term ecosystem level experiments at Toolik Lake, Alaska, and at Abisko, Northern Sweden: generalizations and differences in ecosystem and plant type responses to global change. Global Change Biology, 2004, 10, 105-123.	4.2	299
6	An improved analysis of forest carbon dynamics using data assimilation. Global Change Biology, 2005, 11, 89-105.	4.2	294
7	Modeling stomatal conductance in the earth system: linking leaf water-use efficiency and water transport along the soilâ€“plantâ€“atmosphere continuum. Geoscientific Model Development, 2014, 7, 2193-2222.	1.3	293
8	The response of an Eastern Amazonian rain forest to drought stress: results and modelling analyses from a throughfall exclusion experiment. Global Change Biology, 2007, 13, 2361-2378.	4.2	270
9	An assessment of the carbon balance of Arctic tundra: comparisons among observations, process models, and atmospheric inversions. Biogeosciences, 2012, 9, 3185-3204.	1.3	258
10	Correlations between foliar Î´15N and nitrogen concentrations may indicate plant-mycorrhizal interactions. Oecologia, 2000, 122, 273-283.	0.9	257
11	The decadal state of the terrestrial carbon cycle: Global retrievals of terrestrial carbon allocation, pools, and residence times. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1285-1290.	3.3	248
12	Confronting model predictions of carbon fluxes with measurements of Amazon forests subjected to experimental drought. New Phytologist, 2013, 200, 350-365.	3.5	247
13	Seasonal variation in net carbon exchange and evapotranspiration in a Brazilian rain forest: a modelling analysis. Plant, Cell and Environment, 1998, 21, 953-968.	2.8	230
14	OAK FOREST CARBON AND WATER SIMULATIONS: MODEL INTERCOMPARISONS AND EVALUATIONS AGAINST INDEPENDENT DATA. Ecological Monographs, 2004, 74, 443-489.	2.4	225
15	Using satellite radar backscatter to predict aboveâ€ground woody biomass: A consistent relationship across four different African landscapes. Geophysical Research Letters, 2009, 36, .	1.5	222
16	Multiple mechanisms of Amazonian forest biomass losses in three dynamic global vegetation models under climate change. New Phytologist, 2010, 187, 647-665.	3.5	189
17	Current systematic carbon-cycle observations and the need for implementing a policy-relevant carbon observing system. Biogeosciences, 2014, 11, 3547-3602.	1.3	189
18	What is the relationship between changes in canopy leaf area and changes in photosynthetic CO2flux in arctic ecosystems?. Journal of Ecology, 2007, 95, 139-150.	1.9	187

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19	Understanding the relationships between ecosystem services and poverty alleviation: A conceptual framework. Ecosystem Services, 2014, 7, 34-45.	2.3	183
20	Carbon sequestration and biodiversity of re-growing miombo woodlands in Mozambique. Forest Ecology and Management, 2008, 254, 145-155.	1.4	182
21	Evidence from Amazonian forests is consistent with isohydric control of leaf water potential. Plant, Cell and Environment, 2006, 29, 151-165.	2.8	176
22	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.	4.6	173
23	Use of a simulation model and ecosystem flux data to examine carbon-water interactions in ponderosa pine. Tree Physiology, 2001, 21, 287-298.	1.4	171
24	Mapping local and global variability in plant trait distributions. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E10937-E10946.	3.3	159
25	Measuring and modelling seasonal variation of carbon dioxide and water vapour exchange of a Pinus ponderosa forest subject to soil water deficit. Global Change Biology, 2000, 6, 613-630.	4.2	154
26	Functional convergence in regulation of net CO2flux in heterogeneous tundra landscapes in Alaska and Sweden. Journal of Ecology, 2007, 95, 802-817.	1.9	154
27	Estimating parameters of a forest ecosystem C model with measurements of stocks and fluxes as joint constraints. Oecologia, 2010, 164, 25-40.	0.9	153
28	Above- and Belowground Carbon Stocks in a Miombo Woodland Landscape of Mozambique. Biotropica, 2011, 43, 423-432.	0.8	145
29	Hydrological consequences of Eucalyptus afforestation in the Argentine Pampas. Water Resources Research, 2005, 41, .	1.7	141
