

Mathew Williams

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172
papers

10,814
citations

57
h-index

100
g-index

185
ext. papers

12,427
ext. citations

6.6
avg, IF

6.05
L-index

#	Paper	IF	Citations
172	Net primary production of forests: a constant fraction of gross primary production?. <i>Tree Physiology</i> , 1998 , 18, 129-134	4.2	521
171	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. <i>Plant, Cell and Environment</i> , 1996 , 19, 911-927	8.4	442
170	TRY plant trait database - enhanced coverage and open access. <i>Global Change Biology</i> , 2020 , 26, 119-188	11.4	399
169	Improving land surface models with FLUXNET data. <i>Biogeosciences</i> , 2009 , 6, 1341-1359	4.6	260
168	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. <i>Global Change Biology</i> , 2004 , 10, 105-123	11.4	258
167	An improved analysis of forest carbon dynamics using data assimilation. <i>Global Change Biology</i> , 2005 , 11, 89-105	11.4	248
166	The response of an Eastern Amazonian rain forest to drought stress: results and modelling analyses from a throughfall exclusion experiment. <i>Global Change Biology</i> , 2007 , 13, 2361-2378	11.4	226
165	Correlations between foliar N and nitrogen concentrations may indicate plant-mycorrhizal interactions. <i>Oecologia</i> , 2000 , 122, 273-283	2.9	222
164	An assessment of the carbon balance of Arctic tundra: comparisons among observations, process models, and atmospheric inversions. <i>Biogeosciences</i> , 2012 , 9, 3185-3204	4.6	221
163	Modeling stomatal conductance in the earth system: linking leaf water-use efficiency and water transport along the soil-plant-atmosphere continuum. <i>Geoscientific Model Development</i> , 2014 , 7, 2193-2222	6.3	216
162	Confronting model predictions of carbon fluxes with measurements of Amazon forests subjected to experimental drought. <i>New Phytologist</i> , 2013 , 200, 350-365	9.8	214
161	OAK FOREST CARBON AND WATER SIMULATIONS: MODEL INTERCOMPARISONS AND EVALUATIONS AGAINST INDEPENDENT DATA. <i>Ecological Monographs</i> , 2004 , 74, 443-489	9	202
160	Seasonal variation in net carbon exchange and evapotranspiration in a Brazilian rain forest: a modelling analysis. <i>Plant, Cell and Environment</i> , 1998 , 21, 953-968	8.4	199
159	Using satellite radar backscatter to predict above-ground woody biomass: A consistent relationship across four different African landscapes. <i>Geophysical Research Letters</i> , 2009 , 36,	4.9	176
158	Multiple mechanisms of Amazonian forest biomass losses in three dynamic global vegetation models under climate change. <i>New Phytologist</i> , 2010 , 187, 647-65	9.8	162
157	Carbon sequestration and biodiversity of re-growing miombo woodlands in Mozambique. <i>Forest Ecology and Management</i> , 2008 , 254, 145-155	3.9	159
156	What is the relationship between changes in canopy leaf area and changes in photosynthetic CO2 flux in arctic ecosystems?. <i>Journal of Ecology</i> , 2007 , 95, 139-150	6	157

