Tao Wang

List of Publications by Year
in descending order

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79 papers	11,110 citations	50170 46 h-index	64668 79 g-index
80 all docs	80 docs citations	80 times ranked	11500 citing authors

#	Article	IF	Citations
1	Temperature increase reduces global yields of major crops in four independent estimates. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9326-9331.	3.3	1,708
2	The carbon balance of terrestrial ecosystems in China. Nature, 2009, 458, 1009-1013.	13.7	1,243
3	Evaluation of terrestrial carbon cycle models for their response to climate variability and to <scp><scp>CO₂</scp></scp> trends. Global Change Biology, 2013, 19, 2117-2132.	4.2	617
4	Changes in satelliteâ€derived vegetation growth trend in temperate and boreal Eurasia from 1982 to 2006. Global Change Biology, 2011, 17, 3228-3239.	4.2	586
5	Evidence for a weakening relationship between interannual temperature variability and northern vegetation activity. Nature Communications, 2014, 5, 5018.	5.8	414
6	Climate mitigation from vegetation biophysical feedbacks during the past three decades. Nature Climate Change, 2017, 7, 432-436.	8.1	323
7	Air temperature optima of vegetation productivity across global biomes. Nature Ecology and Evolution, 2019, 3, 772-779.	3.4	316
8	The imbalance of the Asian water tower. Nature Reviews Earth & Environment, 2022, 3, 618-632.	12.2	286
9	A two-fold increase of carbon cycle sensitivity to tropical temperature variations. Nature, 2014, 506, 212-215.	13.7	284
10	Multifaceted characteristics of dryland aridity changes in a warming world. Nature Reviews Earth & Environment, 2021, 2, 232-250.	12.2	281
11	Changes in satelliteâ€derived spring vegetation greenâ€up date and its linkage to climate in China from 1982 to 2010: a multimethod analysis. Global Change Biology, 2013, 19, 881-891.	4.2	276
12	Impacts of climate and CO2 changes on the vegetation growth and carbon balance of Qinghaiâ€“Tibetan grasslands over the past five decades. Global and Planetary Change, 2012, 98-99, 73-80.	1.6	248
13	Temperature sensitivity of soil respiration in different ecosystems in China. Soil Biology and Biochemistry, 2009, 41, 1008-1014.	4.2	223
14	Partitioning global land evapotranspiration using CMIP5 models constrained by observations. Nature Climate Change, 2018, 8, 640-646.	8.1	219
15	Extension of the growing season increases vegetation exposure to frost. Nature Communications, 2018, 9, 426.	5.8	190
16	Weakening temperature control on the interannual variations of spring carbon uptake across northern lands. Nature Climate Change, 2017, 7, 359-363.	8.1	183
17	Spatiotemporal patterns of terrestrial carbon cycle during the 20th century. Global Biogeochemical Cycles, 2009, 23, .	1.9	180
18	Spatiotemporal pattern of gross primary productivity and its covariation with climate in China over the last thirty years. Global Change Biology, 2018, 24, 184-196.	4.2	177

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19	Plant phenological responses to climate change on the Tibetan Plateau: research status and challenges. National Science Review, 2015, 2, 454-467.	4.6	161
20	Impact of Earth Greening on the Terrestrial Water Cycle. Journal of Climate, 2018, 31, 2633-2650.	1.2	142
21	Increasingly Important Role of Atmospheric Aridity on Tibetan Alpine Grasslands. Geophysical Research Letters, 2018, 45, 2852-2859.	1.5	136
22	ORCHIDEE-MICT (v8.4.1), aÂland surface model for the high latitudes: model description and validation. Geoscientific Model Development, 2018, 11, 121-163.	1.3	135
23	Temporal trade-off between gymnosperm resistance and resilience increases forest sensitivity to extreme drought. Nature Ecology and Evolution, 2020, 4, 1075-1083.	3.4	134
24	Change in snow phenology and its potential feedback to temperature in the Northern Hemisphere over the last three decades. Environmental Research Letters, 2013, 8, 014008.	2.2	125
25	ESM-SnowMIP: assessing snow models and quantifying snow-related climate feedbacks. Geoscientific Model Development, 2018, 11, 5027-5049.	1.3	119
26	Plausible rice yield losses under future climate warming. Nature Plants, 2017, 3, 16202.	4.7	114
27	Lower land-use emissions responsible for increased net land carbon sink during the slow warming period. Nature Geoscience, 2018, 11, 739-743.	5.4	110
28	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
29	Winter soil CO2 efflux and its contribution to annual soil respiration in different ecosystems of a forest-steppe ecotone, north China. Soil Biology and Biochemistry, 2010, 42, 451-458.	4.2	106
30	Are ecological gradients in seasonal Q10 of soil respiration explained by climate or by vegetation seasonality?. Soil Biology and Biochemistry, 2010, 42, 1728-1734.	4.2	106
31	Declining snow cover may affect spring phenological trend on the Tibetan Plateau. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E2854-5.	3.3	92
32	Future biomass carbon sequestration capacity of Chinese forests. Science Bulletin, 2018, 63, 1108-1117.	4.3	92
33	Responses and feedback of the Tibetan Plateau’s alpine ecosystem to climate change. Chinese Science Bulletin, 2019, 64, 2842-2855.	0.4	91
34	Atmospheric dynamic constraints on Tibetan Plateau freshwater under Paris climate targets. Nature Climate Change, 2021, 11, 219-225.	8.1	87
35	Velocity of change in vegetation productivity over northern high latitudes. Nature Ecology and Evolution, 2017, 1, 1649-1654.	3.4	79
36	The Response of Vegetation Phenology and Productivity to Drought in Semi-Arid Regions of Northern China. Remote Sensing, 2018, 10, 727.	1.8	78

