Xiaofeng Xu

List of Publications by Year
in descending order

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114 papers	7,617 citations	61984 43 h-index	56724 83 g-index
143 all docs	143 docs citations	143 times ranked	8778 citing authors

#	Article	IF	Citations
1	A global analysis of soil microbial biomass carbon, nitrogen and phosphorus in terrestrial ecosystems. Global Ecology and Biogeography, 2013, 22, 737-749.	5.8	762
2	Two-Decade Reconstruction of Algal Blooms in Chinaâ€™s Lake Taihu. Environmental Science & Technology, 2009, 43, 3522-3528.	10.0	473
3	Toward more realistic projections of soil carbon dynamics by Earth system models. Global Biogeochemical Cycles, 2016, 30, 40-56.	4.9	343
4	Model estimates of net primary productivity, evapotranspiration, and water use efficiency in the terrestrial ecosystems of the southern United States during 1895â€“2007. Forest Ecology and Management, 2010, 259, 1311-1327.	3.2	300
5	Explicitly representing soil microbial processes in Earth system models. Global Biogeochemical Cycles, 2015, 29, 1782-1800.	4.9	286
6	Microbes drive global soil nitrogen mineralization and availability. Global Change Biology, 2019, 25, 1078-1088.	9.5	248
7	Plant functional types in Earth system models: past experiences and future directions for application of dynamic vegetation models in high-latitude ecosystems. Annals of Botany, 2014, 114, 1-16.	2.9	240
8	Ecosystemâ€“atmosphere exchange of CH₄ and N₂O and ecosystem respiration in wetlands in the Sanjiang Plain, Northeastern China. Global Change Biology, 2009, 15, 692-705.	9.5	232
9	China's terrestrial carbon balance: Contributions from multiple global change factors. Global Biogeochemical Cycles, 2011, 25, n/a-n/a.	4.9	231
10	Large loss of CO2 in winter observed across the northern permafrost region. Nature Climate Change, 2019, 9, 852-857.	18.8	225
11	Extension of the growing season due to delayed autumn over mid and high latitudes in North America during 1982â€“2006. Global Ecology and Biogeography, 2012, 21, 260-271.	5.8	189
12	Global methane and nitrous oxide emissions from terrestrial ecosystems due to multiple environmental changes. Ecosystem Health and Sustainability, 2015, 1, 1-20.	3.1	180
13	Spatial and temporal patterns of CH₄ and N₂O fluxes in terrestrial ecosystems of North America during 1979â€“2008: application of a global biogeochemistry model. Biogeosciences, 2010, 7, 2673-2694.	3.3	153
14	Substrate and environmental controls on microbial assimilation of soil organic carbon: a framework for Earth system models. Ecology Letters, 2014, 17, 547-555.	6.4	148
15	Net exchanges of CO₂, CH₄, and N₂O between China's terrestrial ecosystems and the atmosphere and their contributions to global climate warming. Journal of Geophysical Research, 2011, 116, .	3.3	139
16	The Millennial model: in search of measurable pools and transformations for modeling soil carbon in the new century. Biogeochemistry, 2018, 137, 51-71.	3.5	139
17	Impacts of urbanization on carbon balance in terrestrial ecosystems of the Southern United States. Environmental Pollution, 2012, 164, 89-101.	7.5	137
18	Century-Scale Responses of Ecosystem Carbon Storage and Flux to Multiple Environmental Changes in the Southern United States. Ecosystems, 2012, 15, 674-694.	3.4	130