155	The decadal state of the terrestrial carbon cycle: Global retrievals of terrestrial carbon allocation, pools, and residence times. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 1285-90	11.5	156
154	Evidence from Amazonian forests is consistent with isohydric control of leaf water potential. <i>Plant, Cell and Environment</i> , 2006 , 29, 151-65	8.4	156
153	Use of a simulation model and ecosystem flux data to examine carbon-water interactions in ponderosa pine. <i>Tree Physiology</i> , 2001 , 21, 287-98	4.2	145
152	Understanding the relationships between ecosystem services and poverty alleviation: A conceptual framework. <i>Ecosystem Services</i> , 2014 , 7, 34-45	6.1	138
151	Current systematic carbon-cycle observations and the need for implementing a policy-relevant carbon observing system. <i>Biogeosciences</i> , 2014 , 11, 3547-3602	4.6	136
150	Functional convergence in regulation of net CO ₂ flux in heterogeneous tundra landscapes in Alaska and Sweden. <i>Journal of Ecology</i> , 2007 , 95, 802-817	6	134
149	Measuring and modelling seasonal variation of carbon dioxide and water vapour exchange of a <i>Pinus ponderosa</i> forest subject to soil water deficit. <i>Global Change Biology</i> , 2000 , 6, 613-630	11.4	133
148	Estimating parameters of a forest ecosystem C model with measurements of stocks and fluxes as joint constraints. <i>Oecologia</i> , 2010 , 164, 25-40	2.9	129
147	An assessment of the MODIS collection 5 leaf area index product for a region of mixed coniferous forest. <i>Remote Sensing of Environment</i> , 2011 , 115, 767-780	13.2	127
146	The REFLEX project: Comparing different algorithms and implementations for the inversion of a terrestrial ecosystem model against eddy covariance data. <i>Agricultural and Forest Meteorology</i> , 2009 , 149, 1597-1615	5.8	124
145	Above- and Belowground Carbon Stocks in a Miombo Woodland Landscape of Mozambique. <i>Biotropica</i> , 2011 , 43, 423-432	2.3	119
144	The carbon balance of Africa: synthesis of recent research studies. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011 , 369, 2038-57	3	117
143	Biosphere-atmosphere exchange of CO ₂ in relation to climate: a cross-biome analysis across multiple time scales. <i>Biogeosciences</i> , 2009 , 6, 2297-2312	4.6	115
142	The effects of water availability on root growth and morphology in an Amazon rainforest. <i>Plant and Soil</i> , 2008 , 311, 189-199	4.2	113
141	Assimilating canopy reflectance data into an ecosystem model with an Ensemble Kalman Filter. <i>Remote Sensing of Environment</i> , 2008 , 112, 1347-1364	13.2	110
140	Hydrological consequences of Eucalyptus afforestation in the Argentine Pampas. <i>Water Resources Research</i> , 2005 , 41,	5.4	110
139	Quantifying small-scale deforestation and forest degradation in African woodlands using radar imagery. <i>Global Change Biology</i> , 2012 , 18, 243-257	11.4	109
138	Evaluating different soil and plant hydraulic constraints on tree function using a model and sap flow data from ponderosa pine. <i>Plant, Cell and Environment</i> , 2001 , 24, 679-690	8.4	109

137	How does fire intensity and frequency affect miombo woodland tree populations and biomass? 2011 , 21, 48-60		105
136	Mapping local and global variability in plant trait distributions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E10937-E10946	11.5	103
135	PREDICTING GROSS PRIMARY PRODUCTIVITY IN TERRESTRIAL ECOSYSTEMS 1997 , 7, 882-894		103
134	Strengthening conceptual foundations: Analysing frameworks for ecosystem services and poverty alleviation research. <i>Global Environmental Change</i> , 2013 , 23, 1098-1111	10.1	99
133	Managing uncertainty in integrated environmental modelling: The UncertWeb framework. <i>Environmental Modelling and Software</i> , 2013 , 39, 116-134	5.2	99
132	The controls on net ecosystem productivity along an Arctic transect: a model comparison with flux measurements.. <i>Global Change Biology</i> , 2000 , 6, 116-126	11.4	97
131	Shifts in plant respiration and carbon use efficiency at a large-scale drought experiment in the eastern Amazon. <i>New Phytologist</i> , 2010 , 187, 608-21	9.8	93
130	Vegetation characteristics and primary productivity along an arctic transect: implications for scaling-up. <i>Journal of Ecology</i> , 1999 , 87, 885-898	6	90
129	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?. <i>Journal of Ecology</i> , 2003 , 91, 664-676	6	85
128	The influence of vegetation and soil characteristics on active-layer thickness of permafrost soils in boreal forest. <i>Global Change Biology</i> , 2016 , 22, 3127-40	11.4	84
127	Climatic versus biotic constraints on carbon and water fluxes in seasonally drought-affected ponderosa pine ecosystems. <i>Global Biogeochemical Cycles</i> , 2004 , 18, n/a-n/a	5.9	83
126	Factors controlling spatio-temporal variation in carbon dioxide efflux from surface litter, roots, and soil organic matter at four rain forest sites in the eastern Amazon. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		82
125	An analysis of the sensitivity of sap flux to soil and plant variables assessed for an Australian woodland using a soil-plant-atmosphere model. <i>Functional Plant Biology</i> , 2008 , 35, 509-520	2.7	81
124	Challenges and opportunities in linking carbon sequestration, livelihoods and ecosystem service provision in drylands. <i>Environmental Science and Policy</i> , 2012 , 19-20, 121-135	6.2	73
123	Multiscale digital Arabidopsis predicts individual organ and whole-organism growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, E4127-36	11.5	73
122	Constraining ecosystem carbon dynamics in a data-limited world: integrating ecological "common sense" in a model-data fusion framework. <i>Biogeosciences</i> , 2015 , 12, 1299-1315	4.6	65
121	Interannual variability of plant phenology in tussock tundra: modelling interactions of plant productivity, plant phenology, snowmelt and soil thaw. <i>Global Change Biology</i> , 2003 , 9, 743-758	11.4	65
120	OPTICAL INSTRUMENTS FOR MEASURING LEAF AREA INDEX IN LOW VEGETATION: APPLICATION IN ARCTIC ECOSYSTEMS 2005 , 15, 1462-1470		65

