

Jinyun Tang

List of Publications by Year in descending order

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59
papers

5,800
citations

172207

29
h-index

138251

58
g-index

80
all docs

80
docs citations

80
times ranked

7643
citing authors

#	ARTICLE	IF	CITATIONS
1	Supporting hierarchical soil biogeochemical modeling: version 2 of the Biogeochemical Transport and Reaction model (BeTR-v2). <i>Geoscientific Model Development</i> , 2022, 15, 1619-1632.	1.3	1
2	Life and death in the soil microbiome: how ecological processes influence biogeochemistry. <i>Nature Reviews Microbiology</i> , 2022, 20, 415-430.	13.6	282
3	KGML-ag: a modeling framework of knowledge-guided machine learning to simulate agroecosystems: a case study of estimating N<sub>2</sub>O emission using data from mesocosm experiments. <i>Geoscientific Model Development</i> , 2022, 15, 2839-2858.	1.3	13
4	Diurnal Rainfall Response to the Physiological and Radiative Effects of CO₂ in Tropical Forests in the Energy Exascale Earth System Model v1. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	1.2	1
5	Assessing the impacts of pre-growing-season weather conditions on soil nitrogen dynamics and corn productivity in the U.S. Midwest. <i>Field Crops Research</i> , 2022, 284, 108563.	2.3	7
6	On the modeling paradigm of plant root nutrient acquisition. <i>Plant and Soil</i> , 2021, 459, 441-451.	1.8	9
7	Non-growing season plant nutrient uptake controls Arctic tundra vegetation composition under future climate. <i>Environmental Research Letters</i> , 2021, 16, 074047.	2.2	13
8	Finding Liebig's law of the minimum. <i>Ecological Applications</i> , 2021, 31, e02458.	1.8	13
9	Quantifying carbon budget, crop yields and their responses to environmental variability using the ecosys model for U.S. Midwestern agroecosystems. <i>Agricultural and Forest Meteorology</i> , 2021, 307, 108521.	1.9	27
10	Role of underlying surface, rainstorm and antecedent wetness condition on flood responses in small and medium sized watersheds in the Yangtze River Delta region, China. <i>Catena</i> , 2021, 206, 105489.	2.2	17
11	Assessing the impacts of cover crops on maize and soybean yield in the U.S. Midwestern agroecosystems. <i>Field Crops Research</i> , 2021, 273, 108264.	2.3	40
12	Long-term leaf C:N ratio change under elevated CO2 and nitrogen deposition in China: Evidence from observations and process-based modeling. <i>Science of the Total Environment</i> , 2021, 800, 149591.	3.9	7
13	Conceptualizing Biogeochemical Reactions With an Ohm's Law Analogy. <i>Journal of Advances in Modeling Earth Systems</i> , 2021, 13, e2021MS002469.	1.3	2
14	Evaluation of simulated soil carbon dynamics in Arctic-Boreal ecosystems. <i>Environmental Research Letters</i> , 2020, 15, 025005.	2.2	19
15	The DOE E3SM v1.1 Biogeochemistry Configuration: Description and Simulated Ecosystem Climate Responses to Historical Changes in Forcing. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001766.	1.3	65
16	Linear two-pool models are insufficient to infer soil organic matter decomposition temperature sensitivity from incubations. <i>Biogeochemistry</i> , 2020, 149, 251-261.	1.7	13
17	Towards a multiscale crop modelling framework for climate change adaptation assessment. <i>Nature Plants</i> , 2020, 6, 338-348.	4.7	181
18	The Community Land Model Version 5: Description of New Features, Benchmarking, and Impact of Forcing Uncertainty. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 4245-4287.	1.3	692