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19	North American terrestrial CO2 uptake largely offset by CH4 and N2O emissions: toward a full accounting of the greenhouse gas budget. Climatic Change, 2015, 129, 413-426.	3.6	112
20	Global pattern and controls of soil microbial metabolic quotient. Ecological Monographs, 2017, 87, 429-441.	5.4	106
21	Reviews and syntheses: Four decades of modeling methane cycling in terrestrial ecosystems. Biogeosciences, 2016, 13, 3735-3755.	3.3	102
22	Food benefit and climate warming potential of nitrogen fertilizer uses in China. Environmental Research Letters, 2012, 7, 044020.	5.2	95
23	Effect of nitrogen deposition on China's terrestrial carbon uptake in the context of multifactor environmental changes. Ecological Applications, 2012, 22, 53-75.	3.8	93
24	Convergence in the relationship of CO₂ and N₂O exchanges between soil and atmosphere within terrestrial ecosystems. Global Change Biology, 2008, 14, 1651-1660.	9.5	86
25	Eutrophic Lake Taihu as a significant CO2 source during 2000â€“2015. Water Research, 2020, 170, 115331.	11.3	85
26	Effects of tropospheric ozone pollution on net primary productivity and carbon storage in terrestrial ecosystems of China. Journal of Geophysical Research, 2007, 112, .	3.3	81
27	Climate and land use controls over terrestrial water use efficiency in monsoon Asia. Ecohydrology, 2011, 4, 322-340.	2.4	79
28	Impacts of tropospheric ozone and climate change on net primary productivity and net carbon exchange of China's forest ecosystems. Global Ecology and Biogeography, 2011, 20, 391-406.	5.8	78
29	Attribution of spatial and temporal variations in terrestrial methane flux over North America. Biogeosciences, 2010, 7, 3637-3655.	3.3	70
30	Global biogeography of fungal and bacterial biomass carbon in topsoil. Soil Biology and Biochemistry, 2020, 151, 108024.	8.8	70
31	Spatial and temporal patterns of CO₂ and CH₄ fluxes in Chinaâ€™s croplands in response to multifactor environmental changes. Tellus, Series B: Chemical and Physical Meteorology, 2022, 63, 222.	1.6	65
32	Climatic versus Anthropogenic Controls of Decadal Trends (1983â€“2017) in Algal Blooms in Lakes and Reservoirs across China. Environmental Science & Technology, 2021, 55, 2929-2938.	10.0	65
33	Stoichiometric models of microbial metabolic limitation in soil systems. Global Ecology and Biogeography, 2021, 30, 2297-2311.	5.8	64
34	Plant, microbial and ecosystem carbon use efficiencies interact to stabilize microbial growth as a fraction of gross primary production. New Phytologist, 2017, 214, 1518-1526.	7.3	62
35	Large methane emission upon spring thaw from natural wetlands in the northern permafrost region. Environmental Research Letters, 2012, 7, 034009.	5.2	61
36	The Effects of Urbanization on Net Primary Productivity in Southeastern China. Environmental Management, 2010, 46, 404-410.	2.7	60

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37	A microbial functional groupâ€based module for simulating methane production and consumption: Application to an incubated permafrost soil. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1315-1333.	3.0	56
38	Foliar nutrient resorption differs between arbuscular mycorrhizal and ectomycorrhizal trees at local and global scales. Global Ecology and Biogeography, 2018, 27, 875-885.	5.8	55
39	Microbial macroecology: In search of mechanisms governing microbial biogeographic patterns. Global Ecology and Biogeography, 2020, 29, 1870-1886.	5.8	55
40	Coregulation of nitrous oxide emissions by nitrogen and temperature in China's third largest freshwater lake (Lake Taihu). Limnology and Oceanography, 2019, 64, 1070-1086.	3.1	54
41	Regional sources of nitrous oxide over the United States: Seasonal variation and spatial distribution. Journal of Geophysical Research, 2012, 117, .	3.3	52
42	Methane exchange between marshland and the atmosphere over China during 1949â€“2008. Global Biogeochemical Cycles, 2012, 26, .	4.9	51
43	Global divergent trends of algal blooms detected by satellite during 1982â€“2018. Global Change Biology, 2022, 28, 2327-2340.	9.5	51
44	Effects of multiple environment stresses on evapotranspiration and runoff over eastern China. Journal of Hydrology, 2012, 426-427, 39-54.	5.4	48
45	Soil dissolved organic carbon in terrestrial ecosystems: Global budget, spatial distribution and controls. Global Ecology and Biogeography, 2020, 29, 2159-2175.	5.8	47
46	Terrestrial carbon balance in tropical Asia: Contribution from cropland expansion and land management. Global and Planetary Change, 2013, 100, 85-98.	3.5	44
47	Heavy metal contamination of cultivated wetland soils along a typical plateau lake from southwest China. Environmental Earth Sciences, 2010, 59, 1781-1788.	2.7	42
48	Contemporary and projected biogenic fluxes of methane and nitrous oxide in North American terrestrial ecosystems. Frontiers in Ecology and the Environment, 2012, 10, 528-536.	4.0	41
49	Contrasting effects of ammonium and nitrate inputs on soil CO2 emission in a subtropical coniferous plantation of southern China. Biology and Fertility of Soils, 2015, 51, 815-825.	4.3	41
50	Soil gross N ammonification and nitrification from tropical to temperate forests in eastern China. Functional Ecology, 2018, 32, 83-94.	3.6	38
51	Divergent impacts of atmospheric water demand on gross primary productivity in three typical ecosystems in China. Agricultural and Forest Meteorology, 2021, 307, 108527.	4.8	37
52	Improved global-scale predictions of soil carbon stocks with Millennial Version 2. Soil Biology and Biochemistry, 2022, 164, 108466.	8.8	36
53	Convergence of microbial assimilations of soil carbon, nitrogen, phosphorus and sulfur in terrestrial ecosystems. Scientific Reports, 2015, 5, 17445.	3.3	35
54	Intermediate-scale community-level flux of CO2 and CH4 in a Minnesota peatland: putting the SPRUCE project in a global context. Biogeochemistry, 2016, 129, 255-272.	3.5	35

