Jianwu Tang

List of Publications by Citations

118 papers	8,301 citations	43 h-index	90 g-index
127 ext. papers	9,708 ext. citations	6.6 avg, IF	5.9 L-index

#	Paper	IF	Citations
118	Reduction of forest soil respiration in response to nitrogen deposition. *Nature Geoscience*, **2010**, 3, 315-322	12.3	988
117	CO2 balance of boreal, temperate, and tropical forests derived from a global database. *Global Change Biology*, **2007**, 13, 2509-2537	11.4	744
116	Tree photosynthesis modulates soil respiration on a diurnal time scale. *Global Change Biology*, **2005**, 11, 1298-1304	11.4	388
115	Soil warming, carbon-nitrogen interactions, and forest carbon budgets. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 9508-12	11.5	357
114	How soil moisture, rain pulses, and growth alter the response of ecosystem respiration to temperature. *Global Biogeochemical Cycles*, **2004**, 18, n/a-n/a	5.9	308
113	Solar-induced chlorophyll fluorescence that correlates with canopy photosynthesis on diurnal and seasonal scales in a temperate deciduous forest. *Geophysical Research Letters*, **2015**, 42, 2977-2987	4.9	303
112	Assessing soil CO2 efflux using continuous measurements of CO2 profiles in soils with small solid-state sensors. *Agricultural and Forest Meteorology*, **2003**, 118, 207-220	5.8	256
111	Spatial□temporal variation in soil respiration in an oak□grass savanna ecosystem in California and its partitioning into autotrophic and heterotrophic components. *Biogeochemistry*, **2005**, 73, 183-207	3.8	237
110	Temperature response of soil respiration largely unaltered with experimental warming. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 13797-13802	11.5	206
109	Soil respiration under climate warming: differential response of heterotrophic and autotrophic respiration. *Global Change Biology*, **2014**, 20, 3229-37	11.4	177
108	A meta-analysis of 1,119 manipulative experiments on terrestrial carbon-cycling responses to global change. *Nature Ecology and Evolution*, **2019**, 3, 1309-1320	12.3	150
107	Emerging opportunities and challenges in phenology: a review. *Ecosphere*, **2016**, 7, e01436	3.1	144
106	Ecosystem-level controls on root-rhizosphere respiration. *New Phytologist*, **2013**, 199, 339-51	9.8	140
105	Model-based analysis of the relationship between sun-induced chlorophyll fluorescence and gross primary production for remote sensing applications. *Remote Sensing of Environment*, **2016**, 187, 145-155	13.2	139
104	Forest thinning and soil respiration in a ponderosa pine plantation in the Sierra Nevada. *Tree Physiology*, **2005**, 25, 57-66	4.2	136
103	Continuous measurements of soil respiration with and without roots in a ponderosa pine plantation in the Sierra Nevada Mountains. *Agricultural and Forest Meteorology*, **2005**, 132, 212-227	5.8	131
102	Global patterns and substrate-based mechanisms of the terrestrial nitrogen cycle. *Ecology Letters*, **2016**, 19, 697-709	10	128

