Qianlai Zhuang

List of Publications by Year
in descending order

189	10,978	38660 50	40881 93
papers	citations	h-index	g-index

230	230	230	11770
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Global Methane Budget 2000â€“2017. Earth System Science Data, 2020, 12, 1561-1623.	3.7	1,199
2	Methane emissions from wetlands: biogeochemical, microbial, and modeling perspectives from local to global scales. Global Change Biology, 2013, 19, 1325-1346.	4.2	836
3	Dependence of the evolution of carbon dynamics in the northern permafrost region on the trajectory of climate change. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3882-3887.	3.3	296
4	Importance of recent shifts in soil thermal dynamics on growing season length, productivity, and carbon sequestration in terrestrial high-latitude ecosystems. Global Change Biology, 2006, 12, 731-750.	4.2	292
5	Methane fluxes between terrestrial ecosystems and the atmosphere at northern high latitudes during the past century: A retrospective analysis with a process-based biogeochemistry model. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	279
6	Large loss of CO2 in winter observed across the northern permafrost region. Nature Climate Change, 2019, 9, 852-857.	8.1	225
7	Estimation of net ecosystem carbon exchange for the conterminous United States by combining MODIS and AmeriFlux data. Agricultural and Forest Meteorology, 2008, 148, 1827-1847.	1.9	221
8	A continuous measure of gross primary production for the conterminous United States derived from MODIS and AmeriFlux data. Remote Sensing of Environment, 2010, 114, 576-591.	4.6	210
9	CO2and CH4exchanges between land ecosystems and the atmosphere in northern high latitudes over the 21st century. Geophysical Research Letters, 2006, 33, .	1.5	179
10	The role of historical fire disturbance in the carbon dynamics of the pan-boreal region: A process-based analysis. Journal of Geophysical Research, 2007, 112, .	3.3	158
11	Assessing net ecosystem carbon exchange of U.S. terrestrial ecosystems by integrating eddy covariance flux measurements and satellite observations. Agricultural and Forest Meteorology, 2011, 151, 60-69.	1.9	157
12	Effects of ozone on net primary production and carbon sequestration in the conterminous United States using a biogeochemistry model. Tellus, Series B: Chemical and Physical Meteorology, 2004, 56, 230-248.	0.8	154
13	Carbon cycling in extratropical terrestrial ecosystems of the Northern Hemisphere during the 20th century: a modeling analysis of the influences of soil thermal dynamics. Tellus, Series B: Chemical and Physical Meteorology, 2003, 55, 751-776.	0.8	151
14	Evaluating evapotranspiration and water-use efficiency of terrestrial ecosystems in the conterminous United States using MODIS and AmeriFlux data. Remote Sensing of Environment, 2010, 114, 1924-1939.	4.6	146
15	Reorganization of vegetation, hydrology and soil carbon after permafrost degradation across heterogeneous boreal landscapes. Environmental Research Letters, 2013, 8, 035017.	2.2	137
16	The combined and separate impacts of climate extremes on the current and future <scp>US</scp> rainfed maize and soybean production under elevated CO₂. Global Change Biology, 2017, 23, 2687-2704.	4.2	134
17	Future Effects of Ozone on Carbon Sequestration and Climate Change Policy Using a Global Biogeochemical Model. Climatic Change, 2005, 73, 345-373.	1.7	124
18	ASSESSING THE CARBON BALANCE OF CIRCUMPOLAR ARCTIC TUNDRA USING REMOTE SENSING AND PROCESS MODELING. , 2007, 17, 213-234.		123

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19	Carbon cycling in extratropical terrestrial ecosystems of the Northern Hemisphere during the 20th century: a modeling analysis of the influences of soil thermal dynamics. Tellus, Series B: Chemical and Physical Meteorology, 2022, 55, 751.	0.8	123
20	Mapping stocks of soil organic carbon and soil total nitrogen in Liaoning Province of China. Geoderma, 2017, 305, 250-263.	2.3	122
21	Modeling soil thermal and carbon dynamics of a fire chronosequence in interior Alaska. Journal of Geophysical Research, 2003, 108, FFR 3-1.	3.3	121
22	Biomass and biofuels in China: Toward bioenergy resource potentials and their impacts on the environment. Renewable and Sustainable Energy Reviews, 2018, 82, 2387-2400.	8.2	120