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19	Improving Representation of Deforestation Effects on Evapotranspiration in the E3SM Land Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2412-2427.	1.3	28
20	Competitor and substrate sizes and diffusion together define enzymatic depolymerization and microbial substrate uptake rates. <i>Soil Biology and Biochemistry</i> , 2019, 139, 107624.	4.2	25
21	Abiotic and Biotic Controls on Soil Organoâ€“Mineral Interactions: Developing Model Structures to Analyze Why Soil Organic Matter Persists. <i>Reviews in Mineralogy and Geochemistry</i> , 2019, 85, 329-348.	2.2	42
22	Representing Nitrogen, Phosphorus, and Carbon Interactions in the E3SM Land Model: Development and Global Benchmarking. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2238-2258.	1.3	74
23	Evaluation of the WRF lake module (v1.0) and its improvements at a deep reservoir. <i>Geoscientific Model Development</i> , 2019, 12, 2119-2138.	1.3	20
24	Soil Organic Matter Temperature Sensitivity Cannot be Directly Inferred From Spatial Gradients. <i>Global Biogeochemical Cycles</i> , 2019, 33, 761-776.	1.9	16
25	The DOE E3SM Coupled Model Version 1: Overview and Evaluation at Standard Resolution. <i>Journal of Advances in Modeling Earth Systems</i> , 2019, 11, 2089-2129.	1.3	404
26	A Theory of Effective Microbial Substrate Affinity Parameters in Variably Saturated Soils and an Example Application to Aerobic Soil Heterotrophic Respiration. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2019, 124, 918-940.	1.3	26
27	11. Abiotic and Biotic Controls on Soil Organoâ€“Mineral Interactions: Developing Model Structures to Analyze Why Soil Organic Matter Persists. , 2019, , 329-348.		0
28	Multiple models and experiments underscore large uncertainty in soil carbon dynamics. <i>Biogeochemistry</i> , 2018, 141, 109-123.	1.7	169
29	Identifying the dominant controls on macropore flow velocity in soils: A meta-analysis. <i>Journal of Hydrology</i> , 2018, 567, 590-604.	2.3	17
30	Aquatic Carbonâ€“Nutrient Dynamics as Emergent Properties of Hydrological, Biogeochemical, and Ecological Interactions: Scientific Advances. <i>Water Resources Research</i> , 2018, 54, 7138-7142.	1.7	7
31	Weaker landâ€“climate feedbacks from nutrient uptake during photosynthesis-inactive periods. <i>Nature Climate Change</i> , 2018, 8, 1002-1006.	8.1	37
32	Predicted Land Carbon Dynamics Are Strongly Dependent on the Numerical Coupling of Nitrogen Mobilizing and Immobilizing Processes: A Demonstration with the E3SM Land Model. <i>Earth Interactions</i> , 2018, 22, 1-18.	0.7	15
33	Mineral properties, microbes, transport, and plant-input profiles control vertical distribution and age of soil carbon stocks. <i>Soil Biology and Biochemistry</i> , 2017, 107, 244-259.	4.2	64
34	A new theory of plantâ€“microbe nutrient competition resolves inconsistencies between observations and model predictions. <i>Ecological Applications</i> , 2017, 27, 875-886.	1.8	90
35	SUPECA kinetics for scaling redox reactions in networks of mixed substrates and consumers and an example application to aerobic soil respiration. <i>Geoscientific Model Development</i> , 2017, 10, 3277-3295.	1.3	20
36	Technical Note: A generic law-of-the-minimum flux limiter for simulating substrate limitation in biogeochemical models. <i>Biogeosciences</i> , 2016, 13, 723-735.	1.3	6