101	Early stage litter decomposition across biomes. *Science of the Total Environment*, **2018**, 628-629, 1369-1394	12.2	117
100	How switches and lags in biophysical regulators affect spatial-temporal variation of soil respiration in an oak-grass savanna. *Journal of Geophysical Research*, **2006**, 111, n/a-n/a		116
99	Heterotrophic respiration in disturbed forests: A review with examples from North America. *Journal of Geophysical Research*, **2011**, 116,		111
98	Looking deeper into the soil: biophysical controls and seasonal lags of soil CO2 production and efflux **2010**, 20, 1569-82		108
97	Influences of recovery from clear-cut, climate variability, and thinning on the carbon balance of a young ponderosa pine plantation. *Agricultural and Forest Meteorology*, **2005**, 130, 207-222	5.8	102
96	Simulating the impacts of disturbances on forest carbon cycling in North America: Processes, data, models, and challenges. *Journal of Geophysical Research*, **2011**, 116,		98
95	Short-term nitrogen additions can shift a coastal wetland from a sink to a source of N2O. *Atmospheric Environment*, **2011**, 45, 4390-4397	5.3	98
94	Beyond leaf color: Comparing camera-based phenological metrics with leaf biochemical, biophysical, and spectral properties throughout the growing season of a temperate deciduous forest. *Journal of Geophysical Research G: Biogeosciences*, **2014**, 119, 181-191	3.7	95
93	Influence of vegetation and seasonal forcing on carbon dioxide fluxes across the Upper Midwest, USA: Implications for regional scaling. *Agricultural and Forest Meteorology*, **2008**, 148, 288-308	5.8	95
92	Biophysical control of whole tree transpiration under an urban environment in Northern China. *Journal of Hydrology*, **2011**, 402, 388-400	6	89
91	Chlorophyll fluorescence tracks seasonal variations of photosynthesis from leaf to canopy in a temperate forest. *Global Change Biology*, **2017**, 23, 2874-2886	11.4	88
90	Sap flux□pscaled canopy transpiration, stomatal conductance, and water use efficiency in an old growth forest in the Great Lakes region of the United States. *Journal of Geophysical Research*, **2006**, 111, n/a-n/a		88
89	Soil respiration at mean annual temperature predicts annual total across vegetation types and biomes. *Biogeosciences*, **2010**, 7, 2147-2157	4.6	87
88	Restoring tides to reduce methane emissions in impounded wetlands: A new and potent Blue Carbon climate change intervention. *Scientific Reports*, **2017**, 7, 11914	4.9	86
87	Diel patterns of autotrophic and heterotrophic respiration among phenological stages. *Global Change Biology*, **2013**, 19, 1151-9	11.4	85
86	Seasonal variability of multiple leaf traits captured by leaf spectroscopy at two temperate deciduous forests. *Remote Sensing of Environment*, **2016**, 179, 1-12	13.2	84
85	Soil carbon fluxes and stocks in a Great Lakes forest chronosequence. *Global Change Biology*, **2009**, 15, 145-155	11.4	83
84	Ecosystem respiration and its components in an old-growth forest in the Great Lakes region of the United States. *Agricultural and Forest Meteorology*, **2008**, 148, 171-185	5.8	81

83	Steeper declines in forest photosynthesis than respiration explain age-driven decreases in forest growth. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 8856-60	11.5	79
82	Greening China naturally. *Ambio*, **2011**, 40, 828-31	6.5	70
81	Regional-scale phenology modeling based on meteorological records and remote sensing observations. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		67
80	Influences of canopy photosynthesis and summer rain pulses on root dynamics and soil respiration in a young ponderosa pine forest. *Tree Physiology*, **2006**, 26, 833-44	4.2	66
79	The value of soil respiration measurements for interpreting and modeling terrestrial carbon cycling. *Plant and Soil*, **2017**, 413, 1-25	4.2	60
78	Consequence of altered nitrogen cycles in the coupled human and ecological system under changing climate: The need for long-term and site-based research. *Ambio*, **2015**, 44, 178-93	6.5	49
77	Effects of experimental warming and nitrogen addition on soil respiration and CH4 fluxes from crop rotations of winter wheat□soybean/fallow. *Agricultural and Forest Meteorology*, **2015**, 207, 38-47	5.8	43
76	Seasonal variations of leaf and canopy properties tracked by ground-based NDVI imagery in a temperate forest. *Scientific Reports*, **2017**, 7, 1267	4.9	43
75	Intercomparison of sugar maple (Acer saccharum Marsh.) stand transpiration responses to environmental conditions from the Western Great Lakes Region of the United States. *Agricultural and Forest Meteorology*, **2008**, 148, 231-246	5.8	43
74	Foliar phosphorus fractions reveal how tropical plants maintain photosynthetic rates despite low soil phosphorus availability. *Functional Ecology*, **2019**, 33, 503-513	5.6	42
73	Root standing crop and chemistry after six years of soil warming in a temperate forest. *Tree Physiology*, **2011**, 31, 707-17	4.2	41
72	Nutrient limitation of woody debris decomposition in a tropical forest: contrasting effects of N and P addition. *Functional Ecology*, **2016**, 30, 295-304	5.6	40
71	Soil CO₂ efflux of a larch forest in northern Japan. *Biogeosciences*, **2010**, 7, 3447-3457	4.6	38
70	Nitrous oxide (N2O) emissions in response to increasing fertilizer addition in maize (Zea mays L.) agriculture in western Kenya. *Nutrient Cycling in Agroecosystems*, **2014**, 100, 177-187	3.3	37
69	Conversion of coastal wetlands, riparian wetlands, and peatlands increases greenhouse gas emissions: A global meta-analysis. *Global Change Biology*, **2020**, 26, 1638-1653	11.4	37
68	Potential of solar-induced chlorophyll fluorescence to estimate transpiration in a temperate forest. *Agricultural and Forest Meteorology*, **2018**, 252, 75-87	5.8	35
67	Response of plant nutrient stoichiometry to fertilization varied with plant tissues in a tropical forest. *Scientific Reports*, **2015**, 5, 14605	4.9	35
66	Using long-term ecosystem service and biodiversity data to study the impacts and adaptation options in response to climate change: insights from the global ILTER sites network. *Current Opinion in Environmental Sustainability*, **2013**, 5, 53-66	7.2	33