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37	An earlier start of the thermal growing season enhances tree growth in cold humid areas but not in dry areas. Nature Ecology and Evolution, 2022, 6, 397-404.	3.4	78
38	Disentangling the mechanisms behind winter snow impact on vegetation activity in northern ecosystems. Global Change Biology, 2018, 24, 1651-1662.	4.2	76
39	Enhanced habitat loss of the Himalayan endemic flora driven by warming-forced upslope tree expansion. Nature Ecology and Evolution, 2022, 6, 890-899.	3.4	72
40	Evaluation of an improved intermediate complexity snow scheme in the ORCHIDEE land surface model. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6064-6079.	1.2	63
41	Contrasting responses of grassland water and carbon exchanges to climate change between Tibetan Plateau and Inner Mongolia. Agricultural and Forest Meteorology, 2018, 249, 163-175.	1.9	62
42	A new estimation of Chinaâ€™s net ecosystem productivity based on eddy covariance measurements and a model tree ensemble approach. Agricultural and Forest Meteorology, 2018, 253-254, 84-93.	1.9	58
43	Field-experiment constraints on the enhancement of the terrestrial carbon sink by CO2 fertilization. Nature Geoscience, 2019, 12, 809-814.	5.4	58
44	Moistureâ€induced greening of the South Asia over the past three decades. Global Change Biology, 2017, 23, 4995-5005.	4.2	55
45	Effects of Warming and Clipping on Ecosystem Carbon Fluxes across Two Hydrologically Contrasting Years in an Alpine Meadow of the Qinghai-Tibet Plateau. PLoS ONE, 2014, 9, e109319.	1.1	54
46	Benchmarking the seasonal cycle of CO₂ fluxes simulated by terrestrial ecosystem models. Global Biogeochemical Cycles, 2015, 29, 46-64.	1.9	48
47	On the causes of trends in the seasonal amplitude of atmospheric <scp>CO</scp>₂. Global Change Biology, 2018, 24, 608-616.	4.2	48
48	What eddyâ€covariance measurements tell us about prior land flux errors in CO₂â€flux inversion schemes. Global Biogeochemical Cycles, 2012, 26, .	1.9	47
49	Evaluating biases in simulated land surface albedo from CMIP5 global climate models. Journal of Geophysical Research D: Atmospheres, 2016, 121, 6178-6190.	1.2	46
50	Deciphering impacts of climate extremes on Tibetan grasslands in the last fifteen years. Science Bulletin, 2019, 64, 446-454.	4.3	45
51	Carbon stocks and fluxes in the high latitudes: using site-level data to evaluate Earth system models. Biogeosciences, 2017, 14, 5143-5169.	1.3	43
52	Combined Use of Multiple Drought Indices for Global Assessment of Dry Gets Drier and Wet Gets Wetter Paradigm. Journal of Climate, 2019, 32, 737-748.	1.2	40
53	The paleoclimatic footprint in the soil carbon stock of the Tibetan permafrost region. Nature Communications, 2019, 10, 4195.	5.8	39
54	The weakening relationship between Eurasian spring snow cover and Indian summer monsoon rainfall. Science Advances, 2019, 5, eaau8932.	4.7	39