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55	Multifactor controls on terrestrial N₂O flux over North America from 1979 through 2010. Biogeosciences, 2012, 9, 1351-1366.	3.3	34
56	Interactive impacts of nitrogen input and water amendment on growing season fluxes of CO2, CH4, and N2O in a semiarid grassland, Northern China. Science of the Total Environment, 2017, 578, 523-534.	8.0	34
57	Effect of continued nitrogen enrichment on greenhouse gas emissions from a wetland ecosystem in the Sanjiang Plain, Northeast China: A 5â€‰year nitrogen addition experiment. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 741-751.	3.0	29
58	Rising vegetation activity dominates growing water use efficiency in the Asian permafrost region from 1900 to 2100. Science of the Total Environment, 2020, 736, 139587.	8.0	28
59	Biogeochemical modeling of CO₂ and CH₄ production in anoxic Arctic soil microcosms. Biogeosciences, 2016, 13, 5021-5041.	3.3	27
60	Increasing environmental filtering of diazotrophic communities with a decade of latitudinal soil transplantation. Soil Biology and Biochemistry, 2021, 154, 108119.	8.8	27
61	Microbial functional genes driving the positive priming effect in forest soils along an elevation gradient. Soil Biology and Biochemistry, 2022, 165, 108498.	8.8	27
62	Biogeographical patterns of soil microbial community as influenced by soil characteristics and climate across Chinese forest biomes. Applied Soil Ecology, 2018, 124, 298-305.	4.3	26
63	Heavy Metal Contamination in Riverine Soils Upstream and Downstream of a Hydroelectric Dam on the Lancang River, China. Environmental Engineering Science, 2009, 26, 941-946.	1.6	25
64	Saturated N2O emission rates occur above the nitrogen deposition level predicted for the semi-arid grasslands of Inner Mongolia, China. Geoderma, 2019, 341, 18-25.	5.1	24
65	Mechanistic Modeling of Microtopographic Impacts on CO‹sub›2‹/sub› and CH‹sub›4‹/sub› Fluxes in an Alaskan Tundra Ecosystem Using the CLMâ€Microbe Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 4288-4304.	3.8	22
66	A Global Data Set for Economic Losses of Extreme Hydrological Events During 1960â€2014. Water Resources Research, 2019, 55, 5165-5175.	4.2	21
67	The variation of methane emission from freshwater marshes and response to the exogenous N in Sanjiang Plain Northeast China. Atmospheric Environment, 2007, 41, 4063-4072.	4.1	19
68	Interdisciplinary research in climate and energy sciences. Wiley Interdisciplinary Reviews: Energy and Environment, 2016, 5, 49-56.	4.1	18
69	Phosphorus alleviation of nitrogenâ€suppressed methane sink in global grasslands. Ecology Letters, 2020, 23, 821-830.	6.4	18
70	Wetland reclamation homogenizes microbial properties along soil profiles. Geoderma, 2021, 395, 115075.	5.1	18
71	Mapping soil microbial residence time at the global scale. Global Change Biology, 2021, 27, 6484-6497.	9.5	18
72	Significant inconsistency of vegetation carbon density in CMIP5 Earth system models against observational data. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 2282-2297.	3.0	17

