Wenzhe Jiao

List of Publications by Year
in descending order

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78 papers	5,213 citations	126708 33 h-index	88477 70 g-index
80 all docs	80 docs citations	80 times ranked	6430 citing authors

#	Article	IF	Citations
1	The increasing importance of atmospheric demand for ecosystem water and carbon fluxes. Nature Climate Change, 2016, 6, 1023-1027.	8.1	734
2	Global Synthesis of Drought Effects on Maize and Wheat Production. PLoS ONE, 2016, 11, e0156362.	1.1	606
3	Global synthesis of vegetation control on evapotranspiration partitioning. Geophysical Research Letters, 2014, 41, 6753-6757.	1.5	285
4	Observed increasing water constraint on vegetation growth over the last three decades. Nature Communications, 2021, 12, 3777.	5.8	246
5	Global synthesis of drought effects on cereal, legume, tuber and root crops production: A review. Agricultural Water Management, 2017, 179, 18-33.	2.4	238
6	Studying drought phenomena in the Continental United States in 2011 and 2012 using various drought indices. Remote Sensing of Environment, 2017, 190, 96-106.	4.6	182
7	Partitioning evapotranspiration across gradients of woody plant cover: Assessment of a stable isotope technique. Geophysical Research Letters, 2010, 37, .	1.5	179
8	Global Synthesis of Drought Effects on Food Legume Production. PLoS ONE, 2015, 10, e0127401.	1.1	174
9	High atmospheric demand for water can limit forest carbon uptake and transpiration as severely as dry soil. Geophysical Research Letters, 2016, 43, 9686-9695.	1.5	163
10	Significant Difference in Hydrogen Isotope Composition Between Xylem and Tissue Water in Populus Euphratica. Plant, Cell and Environment, 2016, 39, 1848-1857.	2.8	135
11	A new multi-sensor integrated index for drought monitoring. Agricultural and Forest Meteorology, 2019, 268, 74-85.	1.9	123
12	Multi-sensor remote sensing for drought characterization: current status, opportunities and a roadmap for the future. Remote Sensing of Environment, 2021, 256, 112313.	4.6	114
13	Post-Fire Resource Redistribution in Desert Grasslands: A Possible Negative Feedback on Land Degradation. Ecosystems, 2009, 12, 434-444.	1.6	104
14	Response of ecosystem intrinsic water use efficiency and gross primary productivity to rising vapor pressure deficit. Environmental Research Letters, 2019, 14, 074023.	2.2	94
15	Evaluating an Enhanced Vegetation Condition Index (VCI) Based on VIUPD for Drought Monitoring in the Continental United States. Remote Sensing, 2016, 8, 224.	1.8	85
16	Nonrainfall water origins and formation mechanisms. Science Advances, 2017, 3, e1603131.	4.7	79
17	On the calibration of continuous, highâ€precision Î´¹⁸O and Î´²H measurements using an offâ€axis integrated cavity output spectrometer. Rapid Communications in Mass Spectrometry, 2009, 23, 530-536.	0.7	78
18	Effects of nonâ€rainfall water inputs on ecosystem functions. Wiley Interdisciplinary Reviews: Water, 2017, 4, e1179.	2.8	72