23	Ecological risk assessment of ecosystem services in the Taihu Lake Basin of China from 1985 to 2020. Science of the Total Environment, 2016, 554-555, 7-16.	3.9	119
24	An analysis of the carbon balance of the Arctic Basin from 1997 to 2006. Tellus, Series B: Chemical and Physical Meteorology, 2022, 62, 455.	0.8	116
25	Variability in the sensitivity among model simulations of permafrost and carbon dynamics in the permafrost region between 1960 and 2009. Global Biogeochemical Cycles, 2016, 30, 1015-1037.	1.9	116
26	Incorporation of a permafrost model into a large-scale ecosystem model: Evaluation of temporal and spatial scaling issues in simulating soil thermal dynamics. Journal of Geophysical Research, 2001, 106, 33649-33670.	3.3	113
27	Carbon dynamics of terrestrial ecosystems on the Tibetan Plateau during the 20th century: an analysis with a processâ€based biogeochemical model. Global Ecology and Biogeography, 2010, 19, 649-662.	2.7	97
28	Estimating methane emissions from northern lakes using iceâ€bubble surveys. Limnology and Oceanography: Methods, 2010, 8, 592-609.	1.0	94
29	Response of global soil consumption of atmospheric methane to changes in atmospheric climate and nitrogen deposition. Global Biogeochemical Cycles, 2013, 27, 650-663.	1.9	88
30	An inventory of global N2O emissions from the soils of natural terrestrial ecosystems. Atmospheric Environment, 2012, 47, 66-75.	1.9	84
31	Soil organic carbon sequestration potential of cropland in China. Global Biogeochemical Cycles, 2013, 27, 711-722.	1.9	83
32	WETCHIMP-WSL: intercomparison of wetland methane emissions models over West Siberia. Biogeosciences, 2015, 12, 3321-3349.	1.3	81
33	Adaptation of paddy rice in China to climate change: The effects of shifting sowing date on yield and irrigation water requirement. Agricultural Water Management, 2020, 228, 105890.	2.4	79
34	Methane emissions from an alpine wetland on the Tibetan Plateau: Neglected but vital contribution of the nongrowing season. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1475-1490.	1.3	77
35	Biofuel, land and water: maize, switchgrass or<i>Miscanthus</i>?. Environmental Research Letters, 2013, 8, 015020.	2.2	76
36	Equifinality in parameterization of processâ€based biogeochemistry models: A significant uncertainty source to the estimation of regional carbon dynamics. Journal of Geophysical Research, 2008, 113, .	3.3	75

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37	NET EMISSIONS OF CH4AND CO2IN ALASKA: IMPLICATIONS FOR THE REGION'S GREENHOUSE GAS BUDGET. , 2007, 17, 203-212.		74
38	The impacts of recent permafrost thaw on landâ€“atmosphere greenhouse gas exchange. Environmental Research Letters, 2014, 9, 045005.	2.2	74
39	Cryostratigraphy and Permafrost Evolution in the Lacustrine Lowlands of Westâ€Central Alaska. Permafrost and Periglacial Processes, 2014, 25, 14-34.	1.5	72
40	Modeling methane emissions from arctic lakes: Model development and siteâ€level study. Journal of Advances in Modeling Earth Systems, 2015, 7, 459-483.	1.3	71
41	Reduced net methane emissions due to microbial methane oxidation in a warmer Arctic. Nature Climate Change, 2020, 10, 317-321.	8.1	70
42	Drought effects on large fire activity in Canadian and Alaskan forests. Environmental Research Letters, 2007, 2, 044003.	2.2	69
43	Northern Eurasia Future Initiative (NEFI): facing the challenges and pathways of global change in the twenty-first century. Progress in Earth and Planetary Science, 2017, 4, .	1.1	69
44	Arctic lakes are continuous methane sources to the atmosphere under warming conditions. Environmental Research Letters, 2015, 10, 054016.	2.2	66
45	Agriculture intensifies soil moisture decline in Northern China. Scientific Reports, 2015, 5, 11261.	1.6	65
46	Interactive effects of mulching practice and nitrogen rate on grain yield, water productivity, fertilizer use efficiency and greenhouse gas emissions of rainfed summer maize in northwest China. Agricultural Water Management, 2021, 248, 106778.	2.4	65
47	Do maize models capture the impacts of heat and drought stresses on yield? Using algorithm ensembles to identify successful approaches. Global Change Biology, 2016, 22, 3112-3126.	4.2	63