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73	Nitrogen acquisition strategies during the winter-spring transitional period are divergent at the species level yet convergent at the ecosystem level in temperate grasslands. Soil Biology and Biochemistry, 2018, 122, 150-159.	8.8	17
74	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.	3.3	17
75	Seasonality of gross ammonification and nitrification altered by precipitation in a semi-arid grassland of Northern China. Soil Biology and Biochemistry, 2021, 154, 108146.	8.8	17
76	Effect of exogenous phosphorus addition on soil respiration in Calamagrostis angustifolia freshwater marshes of Northeast China. Atmospheric Environment, 2011, 45, 1402-1406.	4.1	16
77	Microbial seasonality promotes soil respiratory carbon emission in natural ecosystems: A modeling study. Global Change Biology, 2021, 27, 3035-3051.	9.5	16
78	An Integrative Model for Soil Biogeochemistry and Methane Processes. II: Warming and Elevated CO₂ Effects on Peatland CH₄ Emissions. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG005963.	3.0	16
79	Earlier snowmelt may lead to late season declines in plant productivity and carbon sequestration in Arctic tundra ecosystems. Scientific Reports, 2022, 12, 3986.	3.3	16
80	Modeling ecosystem responses to prescribed fires in a phosphorus-enriched Everglades wetland: I. Phosphorus dynamics and cattail recovery. Ecological Modelling, 2010, 221, 1252-1266.	2.5	14
81	Addressing numerical challenges in introducing a reactive transport code into a land surface model: a biogeochemical modeling proof-of-concept with CLMâ€“PFLOTRAN 1.0. Geoscientific Model Development, 2016, 9, 927-946.	3.6	14
82	The retention dynamics of N input within the soilâ€“microbeâ€“plant system in a temperate grassland. Geoderma, 2020, 368, 114290.	5.1	14
83	Projecting terrestrial carbon sequestration of the southeastern United States in the 21st century. Ecosphere, 2013, 4, 1-18.	2.2	13
84	Contrasting drought impacts on the start of phenological growing season in Northern China during 1982â€“2015. International Journal of Climatology, 2020, 40, 3330-3347.	3.5	13
85	Comparative Analysis of Two Machine Learning Algorithms in Predicting Site-Level Net Ecosystem Exchange in Major Biomes. Remote Sensing, 2021, 13, 2242.	4.0	13
86	Net exchanges of CO2, CH4 and N2O between marshland and the atmosphere in Northeast China as influenced by multiple global environmental changes. Atmospheric Environment, 2012, 63, 77-85.	4.1	12
87	Dynamics of Fungal and Bacterial Biomass Carbon in Natural Ecosystems: Siteâ€Level Applications of the CLMâ€Microbe Model. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002283.	3.8	11
88	Effect of water-level fluctuations on methane and carbon dioxide dynamics in a shallow lake of Northern China: Implications for wetland restoration. Journal of Hydrology, 2021, 597, 126169.	5.4	11
89	Strong nonâ€growing season N uptake by deciduous trees in a temperate forest: A ¹⁵N isotopic experiment. Journal of Ecology, 2021, 109, 3752-3766.	4.0	11
90	An Integrative Model for Soil Biogeochemistry and Methane Processes: I. Model Structure and Sensitivity Analysis. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2019JG005468.	3.0	11