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19	Stable isotope compositions (Î´2H, Î´18O and Î´17O) of rainfall and snowfall in the central United States. Scientific Reports, 2018, 8, 6712.	1.6	69
20	The Sensitivity of Satellite Solarâ€Induced Chlorophyll Fluorescence to Meteorological Drought. Earth's Future, 2019, 7, 558-573.	2.4	67
21	Stable Isotopes of Water Vapor in the Vadose Zone: A Review of Measurement and Modeling Techniques. Vadose Zone Journal, 2012, 11, vzj2011.0165.	1.3	64
22	Assessing consistency of spring phenology of snow-covered forests as estimated by vegetation indices, gross primary production, and solar-induced chlorophyll fluorescence. Agricultural and Forest Meteorology, 2019, 275, 305-316.	1.9	64
23	Using atmospheric trajectories to model the isotopic composition of rainfall in central Kenya. Ecosphere, 2013, 4, 1-18.	1.0	61
24	Uncertainties in the assessment of the isotopic composition of surface fluxes: A direct comparison of techniques using laserâ€based water vapor isotope analyzers. Journal of Geophysical Research, 2012, 117, .	3.3	58
25	Dynamic interactions of ecohydrological and biogeochemical processes in waterâ€limited systems. Ecosphere, 2015, 6, 1-27.	1.0	58
26	Patterns and implications of Plant-soil Î´¹³C and Î´¹⁵N values in African savanna ecosystems. Quaternary Research, 2010, 73, 77-83.	1.0	55
27	Partitioning of evapotranspiration using a stable isotope technique in an arid and high temperature agricultural production system. Agricultural Water Management, 2017, 179, 103-109.	2.4	55
28	Factors controlling spatial and seasonal distributions of precipitation Î´¹⁸O in China. Hydrological Processes, 2012, 26, 143-152.	1.1	47
29	Contribution of recycled moisture to local precipitation in the inland Heihe River Basin. Agricultural and Forest Meteorology, 2019, 271, 316-335.	1.9	42
30	Data Descriptor: Daily observations of stable isotope ratios of rainfall in the tropics. Scientific Reports, 2019, 9, 14419.	1.6	40
31	A new station-enabled multi-sensor integrated index for drought monitoring. Journal of Hydrology, 2019, 574, 169-180.	2.3	38
32	Combined effects of soil moisture and nitrogen availability variations on grass productivity in African savannas. Plant and Soil, 2010, 328, 95-108.	1.8	37
33	Convergent vegetation fog and dew water use in the Namib Desert. Ecohydrology, 2019, 12, e2130.	1.1	37
34	Canopy isotopic investigation reveals different water uptake dynamics of maples and oaks. Phytochemistry, 2020, 175, 112389.	1.4	34
35	Enhanced canopy growth precedes senescence in 2005 and 2010 Amazonian droughts. Remote Sensing of Environment, 2018, 211, 26-37.	4.6	33
36	Increased Global Vegetation Productivity Despite Rising Atmospheric Dryness Over the Last Two Decades. Earth's Future, 2022, 10, .	2.4	32

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37	Understanding ecohydrological connectivity in savannas: a system dynamics modelling approach. Ecohydrology, 2012, 5, 200-220.	1.1	31
38	Divergence of stable isotopes in tap water across China. Scientific Reports, 2017, 7, 43653.	1.6	30
39	Spatial and temporal variations of tap water 17O-excess in China. Geochimica Et Cosmochimica Acta, 2019, 260, 1-14.	1.6	30
40	Quantifying the Controls on Evapotranspiration Partitioning in the Highest Alpine Meadow Ecosystem. Water Resources Research, 2020, 56, e2019WR024815.	1.7	28
41	An Analysis of Precipitation Isotope Distributions across Namibia Using Historical Data. PLoS ONE, 2016, 11, e0154598.	1.1	27
42	Precipitation Origins and Key Drivers of Precipitation Isotope (¹⁸O, ²H, and) Tj ETQq0 0 0 rgBT /Overlock 10 T 123, 7311-7330.	1.2	26
43	Intensified vegetation water use under acid deposition. Science Advances, 2019, 5, eaav5168.	4.7	26
44	The Impact of Rainfall on Soil Moisture Dynamics in a Foggy Desert. PLoS ONE, 2016, 11, e0164982.	1.1	25
45	A multi-scale analysis of Namibian rainfall over the recent decade â€“ comparing TMPA satellite estimates and ground observations. Journal of Hydrology: Regional Studies, 2016, 8, 59-68.	1.0	25
46	A comparative analysis of the NDVIg and NDVI3g in monitoring vegetation phenology changes in the Northern Hemisphere. Geocarto International, 2018, 33, 1-20.	1.7	25
47	Spatiotemporal Comparison of Drought in Shaanxiâ€“Gansuâ€“Ningxia from 2003 to 2020 Using Various Drought Indices in Google Earth Engine. Remote Sensing, 2022, 14, 1570.	1.8	23
48	A Î´2H offset correction method for quantifying root water uptake of riparian trees. Journal of Hydrology, 2021, 593, 125811.	2.3	22
49	Water vapor Î´²H, Î´¹⁸O and Î´¹⁷O measurements using an offâ€axis integrated cavity output spectrometer â€“ sensitivity to water vapor concentration, delta value and averagingâ€time. Rapid Communications in Mass Spectrometry, 2016, 30, 2077-2086.	0.7	21
50	The impact of fog on soil moisture dynamics in the Namib Desert. Advances in Water Resources, 2018, 113, 23-29.	1.7	21
51	Assessing Meteorological and Agricultural Drought in Chitral Kabul River Basin Using Multiple Drought Indices. Remote Sensing, 2020, 12, 1417.	1.8	20
52	Characterizing ecohydrological and biogeochemical connectivity across multiple scales: a new conceptual framework. Ecohydrology, 2012, 5, 221-233.	1.1	17
53	A semi-analytical algorithm for deriving the particle size distribution slope of turbid inland water based on OLCI data: A case study in Lake Hongze. Environmental Pollution, 2021, 270, 116288.	3.7	17
54	Estimating site-specific optimum air temperature and assessing its effect on the photosynthesis of grasslands in mid- to high-latitudes. Environmental Research Letters, 2020, 15, 034064.	2.2	16