48	Impacts of land use change due to biofuel crops on carbon balance, bioenergy production, and agricultural yield, in the conterminous <scp>U</scp>nited <scp>S</scp>tates. GCB Bioenergy, 2012, 4, 277-288.	2.5	61
49	Global patterns and predictors of stem <scp>CO</scp>₂ efflux in forest ecosystems. Global Change Biology, 2016, 22, 1433-1444.	4.2	61
50	Carbon Consequences and Agricultural Implications of Growing Biofuel Crops on Marginal Agricultural Lands in China. Environmental Science & Technology, 2011, 45, 10765-10772.	4.6	60
51	Response of evapotranspiration and water availability to changing climate and land cover on the Mongolian Plateau during the 21st century. Global and Planetary Change, 2013, 108, 85-99.	1.6	60
52	Phenology shift from 1989 to 2008 on the Tibetan Plateau: an analysis with a process-based soil physical model and remote sensing data. Climatic Change, 2013, 119, 435-449.	1.7	59
53	A global sensitivity analysis and Bayesian inference framework for improving the parameter estimation and prediction of a processâ€based Terrestrial Ecosystem Model. Journal of Geophysical Research, 2009, 114, .	3.3	57
54	Dissecting the nonlinear response of maize yield to high temperature stress with modelâ€data integration. Global Change Biology, 2019, 25, 2470-2484.	4.2	56

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55	Regional trends and drivers of the global methane budget. Global Change Biology, 2022, 28, 182-200.	4.2	56
56	Potential shift from a carbon sink to a source in Amazonian peatlands under a changing climate. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12407-12412.	3.3	54
57	Quantifying wetland methane emissions with process-based models of different complexities. Biogeosciences, 2010, 7, 3817-3837.	1.3	53
58	Impacts of land use changes on net ecosystem production in the Taihu Lake Basin of China from 1985 to 2010. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 690-707.	1.3	51
59	Improved Constraints on Global Methane Emissions and Sinks Using <i>Î´</i>¹³Câ€CH₄. Global Biogeochemical Cycles, 2021, 35, e2021GB007000.	1.9	50
60	Global Methan Emissions From Wetlands, Rice Paddies, and Lakes. Eos, 2009, 90, 37-38.	0.1	49
61	Future nitrogen availability and its effect on carbon sequestration in Northern Eurasia. Nature Communications, 2019, 10, 3024.	5.8	49
62	Evapotranspiration partitioning and water productivity of rainfed maize under contrasting mulching conditions in Northwest China. Agricultural Water Management, 2021, 243, 106473.	2.4	49
63	Crop model- and satellite imagery-based recommendation tool for variable rate N fertilizer application for the US Corn system. Precision Agriculture, 2017, 18, 779-800.	3.1	46
64	Spatio-temporal dynamics of evapotranspiration on the Tibetan Plateau from 2000 to 2010. Environmental Research Letters, 2017, 12, 014011.	2.2	45
65	Tundra landscape heterogeneity, not interannual variability, controls the decadal regional carbon balance in the Western Russian Arctic. Global Change Biology, 2018, 24, 5188-5204.	4.2	45
66	Midâ€upper tropospheric methane in the high Northern Hemisphere: Spaceborne observations by AIRS, aircraft measurements, and model simulations. Journal of Geophysical Research, 2010, 115, .	3.3	44
67	Net exchanges of methane and carbon dioxide on the Qinghai-Tibetan Plateau from 1979 to 2100. Environmental Research Letters, 2015, 10, 085007.	2.2	44
68	Toward optimal soil organic carbon sequestration with effects of agricultural management practices and climate change in Tai-Lake paddy soils of China. Geoderma, 2016, 275, 28-39.	2.3	44
69	Factors influencing industrial carbon emissions and strategies for carbon mitigation in the Yangtze River Delta of China. Journal of Cleaner Production, 2017, 142, 3607-3616.	4.6	44
70	Permafrost degradation and methane: low risk of biogeochemical climate-warming feedback. Environmental Research Letters, 2013, 8, 035014.	2.2	43
71	Potential influence of climate-induced vegetation shifts on future land use and associated land carbon fluxes in Northern Eurasia. Environmental Research Letters, 2014, 9, 035004.	2.2	43
