Jiafu Mao

List of Publications by Year
in descending order

106 papers	9,422 citations	57631 44 h-index	40881 93 g-index
120 all docs	120 docs citations	120 times ranked	10058 citing authors

#	Article	IF	Citations
1	Greening of the Earth and its drivers. Nature Climate Change, 2016, 6, 791-795.	8.1	1,675
2	High Resolution Model Intercomparison Project (HighResMIPÂv1.0) for CMIP6. Geoscientific Model Development, 2016, 9, 4185-4208.	1.3	643
3	Detection and attribution of vegetation greening trend in China over the last 30Âyears. Global Change Biology, 2015, 21, 1601-1609.	4.2	597
4	Evidence for a weakening relationship between interannual temperature variability and northern vegetation activity. Nature Communications, 2014, 5, 5018.	5.8	414
5	Climate mitigation from vegetation biophysical feedbacks during the past three decades. Nature Climate Change, 2017, 7, 432-436.	8.1	323
6	Air temperature optima of vegetation productivity across global biomes. Nature Ecology and Evolution, 2019, 3, 772-779.	3.4	316
7	Global patterns and controls of soil organic carbon dynamics as simulated by multiple terrestrial biosphere models: Current status and future directions. Global Biogeochemical Cycles, 2015, 29, 775-792.	1.9	241
8	Change in terrestrial ecosystem waterâ€use efficiency over the last three decades. Global Change Biology, 2015, 21, 2366-2378.	4.2	215
9	The North American Carbon Program Multi-Scale Synthesis and Terrestrial Model Intercomparison Project â€" Part 1: Overview and experimental design. Geoscientific Model Development, 2013, 6, 2121-2133.	1.3	212
10	The North American Carbon Program Multi-scale Synthesis and Terrestrial Model Intercomparison Project â€" Part 2: Environmental driver data. Geoscientific Model Development, 2014, 7, 2875-2893.	1.3	207
11	Weakening temperature control on the interannual variations of spring carbon uptake across northern lands. Nature Climate Change, 2017, 7, 359-363.	8.1	183
12	Impact of largeâ€scale climate extremes on biospheric carbon fluxes: An intercomparison based on MsTMIP data. Global Biogeochemical Cycles, 2014, 28, 585-600.	1.9	181
13	Uncertainty in the response of terrestrial carbon sink to environmental drivers undermines carbon-climate feedback predictions. Scientific Reports, 2017, 7, 4765.	1.6	156
14	LS3MIP (v1.0) contribution to CMIP6: the Land Surface, Snow and Soil moisture Model Intercomparison Project â€" aims, setup and expected outcome. Geoscientific Model Development, 2016, 9, 2809-2832.	1.3	152
15	Human-induced greening of the northern extratropical land surface. Nature Climate Change, 2016, 6, 959-963.	8.1	145
16	Impact of Earth Greening on the Terrestrial Water Cycle. Journal of Climate, 2018, 31, 2633-2650.	1.2	142
17	Observed changes in dry-season water availability attributed to human-induced climate change. Nature Geoscience, 2020, 13, 477-481.	5.4	132
18	Response of vegetation phenology to urbanization in the conterminous United States. Global Change Biology, 2017, 23, 2818-2830.	4.2	130