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55	Dew formation reduction in global warming experiments and the potential consequences. Journal of Hydrology, 2021, 593, 125819.	2.3	16
56	Dew formation characteristics in the gravel desert ecosystem and its ecological roles on Reaumuria soongorica. Journal of Hydrology, 2021, 603, 126932.	2.3	16
57	Drought monitoring based on a new combined remote sensing index across the transitional area between humid and arid regions in China. Atmospheric Research, 2021, 264, 105850.	1.8	15
58	Stable isotope variations of daily precipitation from 2014â€“2018 in the central United States. Scientific Data, 2019, 6, 190018.	2.4	15
59	Investigating the role of evaporation in dew formation under different climates using 17O-excess. Journal of Hydrology, 2021, 592, 125847.	2.3	13
60	Fog Spatial Distributions over the Central Namib Desert - An Isotope Approach. Aerosol and Air Quality Research, 2018, 18, 49-61.	0.9	13
61	The interactive nutrient and water effects on vegetation biomass at two <scp>A</scp>frican savannah sites with different mean annual precipitation. African Journal of Ecology, 2012, 50, 446-454.	0.4	12
62	Satellite Observed Positive Impacts of Fog on Vegetation. Geophysical Research Letters, 2020, 47, e2020GL088428.	1.5	10
63	The importance of cuticular permeance in assessing plant waterâ€“use strategies. Tree Physiology, 2020, 40, 425-432.	1.4	10
64	Improved understanding of the spatially-heterogeneous relationship between satellite solar-induced chlorophyll fluorescence and ecosystem productivity. Ecological Indicators, 2021, 129, 107949.	2.6	10
65	Comprehensive Quantification of the Responses of Ecosystem Production and Respiration to Drought Time Scale, Intensity and Timing in Humid Environments: A FLUXNET Synthesis. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	1.3	10
66	Soil CO₂ flux and its controls during secondary succession. Journal of Geophysical Research, 2010, 115, .	3.3	9
67	Assessing variability of optimum air temperature for photosynthesis across site-years, sites and biomes and their effects on photosynthesis estimation. Agricultural and Forest Meteorology, 2021, 298-299, 108277.	1.9	8
68	A new multi-variable integrated framework for identifying flash drought in the Loess Plateau and Qinling Mountains regions of China. Agricultural Water Management, 2022, 265, 107544.	2.4	8
69	No-till is challenged: Complementary management is crucial to improve its environmental benefits under a changing climate. Geography and Sustainability, 2020, 1, 229-232.	1.9	6
70	Triple isotope variations of monthly tap water in China. Scientific Data, 2020, 7, 336.	2.4	6
71	The potential contribution of soil moisture to fog formation in the Namib Desert. Journal of Hydrology, 2020, 591, 125326.	2.3	5
72	A modified isotope-based method for potential high-frequency evapotranspiration partitioning. Advances in Water Resources, 2022, 160, 104103.	1.7	4

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73	Reconciling the isotope-based fog classification with meteorological conditions of different fog types. Journal of Hydrology, 2022, 605, 127321.	2.3	4
74	Spatiotemporal dynamics of the climatic impacts on greenup date in the Tibetan Plateau. Environmental Earth Sciences, 2016, 75, 1.	1.3	3
75	Novel Keeling-plot-based methods to estimate the isotopic composition of ambient water vapor. Hydrology and Earth System Sciences, 2020, 24, 4491-4501.	1.9	3
76	Ecohydrological Controls on the Deposition of Non-rainfall Water, N, and P to Dryland Ecosystems. , 2019, , 121-137.		2
77	Satellite observed vegetation dynamics and drivers in the Namib sand sea over the recent 20â€‰years. Ecohydrology, 2022, 15, .	1.1	2
78	Stable isotope variations of dew under three different climates. Scientific Data, 2022, 9, 50.	2.4	0