72	Evaluating aerosol direct radiative effects on global terrestrial ecosystem carbon dynamics from 2003 to 2010. Tellus, Series B: Chemical and Physical Meteorology, 2022, 66, 21808.	0.8	43

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73	Methane emissions from panâ€Arctic lakes during the 21st century: An analysis with processâ€based models of lake evolution and biogeochemistry. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2641-2653.	1.3	41
74	The ecology of peace: preparing Colombia for new political and planetary climates. Frontiers in Ecology and the Environment, 2018, 16, 525-531.	1.9	41
75	The important but weakening maize yield benefit of grain filling prolongation in the US Midwest. Global Change Biology, 2018, 24, 4718-4730.	4.2	41
76	Wheat straw mulching with nitrification inhibitor application improves grain yield and economic benefit while mitigating gaseous emissions from a dryland maize field in northwest China. Field Crops Research, 2021, 265, 108125.	2.3	40
77	Uncertainty analysis of vegetation distribution in the northern high latitudes during the 21st century with a dynamic vegetation model. Ecology and Evolution, 2012, 2, 593-614.	0.8	39
78	Spatial variations of soil organic carbon stocks in a coastal hilly area of China. Geoderma, 2018, 314, 8-19.	2.3	39
79	Modeling <scp>CO</scp>₂ emissions from <scp>A</scp>rctic lakes: Model development and siteâ€level study. Journal of Advances in Modeling Earth Systems, 2017, 9, 2190-2213.	1.3	38
80	Bioenergy crop productivity and potential climate change mitigation from marginal lands in the United States: An ecosystem modeling perspective. GCB Bioenergy, 2015, 7, 1211-1221.	2.5	37
81	Modeling thermal dynamics of active layer soils and nearâ€surface permafrost using a fully coupled water and heat transport model. Journal of Geophysical Research, 2012, 117, .	3.3	36
82	Effects of ridgeâ€“furrow mulching on soil CO2 efflux in a maize field in the Chinese Loess Plateau. Agricultural and Forest Meteorology, 2019, 264, 200-212.	1.9	36
83	Investigating the spatio-temporal variability of soil organic carbon stocks in different ecosystems of China. Science of the Total Environment, 2021, 758, 143644.	3.9	36
84	An Efficient Method of Estimating Downward Solar Radiation Based on the MODIS Observations for the Use of Land Surface Modeling. Remote Sensing, 2014, 6, 7136-7157.	1.8	35
85	Response of evapotranspiration and water availability to the changing climate in Northern Eurasia. Climatic Change, 2014, 126, 413-427.	1.7	35
86	A Small Temperate Lake in the 21st Century: Dynamics of Water Temperature, Ice Phenology, Dissolved Oxygen, and Chlorophyll <i>a</i>. Water Resources Research, 2018, 54, 4681-4699.	1.7	33
87	Estimating wetland methane emissions from the northern high latitudes from 1990 to 2009 using artificial neural networks. Global Biogeochemical Cycles, 2013, 27, 592-604.	1.9	31
88	Evaluating atmospheric CO2 effects on gross primary productivity and net ecosystem exchanges of terrestrial ecosystems in the conterminous United States using the AmeriFlux data and an artificial neural network approach. Agricultural and Forest Meteorology, 2016, 220, 38-49.	1.9	31
89	Elevated atmospheric CO₂ negatively impacts photosynthesis through radiative forcing and physiologyâ€mediated climate feedback. Geophysical Research Letters, 2017, 44, 1956-1963.	1.5	31
90	Incorporating microbial dormancy dynamics into soil decomposition models to improve quantification of soil carbon dynamics of northern temperate forests. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2596-2611.	1.3	29

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91	Impacts of urbanization on soil organic carbon stocks in the northeast coastal agricultural areas of China. Science of the Total Environment, 2020, 721, 137814.	3.9	29
92	Aerosol effects on global land surface energy fluxes during 2003â€"2010. Geophysical Research Letters, 2014, 41, 7875-7881.	1.5	28
93	Câ€"Nâ€"P interactions control climate driven changes in regional patterns of C storage on the North Slope of Alaska. Landscape Ecology, 2016, 31, 195-213.	1.9	28
94	Inverse modeling of pan-Arctic methane emissions at high spatial resolution: what can we learn from assimilating satellite retrievals and using different process-based wetland and lake biogeochemical models?. Atmospheric Chemistry and Physics, 2016, 16, 12649-12666.	1.9	27