119	Can spatio-temporal geostatistical methods improve high resolution regionalisation of meteorological variables?. <i>Agricultural and Forest Meteorology</i> , 2009 , 149, 1105-1117	5.8	59
118	Identifying Differences in Carbon Exchange among Arctic Ecosystem Types. <i>Ecosystems</i> , 2006 , 9, 288-304	3.9	58
117	PRIMARY PRODUCTION OF AN ARCTIC WATERSHED: AN UNCERTAINTY ANALYSIS 2001 , 11, 1800-1816		58
116	A method for extracting plant roots from soil which facilitates rapid sample processing without compromising measurement accuracy. <i>New Phytologist</i> , 2007 , 174, 697-703	9.8	57
115	Limited contribution of permafrost carbon to methane release from thawing peatlands. <i>Nature Climate Change</i> , 2017 , 7, 507-511	21.4	56
114	Tight coupling between leaf area index and foliage N content in arctic plant communities. <i>Oecologia</i> , 2005 , 142, 421-7	2.9	55
113	Multi-dimensional sensitivity analysis and ecological implications of a nutrient uptake model. <i>Plant and Soil</i> , 1996 , 180, 311-324	4.2	55
112	Is productivity of mesic savannas light limited or water limited? Results of a simulation study. <i>Global Change Biology</i> , 2011 , 17, 3130-3149	11.4	54
111	Landscape pattern and spatial variability of leaf area index in Eastern Amazonia. <i>Forest Ecology and Management</i> , 2005 , 211, 240-256	3.9	53
110	Net ecosystem exchange over heterogeneous Arctic tundra: Scaling between chamber and eddy covariance measurements. <i>Global Biogeochemical Cycles</i> , 2008 , 22, n/a-n/a	5.9	50
109	Evidence for strong seasonality in the carbon storage and carbon use efficiency of an Amazonian forest. <i>Global Change Biology</i> , 2014 , 20, 979-91	11.4	49
108	An augmented Arabidopsis phenology model reveals seasonal temperature control of flowering time. <i>New Phytologist</i> , 2012 , 194, 654-665	9.8	49
107	Evaluating climatic and soil water controls on evapotranspiration at two Amazonian rainforest sites. <i>Agricultural and Forest Meteorology</i> , 2008 , 148, 850-861	5.8	49
106	Arctic canopy photosynthetic efficiency enhanced under diffuse light, linked to a reduction in the fraction of the canopy in deep shade. <i>New Phytologist</i> , 2014 , 202, 1267-1276	9.8	48
105	The role of mosses in carbon uptake and partitioning in arctic vegetation. <i>New Phytologist</i> , 2013 , 199, 163-175	9.8	48
104	Simulations of global evapotranspiration using semiempirical and mechanistic schemes of plant hydrology. <i>Global Biogeochemical Cycles</i> , 2009 , 23, n/a-n/a	5.9	47
103	The carbon balance of European croplands: A cross-site comparison of simulation models. <i>Agriculture, Ecosystems and Environment</i> , 2010 , 139, 419-453	5.7	47
102	A linked carbon cycle and crop developmental model: Description and evaluation against measurements of carbon fluxes and carbon stocks at several European agricultural sites. <i>Agriculture, Ecosystems and Environment</i> , 2010 , 139, 402-418	5.7	46