30	The carbon balance of Africa: synthesis of recent research studies. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 2038-2057.	1.6	141
31	The REFLEX project: Comparing different algorithms and implementations for the inversion of a terrestrial ecosystem model against eddy covariance data. Agricultural and Forest Meteorology, 2009, 149, 1597-1615.	1.9	138
32	PREDICTING GROSS PRIMARY PRODUCTIVITY IN TERRESTRIAL ECOSYSTEMS. , 1997, 7, 882-894.		136
33	The effects of water availability on root growth and morphology in an Amazon rainforest. Plant and Soil, 2008, 311, 189-199.	1.8	134
34	Evaluating different soil and plant hydraulic constraints on tree function using a model and sap flow data from ponderosa pine. Plant, Cell and Environment, 2001, 24, 679-690.	2.8	133
35	How does fire intensity and frequency affect miombo woodland tree populations and biomass?. , 2011, 21, 48-60.		133
36	Biosphere-atmosphere exchange of CO₂ in relation to climate: a cross-biome analysis across multiple time scales. Biogeosciences, 2009, 6, 2297-2312.	1.3	132

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37	Quantifying smallâ€scale deforestation and forest degradation in African woodlands using radar imagery. Global Change Biology, 2012, 18, 243-257.	4.2	131
38	The influence of vegetation and soil characteristics on activeâ€layer thickness of permafrost soils in boreal forest. Global Change Biology, 2016, 22, 3127-3140.	4.2	131
39	Strengthening conceptual foundations: Analysing frameworks for ecosystem services and poverty alleviation research. Global Environmental Change, 2013, 23, 1098-1111.	3.6	125
40	Assimilating canopy reflectance data into an ecosystem model with an Ensemble Kalman Filter. Remote Sensing of Environment, 2008, 112, 1347-1364.	4.6	123
41	Shifts in plant respiration and carbon use efficiency at a largeâ€scale drought experiment in the eastern Amazon. New Phytologist, 2010, 187, 608-621.	3.5	118
42	The controls on net ecosystem productivity along an Arctic transect: a model comparison with flux measurements. Global Change Biology, 2000, 6, 116-126.	4.2	114
43	Managing uncertainty in integrated environmental modelling: The UncertWeb framework. Environmental Modelling and Software, 2013, 39, 116-134.	1.9	111
44	Factors controlling spatioâ€temporal variation in carbon dioxide efflux from surface litter, roots, and soil organic matter at four rain forest sites in the eastern Amazon. Journal of Geophysical Research, 2007, 112, .	3.3	99
45	Climatic versus biotic constraints on carbon and water fluxes in seasonally drought-affected ponderosa pine ecosystems. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	97
46	Vegetation characteristics and primary productivity along an arctic transect: implications for scaling-up. Journal of Ecology, 1999, 87, 885-898.	1.9	95
47	Luxury consumption of soil nutrients: a possible competitive strategy in above-ground and below-ground biomass allocation and root morphology for slow-growing arctic vegetation?. Journal of Ecology, 2003, 91, 664-676.	1.9	94
48	Challenges and opportunities in linking carbon sequestration, livelihoods and ecosystem service provision in drylands. Environmental Science and Policy, 2012, 19-20, 121-135.	2.4	94
49	An analysis of the sensitivity of sap flux to soil and plant variables assessed for an Australian woodland using a soil - plant - atmosphere model. Functional Plant Biology, 2008, 35, 509.	1.1	92
50	Constraining ecosystem carbon dynamics in a data-limited world: integrating ecological "common sense" in a modelâ€“data fusion framework. Biogeosciences, 2015, 12, 1299-1315.	1.3	89
51	Multiscale digital Arabidopsis predicts individual organ and whole-organism growth. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E4127-36.	3.3	88
52	OPTICAL INSTRUMENTS FOR MEASURING LEAF AREA INDEX IN LOW VEGETATION: APPLICATION IN ARCTIC ECOSYSTEMS. , 2005, 15, 1462-1470.		75
53	Interannual variability of plant phenology in tussock tundra: modelling interactions of plant productivity, plant phenology, snowmelt and soil thaw. Global Change Biology, 2003, 9, 743-758.	4.2	71