65	Global blue carbon accumulation in tidal wetlands increases with climate change. *National Science Review*, **2021**, 8, nwaa296	10.8	31
64	Short-term drought response of N2O and CO2 emissions from mesic agricultural soils in the US Midwest. *Agriculture, Ecosystems and Environment*, **2015**, 212, 127-133	5.7	30
63	Coastal blue carbon: Concept, study method, and the application to ecological restoration. *Science China Earth Sciences*, **2018**, 61, 637-646	4.6	30
62	Carbon dioxide fluxes reflect plant zonation and belowground biomass in a coastal marsh. *Ecosphere*, **2016**, 7, e01560	3.1	29
61	Extreme rainfall and snowfall alter responses of soil respiration to nitrogen fertilization: a 3-year field experiment. *Global Change Biology*, **2017**, 23, 3403-3417	11.4	28
60	Carbon budget of the Harvard Forest Long-Term Ecological Research site: pattern, process, and response to global change. *Ecological Monographs*, **2020**, 90, e01423	9	26
59	Tidal wetland resilience to sea level rise increases their carbon sequestration capacity in United States. *Nature Communications*, **2019**, 10, 5434	17.4	26
58	Tropical forest restoration: Fast resilience of plant biomass contrasts with slow recovery of stable soil C stocks. *Functional Ecology*, **2017**, 31, 2344-2355	5.6	25
57	Experimental warming-driven soil drying reduced N2O emissions from fertilized crop rotations of winter wheatSoybean/fallow, 2009?2014. *Agriculture, Ecosystems and Environment*, **2016**, 219, 71-82	5.7	25
56	Evaluation of laser-based spectrometers for greenhouse gas flux measurements in coastal marshes. *Limnology and Oceanography: Methods*, **2016**, 14, 466-476	2.6	25
55	Investigations of relationships among aggregate pore structure, microbial biomass, and soil organic carbon in a Mollisol using combined non-destructive measurements and phospholipid fatty acid analysis. *Soil and Tillage Research*, **2019**, 185, 94-101	6.5	25
54	Impacts of rice varieties and management on yield-scaled greenhouse gas emissions from rice fields in China: A meta-analysis. *Biogeosciences*, **2014**, 11, 3685-3693	4.6	23
53	Steering operational synergies in terrestrial observation networks: opportunity for advancing Earth system dynamics modelling. *Earth System Dynamics*, **2018**, 9, 593-609	4.8	23
52	Environmental Controls, Emergent Scaling, and Predictions of Greenhouse Gas (GHG) Fluxes in Coastal Salt Marshes. *Journal of Geophysical Research G: Biogeosciences*, **2018**, 123, 2234-2256	3.7	23
51	The foliar spray of Rhodopseudomonas palustris grown under Stevia residue extract promotes plant growth via changing soil microbial community. *Journal of Soils and Sediments*, **2016**, 16, 916-923	3.4	21
50	Opportunities and challenges of applications of satellite-derived sun-induced fluorescence at relatively high spatial resolution. *Science of the Total Environment*, **2018**, 619-620, 649-653	10.2	21
49	Comparison of Phenology Estimated from Reflectance-Based Indices and Solar-Induced Chlorophyll Fluorescence (SIF) Observations in a Temperate Forest Using GPP-Based Phenology as the Standard. *Remote Sensing*, **2018**, 10, 932	5	20
48	Stover retention rather than no-till decreases the global warming potential of rainfed continuous maize cropland. *Field Crops Research*, **2018**, 219, 14-23	5.5	18