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91	A Landsat-derived annual inland water clarity dataset of China between 1984 and 2018. Earth System Science Data, 2022, 14, 79-94.	9.9	11
92	Forecasting and Assessing the Large-Scale and Long-Term Impacts of Global Environmental Change on Terrestrial Ecosystems in the United States and China. , 2009, , 235-266.		10
93	Modeling ecosystem responses to prescribed fires in a phosphorus-enriched Everglades wetland: II. Phosphorus dynamics and community shift in response to hydrological and seasonal scenarios. Ecological Modelling, 2011, 222, 3942-3956.	2.5	9
94	Divergence of dominant factors in soil microbial communities and functions in forest ecosystems along a climatic gradient. Biogeosciences, 2018, 15, 1217-1228.	3.3	9
95	Population turnover promotes fungal stability in a semi-arid grassland under precipitation shifts. Journal of Plant Ecology, 2020, 13, 499-509.	2.3	8
96	Wetland conversion to cropland alters the microbes along soil profiles and over seasons. Catena, 2022, 214, 106282.	5.0	8
97	Spatial evolution of cultivated land in the Heilongjiang Province in China from 1980 to 2015. Environmental Monitoring and Assessment, 2022, 194, .	2.7	8
98	Multiscale evaluation of NCEP and CRUNCEP data sets at 90 large U.S. cities. Journal of Geophysical Research D: Atmospheres, 2017, 122, 7433-7444.	3.3	7
99	Spatiotemporal pattern of gypsum blooms in the Salton Sea, California, during 2000-2018. International Journal of Applied Earth Observation and Geoinformation, 2020, 89, 102090.	2.8	7
100	A Microbial Functional Groupâ€Based CH₄ Model Integrated Into a Terrestrial Ecosystem Model: Model Structure, Siteâ€Level Evaluation, and Sensitivity Analysis. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001867.	3.8	7
101	Linkage between microbial functional genes and net N mineralisation in forest soils along an elevational gradient. European Journal of Soil Science, 2022, 73, .	3.9	7
102	A semiempirical model for horizontal distribution of surface wind speed leeward windbreaks. Agroforestry Systems, 2020, 94, 499-516.	2.0	5
103	Evaluating alternative ebullition models for predicting peatland methane emission and its pathways via dataâ€“model fusion. Biogeosciences, 2022, 19, 2245-2262.	3.3	5
104	Hydrological feedbacks on peatland CH4 emission under warming and elevated CO2: A modeling study. Journal of Hydrology, 2021, 603, 127137.	5.4	4
105	Representing methane emissions from wet tropical forest soils using microbial functional groups constrained by soil diffusivity. Biogeosciences, 2021, 18, 1769-1786.	3.3	3
106	Reviewing Global Change Research and Recommending Future Priorities. Eos, 2013, 94, 426-426.	0.1	2
107	Climate Change Made Major Contributions to Soil Water Storage Decline in the Southwestern US during 2003â€“2014. Water (Switzerland), 2019, 11, 1947.	2.7	1
108	Integrating Soil Microbiology into Ecosystem Science. Advances in Environmental Microbiology, 2019, , 65-102.	0.3	1

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109	Retention of early-spring nitrogen in temperate grasslands: The dynamics of ammonium and nitrate nitrogen differ. Global Ecology and Conservation, 2020, 24, e01335.	2.1	1
110	Microbes drive global soil nitrogen mineralization and availability. , 2019, 25, 1078.		1
111	Forest biomass turnover time estimation in China based on spatially explicit rootÂ:Âshoot ratios. Global Ecology and Biogeography, 2022, 31, 1332-1344.	5.8	1
112	Modeling methane dynamics in three wetlands in Northeastern China by using the CLM-Microbe model. Ecosystem Health and Sustainability, 2022, 8, .	3.1	1
113	Cover Image, Volume 5, Issue 1. Wiley Interdisciplinary Reviews: Energy and Environment, 2016, 5, i.	4.1	0
114	Upscaling Methane Flux From Plot Level to Eddy Covariance Tower Domains in Five Alaskan Tundra Ecosystems. Frontiers in Environmental Science, 0, 10, .	3.3	0