101	Pre-rain green-up is ubiquitous across southern tropical Africa: implications for temporal niche separation and model representation. <i>New Phytologist</i> , 2017 , 213, 625-633	9.8	45
100	Are inventory based and remotely sensed above-ground biomass estimates consistent?. <i>PLoS ONE</i> , 2013 , 8, e74170	3.7	40
99	How resilient are African woodlands to disturbance from shifting cultivation? 2015 , 25, 2320-36		38
98	Upscaling leaf area index in an Arctic landscape through multiscale observations. <i>Global Change Biology</i> , 2008 , 14, 1517-1530	11.4	38
97	. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2005 , 43, 2526-2534	8.1	38
96	A model using marginal efficiency of investment to analyze carbon and nitrogen interactions in terrestrial ecosystems (ACONITE Version 1). <i>Geoscientific Model Development</i> , 2014 , 7, 2015-2037	6.3	37
95	A model analysis of N and P limitation on carbon accumulation in Amazonian secondary forest after alternate land-use abandonment. <i>Biogeochemistry</i> , 2003 , 65, 121-150	3.8	35
94	Constraining ecosystem processes from tower fluxes and atmospheric profiles 2011 , 21, 1474-89		34
93	Forest loss maps from regional satellite monitoring systematically underestimate deforestation in two rapidly changing parts of the Amazon. <i>Environmental Research Letters</i> , 2017 , 12, 094003	6.2	33
92	Leaf and fine root carbon stocks and turnover are coupled across Arctic ecosystems. <i>Global Change Biology</i> , 2013 , 19, 3668-76	11.4	33
91	Impacts of experimentally imposed drought on leaf respiration and morphology in an Amazon rain forest. <i>Functional Ecology</i> , 2010 , 24, 524-533	5.6	33
90	Simulating the effects of climate change and climate variability on carbon dynamics in Arctic tundra. <i>Global Biogeochemical Cycles</i> , 2000 , 14, 1123-1136	5.9	33
89	Challenges and opportunities in land surface modelling of savanna ecosystems. <i>Biogeosciences</i> , 2017 , 14, 4711-4732	4.6	32
88	Seasonal bryophyte productivity in the sub-Arctic: a comparison with vascular plants. <i>Functional Ecology</i> , 2012 , 26, 365-378	5.6	32
87	A comparison of methods for converting rhizotron root length measurements into estimates of root mass production per unit ground area. <i>Plant and Soil</i> , 2007 , 301, 279-288	4.2	32
86	Limited release of previously-frozen C and increased new peat formation after thaw in permafrost peatlands. <i>Soil Biology and Biochemistry</i> , 2018 , 118, 115-129	7.5	31
85	Forest canopy hydraulic properties and catchment water balance: observations and modeling. <i>Ecological Modelling</i> , 2002 , 154, 263-288	3	31
84	Exchange of CO ₂ in Arctic tundra: impacts of meteorological variations and biological disturbance. <i>Biogeosciences</i> , 2017 , 14, 4467-4483	4.6	30