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19	Disentangling climatic and anthropogenic controls on global terrestrial evapotranspiration trends. Environmental Research Letters, 2015, 10, 094008.	2.2	119
20	Global Latitudinal-Asymmetric Vegetation Growth Trends and Their Driving Mechanisms: 1982â€“2009. Remote Sensing, 2013, 5, 1484-1497.	1.8	117
21	A worldwide analysis of spatiotemporal changes in water balanceâ€based evapotranspiration from 1982 to 2009. Journal of Geophysical Research D: Atmospheres, 2014, 119, 1186-1202.	1.2	109
22	Urban warming advances spring phenology but reduces the response of phenology to temperature in the conterminous United States. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 4228-4233.	3.3	109
23	The carbon budget of terrestrial ecosystems in East Asia over the last two decades. Biogeosciences, 2012, 9, 3571-3586.	1.3	103
24	Global patterns and climate drivers of waterâ€use efficiency in terrestrial ecosystems deduced from satelliteâ€based datasets and carbon cycle models. Global Ecology and Biogeography, 2016, 25, 311-323.	2.7	102
25	Seasonal responses of terrestrial ecosystem waterâ€use efficiency to climate change. Global Change Biology, 2016, 22, 2165-2177.	4.2	100
26	Decisions and coordination of retailer-led low-carbon supply chain under altruistic preference. European Journal of Operational Research, 2021, 293, 910-925.	3.5	99
27	Remote Sensing Evaluation of CLM4 GPP for the Period 2000â€“09*. Journal of Climate, 2012, 25, 5327-5342.	1.2	85
28	Interannual variability in the onset of the summer monsoon over the Eastern Bay of Bengal. Theoretical and Applied Climatology, 2007, 89, 155-170.	1.3	82
29	Comparing Evapotranspiration from Eddy Covariance Measurements, Water Budgets, Remote Sensing, and Land Surface Models over Canadaa,b. Journal of Hydrometeorology, 2015, 16, 1540-1560.	0.7	75
30	Seasonally different response of photosynthetic activity to daytime and nightâ€time warming in the Northern Hemisphere. Global Change Biology, 2015, 21, 377-387.	4.2	72
31	Spatiotemporal patterns of evapotranspiration in response to multiple environmental factors simulated by the Community Land Model. Environmental Research Letters, 2013, 8, 024012.	2.2	71
32	Rapid Net Carbon Loss From a Wholeâ€Ecosystem Warmed Peatland. AGU Advances, 2020, 1, e2020AV000163.	2.3	69
33	Representing northern peatland microtopography and hydrology within the Community Land Model. Biogeosciences, 2015, 12, 6463-6477.	1.3	66
34	Response of Water Use Efficiency to Global Environmental Change Based on Output From Terrestrial Biosphere Models. Global Biogeochemical Cycles, 2017, 31, 1639-1655.	1.9	63
35	Greenhouse Gas Policy Influences Climate via Direct Effects of Land-Use Change. Journal of Climate, 2013, 26, 3657-3670.	1.2	59
36	The impact of climate, CO₂, nitrogen deposition and land use change on simulated contemporary global river flow. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	58

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37	Field-experiment constraints on the enhancement of the terrestrial carbon sink by CO2 fertilization. Nature Geoscience, 2019, 12, 809-814.	5.4	58
38	Moisture availability mediates the relationship between terrestrial gross primary production and solarâ€induced chlorophyll fluorescence: Insights from globalâ€scale variations. Global Change Biology, 2021, 27, 1144-1156.	4.2	57
39	Asymmetric responses of primary productivity to altered precipitation simulated by ecosystem models across three long-term grassland sites. Biogeosciences, 2018, 15, 3421-3437.	1.3	55
40	Causes of spring vegetation growth trends in the northern midâ€“high latitudes from 1982 to 2004. Environmental Research Letters, 2012, 7, 014010.	2.2	53
41	From land use to land cover: restoring the afforestation signal in a coupled integrated assessmentâ€“earth system model and the implications for CMIP5 RCP simulations. Biogeosciences, 2014, 11, 6435-6450.	1.3	49
42	Assessment of Reanalysis Daily Extreme Temperatures with Chinaâ€™s Homogenized Historical Dataset during 1979â€“2001 Using Probability Density Functions. Journal of Climate, 2010, 23, 6605-6623.	1.2	48
43	Sensitivity of global terrestrial gross primary production to hydrologic states simulated by the Community Land Model using two runoff parameterizations. Journal of Advances in Modeling Earth Systems, 2014, 6, 658-679.	1.3	48
44	Toward â€œoptimalâ€•integration of terrestrial biosphere models. Geophysical Research Letters, 2015, 42, 4418-4428.	1.5	48
45	Observed positive vegetation-rainfall feedbacks in the Sahel dominated by a moisture recycling mechanism. Nature Communications, 2017, 8, 1873.	5.8	48
46	Photoperiod decelerates the advance of spring phenology of six deciduous tree species under climate warming. Global Change Biology, 2021, 27, 2914-2927.	4.2	48
47	Biospheric feedback effects in a synchronously coupled model of human and Earth systems. Nature Climate Change, 2017, 7, 496-500.	8.1	46
48	The integrated Earth system model version 1: formulation and functionality. Geoscientific Model Development, 2015, 8, 2203-2219.	1.3	44
49	Land carbon models underestimate the severity and duration of droughtâ€™s impact on plant productivity. Scientific Reports, 2019, 9, 2758.	1.6	42
50	Increased lightâ€use efficiency in northern terrestrial ecosystems indicated by CO₂ and greening observations. Geophysical Research Letters, 2016, 43, 11,339.	1.5	40
51	Global land carbon sink response to temperature and precipitation varies with ENSO phase. Environmental Research Letters, 2017, 12, 064007.	2.2	39
52	The paleoclimatic footprint in the soil carbon stock of the Tibetan permafrost region. Nature Communications, 2019, 10, 4195.	5.8	39
53	Vegetation Functional Properties Determine Uncertainty of Simulated Ecosystem Productivity: A Traceability Analysis in the East Asian Monsoon Region. Global Biogeochemical Cycles, 2019, 33, 668-689.	1.9	38
54	Vulnerability of existing and planned coal-fired power plants in Developing Asia to changes in climate and water resources. Energy and Environmental Science, 2019, 12, 3164-3181.	15.6	38