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55	Can changes in autumn phenology facilitate earlier green-up date of northern vegetation?. Agricultural and Forest Meteorology, 2020, 291, 108077.	1.9	36
56	MODIS Based Estimation of Forest Aboveground Biomass in China. PLoS ONE, 2015, 10, e0130143.	1.1	35
57	Emerging negative impact of warming on summer carbon uptake in northern ecosystems. Nature Communications, 2018, 9, 5391.	5.8	31
58	Spring snow cover deficit controlled by intraseasonal variability of the surface energy fluxes. Environmental Research Letters, 2015, 10, 024018.	2.2	26
59	Biophysical impacts of northern vegetation changes on seasonal warming patterns. Nature Communications, 2022, 13, .	5.8	26
60	Changes in the Response of the Northern Hemisphere Carbon Uptake to Temperature Over the Last Three Decades. Geophysical Research Letters, 2018, 45, 4371-4380.	1.5	21
61	Changing the retention properties of catchments and their influence on runoff under climate change. Environmental Research Letters, 2018, 13, 094019.	2.2	21
62	State-dependent errors in a land surface model across biomes inferred from eddy covariance observations on multiple timescales. Ecological Modelling, 2012, 246, 11-25.	1.2	18
63	Spring Snowâ€Albedo Feedback Analysis Over the Third Pole: Results From Satellite Observation and CMIP5 Model Simulations. Journal of Geophysical Research D: Atmospheres, 2018, 123, 750-763.	1.2	17
64	Multisatellite Analyses of Spatiotemporal Variability in Photosynthetic Activity Over the Tibetan Plateau. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 3778-3797.	1.3	17
65	Impacts of Satellite-Based Snow Albedo Assimilation on Offline and Coupled Land Surface Model Simulations. PLoS ONE, 2015, 10, e0137275.	1.1	16
66	Carbon turnover times shape topsoil carbon difference between Tibetan Plateau and Arctic tundra. Science Bulletin, 2021, 66, 1698-1704.	4.3	14
67	Sustained Biomass Carbon Sequestration by Chinaâ€™s Forests from 2010 to 2050. Forests, 2018, 9, 689.	0.9	12
68	Higher Temperature Sensitivity of Soil C Release to Atmosphere From Northern Permafrost Soils as Indicated by a Metaâ€Analysis. Global Biogeochemical Cycles, 2020, 34, e2020GB006688.	1.9	12
69	Reducing the uncertainty of parameters controlling seasonal carbon and water fluxes in Chinese forests and its implication for simulated climate sensitivities. Global Biogeochemical Cycles, 2017, 31, 1344-1366.	1.9	11
70	An emerging impact of Eurasian spring snow cover on summer rainfall in Eastern China. Environmental Research Letters, 2021, 16, 054012.	2.2	9
71	Decelerating Autumn CO 2 Release With Warming Induced by Attenuated Temperature Dependence of Respiration in Northern Ecosystems. Geophysical Research Letters, 2018, 45, 5562-5571.	1.5	8
72	Species richness is a strong driver of forest biomass along broad bioclimatic gradients in the Himalayas. Ecosphere, 2022, 13, .	1.0	8

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73	Drivers of Eurasian Spring Snow-Cover Variability. Journal of Climate, 2021, 34, 2037-2052.	1.2	7
74	Observationâ€based global soil heterotrophic respiration indicates underestimated turnover and sequestration of soil carbon by terrestrial ecosystem models. Global Change Biology, 2022, 28, 5547-5559.	4.2	7
75	Emerging Negative Warming Impacts on Tibetan Crop Yield. Engineering, 2022, 14, 163-168.	3.2	6
76	New understanding of the response of permafrost carbon cycling to climate warming. Science Bulletin, 2022, 67, 1322-1325.	4.3	3
77	Significant CO2 sink over the Tibet's largest lake: Implication for carbon neutrality across the Tibetan Plateau. Science of the Total Environment, 2022, 843, 156792.	3.9	2
78	Reply to: Disentangling biology from mathematical necessity in twentieth-century gymnosperm resilience trends. Nature Ecology and Evolution, 2021, 5, 736-737.	3.4	1
79	Watershed scale patterns and controlling factors of ecosystem respiration and methane fluxes in a Tibetan alpine grassland. Agricultural and Forest Meteorology, 2021, 306, 108451.	1.9	1