83	Global evaluation of gross primary productivity in the JULES land surface model v3.4.1. <i>Geoscientific Model Development</i> , 2017 , 10, 2651-2670	6.3	30
82	Carbon Stocks in an African Woodland Landscape: Spatial Distributions and Scales of Variation. <i>Ecosystems</i> , 2012 , 15, 804-818	3.9	30
81	A three-dimensional model of forest development and competition. <i>Ecological Modelling</i> , 1996 , 89, 73-98		30
80	Modelling climate change responses in tropical forests: similar productivity estimates across five models, but different mechanisms and responses. <i>Geoscientific Model Development</i> , 2015 , 8, 1097-1110	6.3	29
79	Assimilation of repeated woody biomass observations constrains decadal ecosystem carbon cycle uncertainty in aggrading forests. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017 , 122, 528-545	3.7	28
78	Upscaling as ecological information transfer: a simple framework with application to Arctic ecosystem carbon exchange. <i>Landscape Ecology</i> , 2009 , 24, 971-986	4.3	28
77	Heterogeneity of Soils and Vegetation in an Eastern Amazonian Rain Forest: Implications for Scaling Up Biomass and Production. <i>Ecosystems</i> , 2002 , 5, 692-704	3.9	28
76	Topographic controls on the leaf area index and plant functional type of a tundra ecosystem. <i>Journal of Ecology</i> , 2008 , 96, 1238-1251	6	27
75	Estimating gross primary productivity of a tropical forest ecosystem over north-east India using LAI and meteorological variables. <i>Journal of Earth System Science</i> , 2017 , 126, 1	1.8	26
74	Carbon cycling of European croplands: A framework for the assimilation of optical and microwave Earth observation data. <i>Remote Sensing of Environment</i> , 2013 , 137, 84-93	13.2	26
73	Measured and modelled leaf and stand-scale productivity across a soil moisture gradient and a severe drought. <i>Plant, Cell and Environment</i> , 2013 , 36, 467-83	8.4	26
72	Using Information Theory to Determine Optimum Pixel Size and Shape for Ecological Studies: Aggregating Land Surface Characteristics in Arctic Ecosystems. <i>Ecosystems</i> , 2009 , 12, 574-589	3.9	26
71	Applying a SPA model to examine the impact of climate change on GPP of open woodlands and the potential for woody thickening. <i>Ecohydrology</i> , 2011 , 4, 379-393	2.5	25
70	Evaluating the effect of drier and warmer conditions on water use by <i>Quercus pyrenaica</i> . <i>Forest Ecology and Management</i> , 2009 , 258, 1719-1730	3.9	25
69	Sample sizes for estimating key ecosystem characteristics in a tropical terra firme rainforest. <i>Forest Ecology and Management</i> , 2008 , 255, 558-566	3.9	25
68	A model inter-comparison study to examine limiting factors in modelling Australian tropical savannas. <i>Biogeosciences</i> , 2016 , 13, 3245-3265	4.6	25
67	Gross Primary Productivity of a High Elevation Tropical Montane Cloud Forest. <i>Ecosystems</i> , 2014 , 17, 751	3.9	24
66	The use of CO ₂ flux time series for parameter and carbon stock estimation in carbon cycle research. <i>Global Change Biology</i> , 2012 , 18, 179-193	11.4	24

65	Automatic processing, quality assurance and serving of real-time weather data. <i>Computers and Geosciences</i> , 2011 , 37, 353-362	4.5	24
64	A novel application of satellite radar data: measuring carbon sequestration and detecting degradation in a community forestry project in Mozambique. <i>Plant Ecology and Diversity</i> , 2013 , 6, 159-170 ²	2.2	23
63	Canopy Carbon Gain and Water Use: Analysis of Old-growth Conifers in the Pacific Northwest. <i>Ecosystems</i> , 2004 , 7, 482	3.9	23
62	Processing arctic eddy-flux data using a simple carbon-exchange model embedded in the ensemble Kalman filter 2010 , 20, 1285-301		22
61	Simultaneous state-parameter estimation supports the evaluation of data assimilation performance and measurement design for soil-water-atmosphere-plant system. <i>Journal of Hydrology</i> , 2017 , 555, 812-831	6	21
60	Quantifying landscape-level methane fluxes in subarctic Finland using a multiscale approach. <i>Global Change Biology</i> , 2015 , 21, 3712-25	11.4	20
59	Incident radiation and the allocation of nitrogen within Arctic plant canopies: implications for predicting gross primary productivity. <i>Global Change Biology</i> , 2012 , 18, 2838-52	11.4	19
58	Aboveground Carbon Storage and Its Links to Stand Structure, Tree Diversity and Floristic Composition in South-Eastern Tanzania. <i>Ecosystems</i> , 2018 , 21, 740-754	3.9	18
57	Data assimilation of soil water flow via ensemble Kalman filter: Infusing soil moisture data at different scales. <i>Journal of Hydrology</i> , 2017 , 555, 912-925	6	18
56	Global sensitivity analysis, probabilistic calibration, and predictive assessment for the data assimilation linked ecosystem carbon model. <i>Geoscientific Model Development</i> , 2015 , 8, 1899-1918	6.3	18
55	Upscaling Tundra CO ₂ Exchange from Chamber to Eddy Covariance Tower. <i>Arctic, Antarctic, and Alpine Research</i> , 2013 , 45, 275-284	1.8	17
54	A Revised Assessment of Species Redundancy and Ecosystem Reliability. <i>Conservation Biology</i> , 1999 , 13, 440-443	6	17
53	Effects of heat and drought on carbon and water dynamics in a regenerating semi-arid pine forest: a combined experimental and modeling approach. <i>Biogeosciences</i> , 2014 , 11, 4139-4156	4.6	16
52	Fire decline in dry tropical ecosystems enhances decadal land carbon sink. <i>Nature Communications</i> , 2020 , 11, 1900	17.4	15
51	Assessing the Phenology of Southern Tropical Africa: A Comparison of Hemispherical Photography, Scatterometry, and Optical/NIR Remote Sensing. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2014 , 52, 519-528	8.1	15
50	Uncertainty in predictions of forest carbon dynamics: separating driver error from model error 2011 , 21, 1506-22		15
49	Forest biomass and the science of inventory from space. <i>Nature Climate Change</i> , 2012 , 2, 826-827	21.4	15
48	Multi-year data-model evaluation reveals the importance of nutrient availability over climate in arctic ecosystem C dynamics. <i>Environmental Research Letters</i> , 2020 , 15, 094007	6.2	15