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55	Divergent responses of spring phenology to daytime and nighttime warming. Agricultural and Forest Meteorology, 2020, 281, 107832.	1.9	38
56	Carbon and Water Use Efficiencies: A Comparative Analysis of Ten Terrestrial Ecosystem Models under Changing Climate. Scientific Reports, 2019, 9, 14680.	1.6	37
57	Uncertainty analysis of terrestrial net primary productivity and net biome productivity in China during 1901â€“2005. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 1372-1393.	1.3	35
58	Selfâ€Amplifying Feedbacks Accelerate Greening and Warming of the Arctic. Geophysical Research Letters, 2018, 45, 7102-7111.	1.5	35
59	Seasonal changes in GPP/SIF ratios and their climatic determinants across the Northern Hemisphere. Global Change Biology, 2021, 27, 5186-5197.	4.2	34
60	Decoupling of greenness and gross primary productivity as aridity decreases. Remote Sensing of Environment, 2022, 279, 113120.	4.6	34
61	Decadal trends in the seasonal-cycle amplitude of terrestrial CO₂ exchange resulting from the ensemble of terrestrial biosphere models. Tellus, Series B: Chemical and Physical Meteorology, 2022, 68, 28968.	0.8	31
62	Mapping potentials and bridging regional gaps of renewable resources in China. Renewable and Sustainable Energy Reviews, 2020, 134, 110337.	8.2	30
63	Testing a land model in ecosystem functional space via a comparison of observed and modeled ecosystem flux responses to precipitation regimes and associated stresses in a Central U.S. forest. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 1884-1902.	1.3	29
64	On linking an Earth system model to the equilibrium carbon representation of an economically optimizing land use model. Geoscientific Model Development, 2014, 7, 2545-2555.	1.3	26
65	Evaluation of the Community Land Model simulated carbon and water fluxes against observations over ChinaFLUX sites. Agricultural and Forest Meteorology, 2016, 226-227, 174-185.	1.9	26
66	Quantifying the Effects of Historical Land Cover Conversion Uncertainty on Global Carbon and Climate Estimates. Geophysical Research Letters, 2018, 45, 974-982.	1.5	26
67	Cryptic phenology in plants: Case studies, implications, and recommendations. Global Change Biology, 2019, 25, 3591-3608.	4.2	26
68	A Causal Inference Model Based on Random Forests to Identify the Effect of Soil Moisture on Precipitation. Journal of Hydrometeorology, 2020, 21, 1115-1131.	0.7	21
69	Simulation and evaluation of terrestrial ecosystem NPP with M-SDGVM over continental China. Advances in Atmospheric Sciences, 2010, 27, 427-442.	1.9	19
70	Evaluation of simulated soil carbon dynamics in Arctic-Boreal ecosystems. Environmental Research Letters, 2020, 15, 025005.	2.2	19
71	Machine learningâ€“based observation-constrained projections reveal elevated global socioeconomic risks from wildfire. Nature Communications, 2022, 13, 1250.	5.8	19
72	The CSIRO Mk3L climate system model v1.0 coupled to the CABLE land surface scheme v1.4b: evaluation of the control climatology. Geoscientific Model Development, 2011, 4, 1115-1131.	1.3	18