54	Limited contribution of permafrost carbon to methane release from thawing peatlands. Nature Climate Change, 2017, 7, 507-511.	8.1	69

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55	Identifying Differences in Carbon Exchange among Arctic Ecosystem Types. Ecosystems, 2006, 9, 288-304.	1.6	67
56	The role of mosses in carbon uptake and partitioning in arctic vegetation. New Phytologist, 2013, 199, 163-175.	3.5	65
57	Can spatio-temporal geostatistical methods improve high resolution regionalisation of meteorological variables?. Agricultural and Forest Meteorology, 2009, 149, 1105-1117.	1.9	63
58	Arctic canopy photosynthetic efficiency enhanced under diffuse light, linked to a reduction in the fraction of the canopy in deep shade. New Phytologist, 2014, 202, 1267-1276.	3.5	63
59	PRIMARY PRODUCTION OF AN ARCTIC WATERSHED: AN UNCERTAINTY ANALYSIS. , 2001, 11, 1800-1816.		62
60	Tight coupling between leaf area index and foliage N content in arctic plant communities. Oecologia, 2005, 142, 421-427.	0.9	61
61	A method for extracting plant roots from soil which facilitates rapid sample processing without compromising measurement accuracy. New Phytologist, 2007, 174, 697-703.	3.5	60
62	Net ecosystem exchange over heterogeneous Arctic tundra: Scaling between chamber and eddy covariance measurements. Global Biogeochemical Cycles, 2008, 22, .	1.9	60
63	Is productivity of mesic savannas light limited or water limited? Results of a simulation study. Global Change Biology, 2011, 17, 3130-3149.	4.2	60
64	Preâ€rain greenâ€up is ubiquitous across southern tropical Africa: implications for temporal niche separation and model representation. New Phytologist, 2017, 213, 625-633.	3.5	60
65	Multi-dimensional sensitivity analysis and ecological implications of a nutrient uptake model. Plant and Soil, 1996, 180, 311-324.	1.8	59
66	Evidence for strong seasonality in the carbon storage and carbon use efficiency of an Amazonian forest. Global Change Biology, 2014, 20, 979-991.	4.2	59
67	Evaluating climatic and soil water controls on evapotranspiration at two Amazonian rainforest sites. Agricultural and Forest Meteorology, 2008, 148, 850-861.	1.9	58
68	Landscape pattern and spatial variability of leaf area index in Eastern Amazonia. Forest Ecology and Management, 2005, 211, 240-256.	1.4	57
69	An augmented Arabidopsis phenology model reveals seasonal temperature control of flowering time. New Phytologist, 2012, 194, 654-665.	3.5	57
70	Simulations of global evapotranspiration using semiempirical and mechanistic schemes of plant hydrology. Global Biogeochemical Cycles, 2009, 23, .	1.9	55
71	The carbon balance of European croplands: A cross-site comparison of simulation models. Agriculture, Ecosystems and Environment, 2010, 139, 419-453.	2.5	55
72	A linked carbon cycle and crop developmental model: Description and evaluation against measurements of carbon fluxes and carbon stocks at several European agricultural sites. Agriculture, Ecosystems and Environment, 2010, 139, 402-418.	2.5	54

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73	Are Inventory Based and Remotely Sensed Above-Ground Biomass Estimates Consistent?. PLoS ONE, 2013, 8, e74170.	1.1	52
74	Forest loss maps from regional satellite monitoring systematically underestimate deforestation in two rapidly changing parts of the Amazon. Environmental Research Letters, 2017, 12, 094003.	2.2	50
75	Spatial validation of the collection 4 MODIS LAI product in eastern Amazonia. IEEE Transactions on Geoscience and Remote Sensing, 2005, 43, 2526-2534.	2.7	48
76	Title is missing!. Biogeochemistry, 2003, 65, 121-150.	1.7	47
77	Challenges and opportunities in land surface modelling of savanna ecosystems. Biogeosciences, 2017, 14, 4711-4732.	1.3	45
78	Upscaling leaf area index in an Arctic landscape through multiscale observations. Global Change Biology, 2008, 14, 1517-1530.	4.2	43
79	How resilient are African woodlands to disturbance from shifting cultivation?. Ecological Applications, 2015, 25, 2320-2336.	1.8	43