95	Focus on the impact of climate change on wetland ecosystems and carbon dynamics. Environmental Research Letters, 2016, 11, 100201.	2.2	27
96	Predicting Soil Organic Carbon and Soil Nitrogen Stocks in Topsoil of Forest Ecosystems in Northeastern China Using Remote Sensing Data. Remote Sensing, 2020, 12, 1115.	1.8	27
97	Quantification of terrestrial ecosystem carbon dynamics in the conterminous United States combining a process-based biogeochemical model and MODIS and AmeriFlux data. Biogeosciences, 2011, 8, 2665-2688.	1.3	26
98	Evapotranspiration in Northern Eurasia: Impact of forcing uncertainties on terrestrial ecosystem model estimates. Journal of Geophysical Research D: Atmospheres, 2015, 120, 2647-2660.	1.2	26
99	Possible decline of the carbon sink in the Mongolian Plateau during the 21st century. Environmental Research Letters, 2009, 4, 045023.	2.2	25
100	Modeling soil thermal and hydrological dynamics and changes of growing season in Alaskan terrestrial ecosystems. Climatic Change, 2011, 107, 481-510.	1.7	25
101	Sensitivity of carbon budget to historical climate variability and atmospheric CO2 concentration in temperate grassland ecosystems in China. Climatic Change, 2013, 117, 259-272.	1.7	25
102	The role of driving factors in historical and projected carbon dynamics of upland ecosystems in Alaska. Ecological Applications, 2018, 28, 5-27.	1.8	25
103	Rising methane emissions from boreal lakes due to increasing ice-free days. Environmental Research Letters, 2020, 15, 064008.	2.2	25
104	Estimation of rainfed maize transpiration under various mulching methods using modified Jarvis-Stewart model and hybrid support vector machine model with whale optimization algorithm. Agricultural Water Management, 2021, 249, 106799.	2.4	25
105	Modeling methane emissions from the Alaskan Yukon River basin, 1986â€"2005, by coupling a largeâ€scale hydrological model and a processâ€based methane model. Journal of Geophysical Research, 2012, 117, .	3.3	24
106	Rising methane emissions in response to climate change in Northern Eurasia during the 21st century. Environmental Research Letters, 2011, 6, 045211.	2.2	23
107	Parameterization and sensitivity analysis of a processâ€based terrestrial ecosystem model using adjoint method. Journal of Advances in Modeling Earth Systems, 2014, 6, 315-331.	1.3	23
108	Modeling longâ€term changes in tundra carbon balance following wildfire, climate change, and potential nutrient addition. Ecological Applications, 2017, 27, 105-117.	1.8	23

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109	Spatial-Temporal Changes in Soil Organic Carbon and pH in the Liaoning Province of China: A Modeling Analysis Based on Observational Data. Sustainability, 2019, 11, 3569.	1.6	23
110	Modeling the effects of organic nitrogen uptake by plants on the carbon cycling of boreal forest and tundra ecosystems. Biogeosciences, 2013, 10, 7943-7955.	1.3	22
111	Spatial scale-dependent landâ€“atmospheric methane exchanges in the northern high latitudes from 1993 to 2004. Biogeosciences, 2014, 11, 1693-1704.	1.3	22
112	Carbon and nitrogen dynamics in bioenergy ecosystems: 2. Potential greenhouse gas emissions and global warming intensity in the conterminous <scp>U</scp>nited <scp>S</scp>tates. GCB Bioenergy, 2015, 7, 25-39.	2.5	22
113	Assessing historical and projected carbon balance of Alaska: A synthesis of results and policy/management implications. Ecological Applications, 2018, 28, 1396-1412.	1.8	22
114	Evaluating climate impacts on carbon balance of the terrestrial ecosystems in the Midwest of the United States with a process-based ecosystem model. Mitigation and Adaptation Strategies for Global Change, 2010, 15, 467-487.	1.0	21
115	Influence of changes in wetland inundation extent on net fluxes of carbon dioxide and methane in northern high latitudes from 1993 to 2004. Environmental Research Letters, 2015, 10, 095009.	2.2	21
116	Quantification of the soil organic carbon balance in the Tai-Lake paddy soils of China. Soil and Tillage Research, 2016, 155, 95-106.	2.6	21
117	Modeling biological nitrogen fixation in global natural terrestrial ecosystems. Biogeosciences, 2020, 17, 3643-3657.	1.3	21