47	Quantifying the net contribution of the historical Amazonian deforestation to climate change. <i>Geophysical Research Letters</i> , 2015 , 42, 2968-2976	4.9	14
46	WRFv3.2-SPAv2: development and validation of a coupled ecosystem-atmosphere model, scaling from surface fluxes of CO ₂ and energy to atmospheric profiles. <i>Geoscientific Model Development</i> , 2013 , 6, 1079-1093	6.3	14
45	Greenhouse gas emissions from the energy crop oilseed rape (<i>Brassica napus</i>); the role of photosynthetically active radiation in diurnal N ₂ O flux variation. <i>GCB Bioenergy</i> , 2018 , 10, 306-319	5.6	13
44	Impact of deforestation and climate on the Amazon Basin's above-ground biomass during 1993-2012. <i>Scientific Reports</i> , 2017 , 7, 15615	4.9	13
43	The Response of Tropical Rainforest Dead Wood Respiration to Seasonal Drought. <i>Ecosystems</i> , 2013 , 16, 1294-1309	3.9	13
42	Reliability ensemble averaging of 21st-century projections of terrestrial net primary productivity reduces global and regional uncertainties. <i>Earth System Dynamics</i> , 2018 , 9, 153-165	4.8	13
41	Multi-site evaluation of the JULES land surface model using global and local data. <i>Geoscientific Model Development</i> , 2015 , 8, 295-316	6.3	12
40	A data assimilation framework for constraining upscaled cropland carbon flux seasonality and biometry with MODIS. <i>Biogeosciences</i> , 2013 , 10, 2451-2466	4.6	12
39	Turnover of recently assimilated carbon in arctic bryophytes. <i>Oecologia</i> , 2011 , 167, 325-37	2.9	12
38	Aboveground carbon storage in tropical dry forest plots in Oaxaca, Mexico. <i>Forest Ecology and Management</i> , 2018 , 409, 202-214	3.9	12
37	Quantifying Uncertainty and Bridging the Scaling Gap in the Retrieval of Leaf Area Index by Coupling Sentinel-2 and UAV Observations. <i>Remote Sensing</i> , 2020 , 12, 1843	5	11
36	Inverse Determination of the Influence of Fire on Vegetation Carbon Turnover in the Pantropics. <i>Global Biogeochemical Cycles</i> , 2018 , 32, 1776-1789	5.9	11
35	Fire regimes and variability in aboveground woody biomass in miombo woodland. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2014 , 119, 1014-1029	3.7	10
34	Can seasonal and interannual variation in landscape CO ₂ fluxes be detected by atmospheric observations of CO ₂ concentrations made at a tall tower?. <i>Biogeosciences</i> , 2014 , 11, 735-747	4.6	10
33	Comparing microbial and chemical kinetics for modelling soil organic carbon decomposition using the DecoChem v1.0 and DecoBio v1.0 models. <i>Geoscientific Model Development</i> , 2014 , 7, 1519-1533	6.3	10
32	Improving model prediction of soil NO emissions through Bayesian calibration. <i>Science of the Total Environment</i> , 2018 , 624, 1467-1477	10.2	9
31	Plant Traits are Key Determinants in Buffering the Meteorological Sensitivity of Net Carbon Exchanges of Arctic Tundra. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2018 , 123, 2675-2694	3.7	9
30	Time variable hydraulic parameters improve the performance of a mechanistic stand transpiration model. A case study of Mediterranean Scots pine sap flow data assimilation. <i>Agricultural and Forest Meteorology</i> , 2014 , 198-199, 168-180	5.8	9