80	A model using marginal efficiency of investment to analyze carbon and nitrogen interactions in terrestrial ecosystems (ACONITE Version 1). Geoscientific Model Development, 2014, 7, 2015-2037.	1.3	42
81	Global evaluation of gross primary productivity in the JULES land surface model v3.4.1. Geoscientific Model Development, 2017, 10, 2651-2670.	1.3	42
82	Assimilation of repeated woody biomass observations constrains decadal ecosystem carbon cycle uncertainty in aggrading forests. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 528-545.	1.3	41
83	Seasonal bryophyte productivity in the subâ€Arctic: a comparison with vascular plants. Functional Ecology, 2012, 26, 365-378.	1.7	40
84	Limited release of previously-frozen C and increased new peat formation after thaw in permafrost peatlands. Soil Biology and Biochemistry, 2018, 118, 115-129.	4.2	40
85	Impacts of experimentally imposed drought on leaf respiration and morphology in an Amazon rain forest. Functional Ecology, 2010, 24, 524-533.	1.7	39
86	Constraining ecosystem processes from tower fluxes and atmospheric profiles. , 2011, 21, 1474-1489.		39
87	Carbon Stocks in an African Woodland Landscape: Spatial Distributions and Scales of Variation. Ecosystems, 2012, 15, 804-818.	1.6	38
88	Canopy Carbon Gain and Water Use: Analysis of Old-growth Conifers in the Pacific Northwest. Ecosystems, 2004, 7, 482.	1.6	37
89	Exchange of CO₂ in Arctic tundra: impacts of meteorological variations and biological disturbance. Biogeosciences, 2017, 14, 4467-4483.	1.3	37
90	Simulating the effects of climate change and climate variability on carbon dynamics in Arctic tundra. Global Biogeochemical Cycles, 2000, 14, 1123-1136.	1.9	35

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91	Leaf and fine root carbon stocks and turnover are coupled across Arctic ecosystems. Global Change Biology, 2013, 19, 3668-3676.	4.2	35
92	Estimating gross primary productivity of a tropical forest ecosystem over north-east India using LAI and meteorological variables. Journal of Earth System Science, 2017, 126, 1.	0.6	35
93	A three-dimensional model of forest development and competition. Ecological Modelling, 1996, 89, 73-98.	1.2	34
94	Forest canopy hydraulic properties and catchment water balance: observations and modeling. Ecological Modelling, 2002, 154, 263-288.	1.2	34
95	A comparison of methods for converting rhizotron root length measurements into estimates of root mass production per unit ground area. Plant and Soil, 2007, 301, 279-288.	1.8	34
96	Upscaling as ecological information transfer: a simple framework with application to Arctic ecosystem carbon exchange. Landscape Ecology, 2009, 24, 971-986.	1.9	34
97	Automatic processing, quality assurance and serving of real-time weather data. Computers and Geosciences, 2011, 37, 353-362.	2.0	34
98	Simultaneous state-parameter estimation supports the evaluation of data assimilation performance and measurement design for soil-water-atmosphere-plant system. Journal of Hydrology, 2017, 555, 812-831.	2.3	33
99	Aboveground Carbon Storage and Its Links to Stand Structure, Tree Diversity and Floristic Composition in South-Eastern Tanzania. Ecosystems, 2018, 21, 740-754.	1.6	33
100	A model inter-comparison study to examine limiting factors in modelling Australian tropical savannas. Biogeosciences, 2016, 13, 3245-3265.	1.3	32
101	Topographic controls on the leaf area index and plant functional type of a tundra ecosystem. Journal of Ecology, 2008, 96, 1238-1251.	1.9	31
102	Measured and modelled leaf and standâ€scale productivity across a soil moisture gradient and a severe drought. Plant, Cell and Environment, 2013, 36, 467-483.	2.8	31
103	Modelling climate change responses in tropical forests: similar productivity estimates across five models, but different mechanisms and responses. Geoscientific Model Development, 2015, 8, 1097-1110.	1.3	31
104	Applying a SPA model to examine the impact of climate change on GPP of open woodlands and the potential for woody thickening. Ecohydrology, 2011, 4, 379-393.	1.1	30