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73	Evaluating the Community Land Model in a pine stand with shading manipulations and ¹³CO₂ labeling. Biogeosciences, 2016, 13, 641-657.	1.3	18
74	Human-caused long-term changes in global aridity. Npj Climate and Atmospheric Science, 2021, 4, .	2.6	18
75	Artificial light at night: an underappreciated effect on phenology of deciduous woody plants. , 2022, 1, .		18
76	Extending a land-surface model with <i>Sphagnum</i> moss to simulate responses of a northern temperate bog to whole ecosystem warming and elevated CO₂. Biogeosciences, 2021, 18, 467-486.	1.3	17
77	Photosynthesis phenology, as defined by solar-induced chlorophyll fluorescence, is overestimated by vegetation indices in the extratropical Northern Hemisphere. Agricultural and Forest Meteorology, 2022, 323, 109027.	1.9	17
78	Impacts of land use change and elevated CO₂ on the interannual variations and seasonal cycles of gross primary productivity in China. Earth System Dynamics, 2020, 11, 235-249.	2.7	16
79	Streamflow in the Columbia River Basin: Quantifying Changes Over the Period 1951â€2008 and Determining the Drivers of Those Changes. Water Resources Research, 2019, 55, 6640-6652.	1.7	15
80	Global vegetation biomass production efficiency constrained by models and observations. Global Change Biology, 2020, 26, 1474-1484.	4.2	15
81	Quantifying the drivers and predictability of seasonal changes in African fire. Nature Communications, 2020, 11, 2893.	5.8	15
82	Evaluation of CLM4 Solar Radiation Partitioning Scheme Using Remote Sensing and Site Level FPAR Datasets. Remote Sensing, 2013, 5, 2857-2882.	1.8	14
83	Spatiotemporal dynamics of ecosystem fires and biomass burning-induced carbon emissions in China over the past two decades. Geography and Sustainability, 2020, 1, 47-58.	1.9	14
84	Validation of a Statistical Methodology for Extracting Vegetation Feedbacks: Focus on North African Ecosystems in the Community Earth System Model. Journal of Climate, 2018, 31, 1565-1586.	1.2	13
85	Permafrost response to vegetation greenness variation in the Arctic tundra through positive feedback in surface air temperature and snow cover. Environmental Research Letters, 2019, 14, 044024.	2.2	13
86	Sensitivity of the carbon storage of potential vegetation to historical climate variability and CO2 in continental China. Advances in Atmospheric Sciences, 2009, 26, 87-100.	1.9	11
87	An Integrative Model for Soil Biogeochemistry and Methane Processes: I. Model Structure and Sensitivity Analysis. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2019JG005468.	1.3	11
88	Land cover change-induced decline in terrestrial gross primary production over the conterminous United States from 2001 to 2016. Agricultural and Forest Meteorology, 2021, 308-309, 108609.	1.9	10
89	Improvements of a dynamic global vegetation model and simulations of carbon and water at an upland-oak forest. Advances in Atmospheric Sciences, 2007, 24, 311-322.	1.9	9
90	Toward verifying fossil fuel CO₂ emissions with the CMAQ model: Motivation, model description and initial simulation. Journal of the Air and Waste Management Association, 2014, 64, 419-435.	0.9	9

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91	Advancing a Model-Validated Statistical Method for Decomposing the Key Oceanic Drivers of Regional Climate: Focus on Northern and Tropical African Climate Variability in the Community Earth System Model (CESM). Journal of Climate, 2017, 30, 8517-8537.	1.2	9
92	Informing climate models with rapid chamber measurements of forest carbon uptake. Global Change Biology, 2017, 23, 2130-2139.	4.2	9
93	Contribution of environmental forcings to US runoff changes for the period 1950â€“2010. Environmental Research Letters, 2018, 13, 054023.	2.2	9
94	Modelling tree stemâ€water dynamics over an Amazonian rainforest. Ecohydrology, 2020, 13, e2180.	1.1	9
95	Development of observation-based global multilayer soil moisture products for 1970 to 2016. Earth System Science Data, 2021, 13, 4385-4405.	3.7	9
96	Interannual variability and climatic sensitivity of global wildfire activity. Advances in Climate Change Research, 2021, 12, 686-695.	2.1	9
97	Uncertainty Quantification of Extratropical Forest Biomass in CMIP5 Models over the Northern Hemisphere. Scientific Reports, 2018, 8, 10962.	1.6	7
98	Evaluation and modification of ELM seasonal deciduous phenology against observations in a southern boreal peatland forest. Agricultural and Forest Meteorology, 2021, 308-309, 108556.	1.9	7
99	Unusual characteristics of the carbon cycle during the 2015â€"2016 El NiÃ±o. Global Change Biology, 2021, 27, 3798-3809.	4.2	6
100	Stochastic Parameterization to Represent Variability and Extremes in Climate Modeling. Procedia Computer Science, 2014, 29, 1146-1155.	1.2	5
101	Global and regional coupled climate sensitivity to the parameterization of rainfall interception. Climate Dynamics, 2011, 37, 171-186.	1.7	4
102	Coupling a terrestrial biogeochemical model to the common land model. Advances in Atmospheric Sciences, 2011, 28, 1129-1142.	1.9	4
103	Projected changes in the terrestrial and oceanic regulators of climate variability across sub-Saharan Africa. Climate Dynamics, 2020, 55, 1031-1057.	1.7	4
104	A scalable framework for the global offline community land model ensemble simulation. International Journal of Computational Science and Engineering, 2016, 12, 73.	0.4	2
105	Predictability of tropical vegetation greenness using sea surface temperatures*. Environmental Research Communications, 2019, 1, 031003.	0.9	2
106	Deficient precipitation sensitivity to Sahel land surface forcings among <scp>CMIP5</scp> models. International Journal of Climatology, 2023, 43, 99-122.	1.5	1