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37	Multiple soil nutrient competition between plants, microbes, and mineral surfaces: model development, parameterization, and example applications in several tropical forests. <i>Biogeosciences</i> , 2016, 13, 341-363.	1.3	125
38	Predicting the Responses of Soil Nitrite-Oxidizers to Multi-Factorial Global Change: A Trait-Based Approach. <i>Frontiers in Microbiology</i> , 2016, 7, 628.	1.5	50
39	Incorporating root hydraulic redistribution in <sc>CLM</sc>4.5: Effects on predicted site and global evapotranspiration, soil moisture, and water storage. <i>Journal of Advances in Modeling Earth Systems</i> , 2015, 7, 1828-1848.	1.3	46
40	On the relationships between the Michaelis-Menten kinetics, reverse Michaelis-Menten kinetics, equilibrium chemistry approximation kinetics, and quadratic kinetics. <i>Geoscientific Model Development</i> , 2015, 8, 3823-3835.	1.3	34
41	Weaker soil carbon-climate feedbacks resulting from microbial and abiotic interactions. <i>Nature Climate Change</i> , 2015, 5, 56-60.	8.1	184
42	Technical Note: Simple formulations and solutions of the dual-phase diffusive transport for biogeochemical modeling. <i>Biogeosciences</i> , 2014, 11, 3721-3728.	1.3	9
43	Long residence times of rapidly decomposable soil organic matter: application of a multi-phase, multi-component, and vertically resolved model (BAMS1) to soil carbon dynamics. <i>Geoscientific Model Development</i> , 2014, 7, 1335-1355.	1.3	97
44	Meta-analysis of high-latitude nitrogen-addition and warming studies implies ecological mechanisms overlooked by land models. <i>Biogeosciences</i> , 2014, 11, 6969-6983.	1.3	34
45	CLM4-BeTR, a generic biogeochemical transport and reaction module for CLM4: model development, evaluation, and application. <i>Geoscientific Model Development</i> , 2013, 6, 127-140.	1.3	50
46	Impacts of a new bare-soil evaporation formulation on site, regional, and global surface energy and water budgets in CLM4. <i>Journal of Advances in Modeling Earth Systems</i> , 2013, 5, 558-571.	1.3	26
47	Response of global soil consumption of atmospheric methane to changes in atmospheric climate and nitrogen deposition. <i>Global Biogeochemical Cycles</i> , 2013, 27, 650-663.	1.9	88
48	A total quasi-steady-state formulation of substrate uptake kinetics in complex networks and an example application to microbial litter decomposition. <i>Biogeosciences</i> , 2013, 10, 8329-8351.	1.3	79
49	A new top boundary condition for modeling surface diffusive exchange of a generic volatile tracer: theoretical analysis and application to soil evaporation. <i>Hydrology and Earth System Sciences</i> , 2013, 17, 873-893.	1.9	51
50	The effect of vertically resolved soil biogeochemistry and alternate soil C and N models on C dynamics of CLM4. <i>Biogeosciences</i> , 2013, 10, 7109-7131.	1.3	359
51	Trait-Based Representation of Biological Nitrification: Model Development, Testing, and Predicted Community Composition. <i>Frontiers in Microbiology</i> , 2012, 3, 364.	1.5	94
52	Technical Note: Propagating correlations in atmospheric inversions using different Kalman update smoothers. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 921-929.	1.9	3
53	Modeling soil thermal and hydrological dynamics and changes of growing season in Alaskan terrestrial ecosystems. <i>Climatic Change</i> , 2011, 107, 481-510.	1.7	25
54	Soil warming, carbon-nitrogen interactions, and forest carbon budgets. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 9508-9512.	3.3	459

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55	Reduction of forest soil respiration in response to nitrogen deposition. <i>Nature Geoscience</i> , 2010, 3, 315-322.	5.4	1,254
56	Quantifying wetland methane emissions with process-based models of different complexities. <i>Biogeosciences</i> , 2010, 7, 3817-3837.	1.3	53
57	A global sensitivity analysis and Bayesian inference framework for improving the parameter estimation and prediction of a process-based Terrestrial Ecosystem Model. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	57
58	Equifinality in parameterization of process-based biogeochemistry models: A significant uncertainty source to the estimation of regional carbon dynamics. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	75
59	Analytical investigation on 3D non-Boussinesq mountain wave drag for wind profiles with vertical variations. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2007, 28, 317-325.	1.9	4