105	The use of <scp><scp>CO</scp>₂</scp> flux time series for parameter and carbon stock estimation in carbon cycle research. Global Change Biology, 2012, 18, 179-193.	4.2	30
106	Carbon cycling of European croplands: A framework for the assimilation of optical and microwave Earth observation data. Remote Sensing of Environment, 2013, 137, 84-93.	4.6	30
107	Fire decline in dry tropical ecosystems enhances decadal land carbon sink. Nature Communications, 2020, 11, 1900.	5.8	30
108	Heterogeneity of Soils and Vegetation in an Eastern Amazonian Rain Forest: Implications for Scaling Up Biomass and Production. Ecosystems, 2002, 5, 692-704.	1.6	29

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109	Sample sizes for estimating key ecosystem characteristics in a tropical terra firme rainforest. Forest Ecology and Management, 2008, 255, 558-566.	1.4	28
110	Using Information Theory to Determine Optimum Pixel Size and Shape for Ecological Studies: Aggregating Land Surface Characteristics in Arctic Ecosystems. Ecosystems, 2009, 12, 574-589.	1.6	28
111	Evaluating the effect of drier and warmer conditions on water use by Quercus pyrenaica. Forest Ecology and Management, 2009, 258, 1719-1730.	1.4	28
112	Gross Primary Productivity of a High Elevation Tropical Montane Cloud Forest. Ecosystems, 2014, 17, 751.	1.6	28
113	A novel application of satellite radar data: measuring carbon sequestration and detecting degradation in a community forestry project in Mozambique. Plant Ecology and Diversity, 2013, 6, 159-170.	1.0	27
114	Quantifying Uncertainty and Bridging the Scaling Gap in the Retrieval of Leaf Area Index by Coupling Sentinel-2 and UAV Observations. Remote Sensing, 2020, 12, 1843.	1.8	27
115	The impact of logging on vertical canopy structure across a gradient of tropical forest degradation intensity in Borneo. Journal of Applied Ecology, 2021, 58, 1764-1775.	1.9	26
116	Processing arctic eddyâ€flux data using a simple carbonâ€exchange model embedded in the ensemble Kalman filter. Ecological Applications, 2010, 20, 1285-1301.	1.8	25
117	Effects of heat and drought on carbon and water dynamics in a regenerating semi-arid pine forest: a combined experimental and modeling approach. Biogeosciences, 2014, 11, 4139-4156.	1.3	25
118	Global sensitivity analysis, probabilistic calibration, and predictive assessment for the data assimilation linked ecosystem carbon model. Geoscientific Model Development, 2015, 8, 1899-1918.	1.3	25
119	Risks to carbon storage from land-use change revealed by peat thickness maps of Peru. Nature Geoscience, 2022, 15, 369-374.	5.4	25
120	A Revised Assessment of Species Redundancy and Ecosystem Reliability. Conservation Biology, 1999, 13, 440-443.	2.4	24
121	Greenhouse gas emissions from the energy crop oilseed rape (Brassica napus); the role of photosynthetically active radiation in diurnal N₂O flux variation. GCB Bioenergy, 2018, 10, 306-319.	2.5	24
122	Reanalysis in Earth System Science: Toward Terrestrial Ecosystem Reanalysis. Reviews of Geophysics, 2021, 59, e2020RG000715.	9.0	24
123	Quantifying landscapeâ€level methane fluxes in subarctic Finland using a multiscale approach. Global Change Biology, 2015, 21, 3712-3725.	4.2	23
124	Data assimilation of soil water flow via ensemble Kalman filter: Infusing soil moisture data at different scales. Journal of Hydrology, 2017, 555, 912-925.	2.3	23
125	Reliability ensemble averaging of 21stÂcentury projections of terrestrial net primary productivity reduces global and regional uncertainties. Earth System Dynamics, 2018, 9, 153-165.	2.7	23
126	Incident radiation and the allocation of nitrogen within <scp>A</scp>rctic plant canopies: implications for predicting gross primary productivity. Global Change Biology, 2012, 18, 2838-2852.	4.2	22

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127	Upscaling Tundra CO₂ Exchange from Chamber to Eddy Covariance Tower. Arctic, Antarctic, and Alpine Research, 2013, 45, 275-284.	0.4	22
128	Multi-year data-model evaluation reveals the importance of nutrient availability over climate in arctic ecosystem C dynamics. Environmental Research Letters, 2020, 15, 094007.	2.2	22