118	Characterization of wildfire regimes in Canadian boreal terrestrial ecosystems. International Journal of Wildland Fire, 2009, 18, 992.	1.0	20
119	The implications of microbial and substrate limitation for the fates of carbon in different organic soil horizon types of boreal forest ecosystems: a mechanistically based model analysis. Biogeosciences, 2014, 11, 4477-4491.	1.3	20
120	Rising methane emissions from northern wetlands associated with sea ice decline. Geophysical Research Letters, 2015, 42, 7214-7222.	1.5	20
121	Detectability of Arctic methane sources at six sites performing continuous atmospheric measurements. Atmospheric Chemistry and Physics, 2017, 17, 8371-8394.	1.9	20
122	Multimodel simulation of vertical gas transfer in a temperate lake. Hydrology and Earth System Sciences, 2020, 24, 697-715.	1.9	20
123	North American boreal forests are a large carbon source due to wildfires from 1986 to 2016. Scientific Reports, 2021, 11, 7723.	1.6	19
124	Extreme value analysis of wildfires in Canadian boreal forest ecosystems. Canadian Journal of Forest Research, 2011, 41, 1836-1851.	0.8	18
125	Pan-Arctic landâ€“atmospheric fluxes of methane and carbon dioxide in response to climate change over the 21st century. Environmental Research Letters, 2013, 8, 045003.	2.2	18
126	Modeling Large Fire Frequency and Burned Area in Canadian Terrestrial Ecosystems with Poisson Models. Environmental Modeling and Assessment, 2012, 17, 483-493.	1.2	17

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127	A review of and perspectives on global change modeling for Northern Eurasia. Environmental Research Letters, 2017, 12, 083001.	2.2	17
128	Modelling temperature acclimation effects on the carbon dynamics of forest ecosystems in the conterminous United States. Tellus, Series B: Chemical and Physical Meteorology, 2022, 65, 19156.	0.8	16
129	Soil thermal dynamics of terrestrial ecosystems of the conterminous United States from 1948 to 2008: an analysis with a process-based soil physical model and AmeriFlux data. Climatic Change, 2014, 126, 135-150.	1.7	16
130	Global soil consumption of atmospheric carbon monoxide: an analysis using a process-based biogeochemistry model. Atmospheric Chemistry and Physics, 2018, 18, 7913-7931.	1.9	16
131	Quantifying global N₂O emissions from natural ecosystem soils using trait-based biogeochemistry models. Biogeosciences, 2019, 16, 207-222.	1.3	16
132	Uncertainty of organic carbon dynamics in Tai-Lake paddy soils of China depends on the scale of soil maps. Agriculture, Ecosystems and Environment, 2016, 222, 13-22.	2.5	15
133	Importance of biophysical effects on climate warming mitigation potential of biofuel crops over the conterminous United States. GCB Bioenergy, 2017, 9, 577-590.	2.5	15
134	Quantifying the Role of Permafrost Distribution in Groundwater and Surface Water Interactions Using a Three-Dimensional Hydrological Model. Arctic, Antarctic, and Alpine Research, 2017, 49, 81-100.	0.4	15
135	Consumption of atmospheric methane by the Qinghaiâ€“Tibet Plateau alpine steppe ecosystem. Cryosphere, 2018, 12, 2803-2819.	1.5	15
136	Validation and Sensitivity Analysis of a 1â€Ð Lake Model Across Global Lakes. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033417.	1.2	15
137	Uncertainty Quantification of Global Net Methane Emissions From Terrestrial Ecosystems Using a Mechanistically Based Biogeochemistry Model. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2019JG005428.	1.3	15
138	Anthropogenic controls over soil organic carbon distribution from the cultivated lands in Northeast China. Catena, 2022, 210, 105897.	2.2	15
139	A Review on Carbon Source and Sink in Arable Land Ecosystems. Land, 2022, 11, 580.	1.2	15
140	Quantifying the Role of Snowmelt in Stream Discharge in an Alaskan Watershed: An Analysis Using a Spatially Distributed Surface Hydrology Model. Journal of Geophysical Research F: Earth Surface, 2017, 122, 2183-2195.	1.0	14
141	Importance of soil thermal regime in terrestrial ecosystem carbon dynamics in the circumpolar north. Global and Planetary Change, 2016, 142, 28-40.	1.6	13
142	Estimating N2O emissions from soils under natural vegetation in China. Plant and Soil, 2019, 434, 271-287.	1.8	13