29	A pilot project to store carbon as biomass in African woodlands. <i>Carbon Management</i> , 2010 , 1, 227-235	3.3	9
28	Modeling feedbacks between a boreal forest and the planetary boundary layer. <i>Journal of Geophysical Research</i> , 2008 , 113,		9
27	Model evaluation in relation to soil N ₂ O emissions: An algorithmic method which accounts for variability in measurements and possible time lags. <i>Environmental Modelling and Software</i> , 2016 , 84, 251-262	5.2	8
26	The BIOMASS mission [An ESA Earth Explorer candidate to measure the BIOMASS of the earth] forests 2010 ,		8
25	The role of heartwood water storage for sem-arid trees under drought. <i>Agricultural and Forest Meteorology</i> , 2018 , 256-257, 534-541	5.8	7
24	A data assimilation method for using low-resolution Earth observation data in heterogeneous ecosystems. <i>Journal of Geophysical Research</i> , 2011 , 116,		7
23	Transpiration from subarctic deciduous woodlands: Environmental controls and contribution to ecosystem evapotranspiration. <i>Ecohydrology</i> , 2020 , 13, e2190	2.5	6
22	Two Aspects of Decadal ENSO Variability Modulating the Long-Term Global Carbon Cycle. <i>Geophysical Research Letters</i> , 2020 , 47, e2019GL086390	4.9	5
21	Using biomass distributions to determine probability and intensity of tropical forest disturbance. <i>Plant Ecology and Diversity</i> , 2013 , 6, 87-99	2.2	5
20	Characterizing the Error and Bias of Remotely Sensed LAI Products: An Example for Tropical and Subtropical Evergreen Forests in South China. <i>Remote Sensing</i> , 2020 , 12, 3122	5	5
19	The impact of logging on vertical canopy structure across a gradient of tropical forest degradation intensity in Borneo. <i>Journal of Applied Ecology</i> , 2021 , 58, 1764	5.8	5
18	Combining Process Modelling and LAI Observations to Diagnose Winter Wheat Nitrogen Status and Forecast Yield. <i>Agronomy</i> , 2021 , 11, 314	3.6	5
17	A systematic approach to identifying key parameters and processes in agroecosystem models. <i>Ecological Modelling</i> , 2018 , 368, 344-356	3	4
16	Boreal permafrost thaw amplified by fire disturbance and precipitation increases. <i>Environmental Research Letters</i> , 2020 , 15, 114050	6.2	4
15	Carbon Stocks and Fluxes in Kenyan Forests and Wooded Grasslands Derived from Earth Observation and Model-Data Fusion. <i>Remote Sensing</i> , 2020 , 12, 2380	5	4
14	Satellite Observations of the Tropical Terrestrial Carbon Balance and Interactions With the Water Cycle During the 21st Century. <i>Reviews of Geophysics</i> , 2021 , 59, e2020RG000711	23.1	4
13	Reanalysis in Earth System Science: Toward Terrestrial Ecosystem Reanalysis. <i>Reviews of Geophysics</i> , 2021 , 59, e2020RG000715	23.1	4
12	The science and measurement concepts underlying the BIOMASS mission 2012 ,		3

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