129	Impact of deforestation and climate on the Amazon Basinâ€™s above-ground biomass during 1993â€“2012. Scientific Reports, 2017, 7, 15615.	1.6	20
130	The BIOMASS mission — An ESA Earth Explorer candidate to measure the BIOMASS of the earth's forests. , 2010, , .		19
131	Assessing the Phenology of Southern Tropical Africa: A Comparison of Hemispherical Photography, Scatterometry, and Optical/NIR Remote Sensing. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 519-528.	2.7	19
132	Aboveground carbon storage in tropical dry forest plots in Oaxaca, Mexico. Forest Ecology and Management, 2018, 409, 202-214.	1.4	19
133	Inverse Determination of the Influence of Fire on Vegetation Carbon Turnover in the Pantropics. Global Biogeochemical Cycles, 2018, 32, 1776-1789.	1.9	19
134	Forest biomass and the science of inventory from space. Nature Climate Change, 2012, 2, 826-827.	8.1	18
135	WRFv3.2-SPAv2: development and validation of a coupled ecosystemâ€“atmosphere model, scaling from surface fluxes of CO₂ and energy to atmospheric profiles. Geoscientific Model Development, 2013, 6, 1079-1093.	1.3	18
136	The role of heartwood water storage for sem-arid trees under drought. Agricultural and Forest Meteorology, 2018, 256-257, 534-541.	1.9	17
137	Uncertainty in predictions of forest carbon dynamics: separating driver error from model error. , 2011, 21, 1506-1522.		16
138	Multi-site evaluation of the JULES land surface model using global and local data. Geoscientific Model Development, 2015, 8, 295-316.	1.3	16
139	Structural diversity and tree density drives variation in the biodiversityâ€“ecosystem function relationship of woodlands andÂsavannas. New Phytologist, 2021, 232, 579-594.	3.5	16
140	A data assimilation framework for constraining upscaled cropland carbon flux seasonality and biometry with MODIS. Biogeosciences, 2013, 10, 2451-2466.	1.3	15
141	Quantifying the net contribution of the historical Amazonian deforestation to climate change. Geophysical Research Letters, 2015, 42, 2968-2976.	1.5	15
142	Reference carbon cycle dataset for typical Chinese forests via colocated observations and data assimilation. Scientific Data, 2021, 8, 42.	2.4	15
143	Modeling feedbacks between a boreal forest and the planetary boundary layer. Journal of Geophysical Research, 2008, 113, .	3.3	14
144	The Response of Tropical Rainforest Dead Wood Respiration to Seasonal Drought. Ecosystems, 2013, 16, 1294-1309.	1.6	14

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145	Fire regimes and variability in aboveground woody biomass in miombo woodland. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 1014-1029.	1.3	14
146	Turnover of recently assimilated carbon in arctic bryophytes. Oecologia, 2011, 167, 325-337.	0.9	13
147	Satellite Observations of the Tropical Terrestrial Carbon Balance and Interactions With the Water Cycle During the 21st Century. Reviews of Geophysics, 2021, 59, e2020RG000711.	9.0	13
148	Comparing microbial and chemical kinetics for modelling soil organic carbon decomposition using the DecoChem v1.0 and DecoBio v1.0 models. Geoscientific Model Development, 2014, 7, 1519-1533.	1.3	12
149	Time variable hydraulic parameters improve the performance of a mechanistic stand transpiration model. A case study of Mediterranean Scots pine sap flow data assimilation. Agricultural and Forest Meteorology, 2014, 198-199, 168-180.	1.9	12
150	Improving model prediction of soil N2O emissions through BayesianÂcalibration. Science of the Total Environment, 2018, 624, 1467-1477.	3.9	12
151	Transpiration from subarctic deciduous woodlands: Environmental controls and contribution to ecosystem evapotranspiration. Ecohydrology, 2020, 13, e2190.	1.1	12
152	Can seasonal and interannual variation in landscape CO₂ fluxes be detected by atmospheric observations of CO₂ concentrations made at a tall tower?. Biogeosciences, 2014, 11, 735-747.	1.3	11
153	Plant Traits are Key Determinants in Buffering the Meteorological Sensitivity of Net Carbon Exchanges of Arctic Tundra. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 2675-2694.	1.3	11