47	Accelerated phosphorus accumulation and acidification of soils under plastic greenhouse condition in four representative organic vegetable cultivation sites. *Scientia Horticulturae*, **2015**, 195, 67-73	4.1	17
46	Seasonal and interannual variations of carbon exchange over a rice-wheat rotation system on the North China Plain. *Advances in Atmospheric Sciences*, **2015**, 32, 1365-1380	2.9	16
45	Relationship between leaf physiologic traits and canopy color indices during the leaf expansion period in an oak forest. *Ecosphere*, **2015**, 6, art259	3.1	16
44	Water salinity and inundation control soil carbon decomposition during salt marsh restoration: An incubation experiment. *Ecology and Evolution*, **2019**, 9, 1911-1921	2.8	15
43	Traditional symbiotic farming technology in China promotes the sustainability of a flooded rice production system. *Sustainability Science*, **2017**, 12, 155-161	6.4	14
42	Ecosystem fluxes of hydrogen: a comparison of flux-gradient methods. *Atmospheric Measurement Techniques*, **2014**, 7, 2787-2805	4	14
41	Ecotypic differences in the phenology of the tundra species reflect sites of origin. *Ecology and Evolution*, **2017**, 7, 9775-9786	2.8	13
40	Comparison of total emitted solar-induced chlorophyll fluorescence (SIF) and top-of-canopy (TOC) SIF in estimating photosynthesis. *Remote Sensing of Environment*, **2020**, 251, 112083	13.2	13
39	Enhancement of nitrate removal at the sediment-water interface by carbon addition plus vertical mixing. *Chemosphere*, **2015**, 136, 305-10	8.4	12
38	Effect of growth temperature on photosynthetic capacity and respiration in three ecotypes of. *Ecology and Evolution*, **2018**, 8, 3711-3725	2.8	12
37	Phosphorus Availability and Sorption as Affected by Long-Term Fertilization. *Agronomy Journal*, **2014**, 106, 1583-1592	2.2	12
36	Ecosystem fluxes of hydrogen in a mid-latitude forest driven by soil microorganisms and plants. *Global Change Biology*, **2017**, 23, 906-919	11.4	11
35	Seasonal patterns of canopy photosynthesis captured by remotely sensed sun-induced fluorescence and vegetation indexes in mid-to-high latitude forests: A cross-platform comparison. *Science of the Total Environment*, **2018**, 644, 439-451	10.2	10
34	External carbon addition increases nitrate removal and decreases nitrous oxide emission in a restored wetland. *Ecological Engineering*, **2019**, 138, 200-208	3.9	9
33	Differential responses of ecotypes to climate in a ubiquitous Arctic sedge: implications for future ecosystem C cycling. *New Phytologist*, **2019**, 223, 180-192	9.8	9
32	Using canopy greenness index to identify leaf ecophysiological traits during the foliar senescence in an oak forest. *Ecosphere*, **2018**, 9, e02337	3.1	8
31	Biogenic silica accumulation varies across tussock tundra plant functional type. *Functional Ecology*, **2017**, 31, 2177-2187	5.6	8
30	A Robust Calibration Method for Continental-Scale Soil Water Content Measurements. *Vadose Zone Journal*, **2018**, 17, 1-19	2.7	8