143	Temporal and Spatial Changes of Soil Organic Carbon Stocks in the Forest Area of Northeastern China. Forests, 2019, 10, 1023.	0.9	13
144	Applying statistical methods to map soil organic carbon of agricultural lands in northeastern coastal areas of China. Archives of Agronomy and Soil Science, 2020, 66, 532-544.	1.3	13

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145	Areal changes of land ecosystems in the Alaskan Yukon River Basin from 1984 to 2008. Environmental Research Letters, 2011, 6, 034012.	2.2	12
146	Spatial state distribution and phase transition of non-uniform water in soils: Implications for engineering and environmental sciences. Advances in Colloid and Interface Science, 2021, 294, 102465.	7.0	12
147	Quantification of net primary production of Chinese forest ecosystems with spatial statistical approaches. Mitigation and Adaptation Strategies for Global Change, 2009, 14, 85-99.	1.0	11
148	Spatially Explicit Parameterization of a Terrestrial Ecosystem Model and Its Application to the Quantification of Carbon Dynamics of Forest Ecosystems in the Conterminous United States. Earth Interactions, 2012, 16, 1-22.	0.7	11
149	Uncertainty in the fate of soil organic carbon: A comparison of three conceptually different decomposition models at a larch plantation. Journal of Geophysical Research G: Biogeosciences, 2014, 119, 1892-1905.	1.3	11
150	The role of environmental driving factors in historical and projected carbon dynamics of wetland ecosystems in Alaska. Ecological Applications, 2018, 28, 1377-1395.	1.8	11
151	Permafrost Degradation Diminishes Terrestrial Ecosystem Carbon Sequestration Capacity on the Qinghaiâ€Tibetan Plateau. Global Biogeochemical Cycles, 2022, 36, .	1.9	11
152	Improved global wetland carbon isotopic signatures support post-2006 microbial methane emission increase. Communications Earth & Environment, 2022, 3, .	2.6	11
153	Ecosystem biogeochemistry model parameterization: Do more flux data result in a better model in predicting carbon flux?. Ecosphere, 2015, 6, 1-20.	1.0	10
154	Temporal variability in the thermal requirements for vegetation phenology on the Tibetan plateau and its implications for carbon dynamics. Climatic Change, 2016, 138, 617-632.	1.7	10
155	Modeling leaf area index in North America using a processâ€based terrestrial ecosystem model. Ecosphere, 2018, 9, e02046.	1.0	10
156	Quantifying Dissolved Organic Carbon Dynamics Using a Threeâ€Dimensional Terrestrial Ecosystem Model at High Spatialâ€Temporal Resolutions. Journal of Advances in Modeling Earth Systems, 2019, 11, 4489-4512.	1.3	10
157	Multispectral Remote Sensing Data Are Effective and Robust in Mapping Regional Forest Soil Organic Carbon Stocks in a Northeast Forest Region in China. Remote Sensing, 2020, 12, 393.	1.8	10
158	Improving the quantification of terrestrial ecosystem carbon dynamics over the United States using an adjoint method. Ecosphere, 2013, 4, 1-21.	1.0	9
159	Carbon and nitrogen dynamics in bioenergy ecosystems: 1. Model development, validation and sensitivity analysis. GCB Bioenergy, 2014, 6, 740-755.	2.5	9
160	Direct radiative effects of tropospheric aerosols on changes of global surface soil moisture. Climatic Change, 2016, 136, 175-187.	1.7	9
161	A largeâ€scale methane model by incorporating the surface water transport. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 1657-1674.	1.3	9
162	Increasing Methane Emissions From Natural Land Ecosystems due to Seaâ€Level Rise. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 1756-1768.	1.3	9

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163	Quantifying peat carbon accumulation in Alaska using a processâ€based biogeochemistry model. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 2172-2185.	1.3	8
164	Reduction of Global Plant Production due to Droughts from 2001 to 2010: An Analysis with a Process-Based Global Terrestrial Ecosystem Model. Earth Interactions, 2015, 19, 1-21.	0.7	7
165	Quantifying the Effects of Snowpack on Soil Thermal and Carbon Dynamics of the Arctic Terrestrial Ecosystems. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 1197-1212.	1.3	7
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