154	Characterizing the Error and Bias of Remotely Sensed LAI Products: An Example for Tropical and Subtropical Evergreen Forests in South China. Remote Sensing, 2020, 12, 3122.	1.8	11
155	A pilot project to store carbon as biomass in African woodlands. Carbon Management, 2010, 1, 227-235.	1.2	10
156	A data assimilation method for using low-resolution Earth observation data in heterogeneous ecosystems. Journal of Geophysical Research, 2011, 116, .	3.3	10
157	Using biomass distributions to determine probability and intensity of tropical forest disturbance. Plant Ecology and Diversity, 2013, 6, 87-99.	1.0	10
158	Model evaluation in relation to soil N2O emissions: An algorithmic method which accounts for variability in measurements and possible time lags. Environmental Modelling and Software, 2016, 84, 251-262.	1.9	10
159	Two Aspects of Decadal ENSO Variability Modulating the Longâ€Term Global Carbon Cycle. Geophysical Research Letters, 2020, 47, e2019GL086390.	1.5	10
160	Combining Process Modelling and LAI Observations to Diagnose Winter Wheat Nitrogen Status and Forecast Yield. Agronomy, 2021, 11, 314.	1.3	10
161	Carbon Stocks and Fluxes in Kenyan Forests and Wooded Grasslands Derived from Earth Observation and Model-Data Fusion. Remote Sensing, 2020, 12, 2380.	1.8	9
162	Boreal permafrost thaw amplified by fire disturbance and precipitation increases. Environmental Research Letters, 2020, 15, 114050.	2.2	9

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163	Arctic warming-induced cold damage to East Asian terrestrial ecosystems. Communications Earth & Environment, 2022, 3, .	2.6	8
164	The science and measurement concepts underlying the BIOMASS mission. , 2012, , .		5
165	A systematic approach to identifying key parameters and processes in agroecosystem models. Ecological Modelling, 2018, 368, 344-356.	1.2	5
166	A framework for estimating forest disturbance intensity from successive remotely sensed biomass maps: moving beyond average biomass loss estimates. Carbon Balance and Management, 2015, 10, 27.	1.4	4
167	Alternate Traitâ€Based Leaf Respiration Schemes Evaluated at Ecosystemâ€Scale Through Carbon Optimization Modeling and Canopy Property Data. Journal of Advances in Modeling Earth Systems, 2019, 11, 4629-4644.	1.3	4
168	The Effect of Antecedence on Empirical Model Forecasts of Crop Yield from Observations of Canopy Properties. Agriculture (Switzerland), 2021, 11, 258.	1.4	4
169	Evaluating two land surface models for Brazil using a full carbon cycle benchmark with uncertainties. Climate Resilience and Sustainability, 2022, 1, e10.	0.9	4
170	Climate Sensitivities of Carbon Turnover Times in Soil and Vegetation: Understanding Their Effects on Forest Carbon Sequestration. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	1.3	3
171	Challenges in scaling up greenhouse gas fluxes: Experience from the UK Greenhouse Gas Emissions and Feedbacks Programme. Journal of Geophysical Research G: Biogeosciences, 0, , .	1.3	3
172	Solute dynamics in storm flow of the Ipswich River basin: effects of land use. Biological Bulletin, 2000, 199, 219-221.	0.7	2
173	Impacts of reduced model complexity and driver resolution on cropland ecosystem photosynthesis estimates. Field Crops Research, 2016, 187, 74-86.	2.3	2
174	Assimilating MODIS reflectance data into an ecosystem model to improve estimates of terrestrial carbon flux: recent progress. , 2007, , .		1
175	Investigating temporal variations in vegetation water content derived from SMOS optical depth. , 2012, , .		1
176	Working towards a global-scale vegetation water product from SMOS optical depth. , 2014, , .		1
177	Using satellite estimates of aboveground biomass to assess carbon stocks in a mixed-management, semi-deciduous tropical forest in the Yucatan Peninsula. Geocarto International, 0, , 1-22.	1.7	1
178	Meso-Scale Variability of Soils and Forest Canopy Properties is Connected to Geomorphologic Features in Eastern Amazonia. , 2006, , .		0
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