29	Environmental controls on light inhibition of respiration and leaf and canopy daytime carbon exchange in a temperate deciduous forest. *Tree Physiology*, **2018**, 38, 1886-1902	4.2	8
28	Aerial photography based census of Adlie Penguin and its application in CH and NO budget estimation in Victoria Land, Antarctic. *Scientific Reports*, **2017**, 7, 12942	4.9	7
27	Soil Warming Accelerates Biogeochemical Silica Cycling in a Temperate Forest. *Frontiers in Plant Science*, **2019**, 10, 1097	6.2	7
26	Temperature sensitivity of soil carbon **2019**, 175-208		7
25	Advantage of multi-band solar-induced chlorophyll fluorescence to derive canopy photosynthesis in a temperate forest. *Agricultural and Forest Meteorology*, **2019**, 279, 107691	5.8	6
24	Meteorological controls on evapotranspiration over a coastal salt marsh ecosystem under tidal influence. *Agricultural and Forest Meteorology*, **2019**, 279, 107755	5.8	6
23	Aggregate-Associated Organic Carbon and Nitrogen Impacted by the Long-Term Application of Fertilizers, Rice Straw, and Pig Manure. *Soil Science*, **2014**, 179, 522-528	0.9	6
22	Contributions of photosynthetic organs to the seed yield of hybrid rice: the effects of gibberellin application examined by carbon isotope technology. *Seed Science and Technology*, **2018**, 46, 533-546	0.6	6
21	Arctic River Dissolved and Biogenic Silicon Exports Current Conditions and Future Changes With Warming. *Global Biogeochemical Cycles*, **2020**, 34, no	5.9	5
20	Enhanced Carbon Uptake and Reduced Methane Emissions in a Newly Restored Wetland. *Journal of Geophysical Research G: Biogeosciences*, **2020**, 125, e2019JG005222	3.7	5
19	ChinaSpec: A Network for Long-Term Ground-Based Measurements of Solar-Induced Fluorescence in China. *Journal of Geophysical Research G: Biogeosciences*, **2021**, 126, e2020JG006042	3.7	5
18	Effects of cultivation techniques on CH4 emissions, net ecosystem production, and rice yield in a paddy ecosystem. *Atmospheric Pollution Research*, **2019**, 10, 274-282	4.5	4
17	Integrating cover crops with chicken grazing to improve soil nitrogen in rice fields and increase economic output. *Science of the Total Environment*, **2020**, 713, 135218	10.2	4
16	Plant biomass and rates of carbon dioxide uptake are enhanced by successful restoration of tidal connectivity in salt marshes. *Science of the Total Environment*, **2021**, 750, 141566	10.2	4
15	A novel combined recirculating treatment system for intensive marine aquaculture. *Aquaculture Research*, **2017**, 48, 5062-5071	1.9	3
14	Comparative transcriptomics of an arctic foundation species, tussock cottongrass (Eriophorum vaginatum), during an extreme heat event. *Scientific Reports*, **2020**, 10, 8990	4.9	3
13	Restoring wetlands outside of the seawalls and to provide clean water habitat. *Science of the Total Environment*, **2020**, 721, 137788	10.2	3
12	Intra-specific variation in phenology offers resilience to climate change for Eriophorum vaginatum. *Arctic Science*,	2.2	3

11	Performance of Solar-Induced Chlorophyll Fluorescence in Estimating Water-Use Efficiency in a Temperate Forest. *Remote Sensing*, **2018**, 10, 796	5	3
10	Linking Spatial Pattern and Biophysical Parameters of Urban Vegetation by Multitemporal Landsat Imagery. *IEEE Geoscience and Remote Sensing Letters*, **2013**, 10, 1263-1267	4.1	2
9	Tidal influence on the relationship between solar-induced chlorophyll fluorescence and canopy photosynthesis in a coastal salt marsh. *Remote Sensing of Environment*, **2022**, 270, 112865	13.2	2
8	Tidal effects on ecosystem CO2 exchange in a Phragmites salt marsh of an intertidal shoal. *Agricultural and Forest Meteorology*, **2020**, 292-293, 108108	5.8	2
7	Cover crops and chicken grazing in a winter fallow field improve soil carbon and nitrogen contents and decrease methane emissions. *Scientific Reports*, **2020**, 10, 12607	4.9	2
6	Passive experimental warming decouples air and sediment temperatures in a salt marsh. *Limnology and Oceanography: Methods*, **2018**, 16, 640-648	2.6	2
5	Building a Global Ecosystem Research Infrastructure to Address Global Grand Challenges for Macrosystem Ecology. *Earth's Future*, **2022**, 10,	7.9	1
4	Nitrogen removal by eutrophic coastal wetlands accomplished with CH4 emission reduction. *Journal of Cleaner Production*, **2022**, 332, 130082	10.3	0
3	Variability of dissolved organic matter in two coastal wetlands along the Changjiang River Estuary: Responses to tidal cycles, seasons, and degradation processes. *Science of the Total Environment*, **2021**, 150993	10.2	0
2	Responses of root phenology in ecotypes of Eriophorum vaginatum to transplantation and warming in the Arctic. *Science of the Total Environment*, **2022**, 805, 149926	10.2	0
1	Landscape Genomics Provides Evidence of Ecotypic Adaptation and a Barrier to Gene Flow at Treeline for the Arctic Foundation Species .. *Frontiers in Plant Science*, **2022**, 13, 860439	6.2	