

Yongguang Zhang

List of Publications by Year in descending order

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Version: 2024-02-01

94
papers

6,878
citations

66343

42
h-index

60623

81
g-index

105
all docs

105
docs citations

105
times ranked

5400
citing authors

#	ARTICLE	IF	CITATIONS
1	Global and time-resolved monitoring of crop photosynthesis with chlorophyll fluorescence. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E1327-33.	7.1	741
2	Ecosystem resilience despite large-scale altered hydroclimatic conditions. Nature, 2013, 494, 349-352.	27.8	450
3	Integrating satellite and climate data to predict wheat yield in Australia using machine learning approaches. Agricultural and Forest Meteorology, 2019, 274, 144-159.	4.8	319
4	Recent global decline of CO ₂ fertilization effects on vegetation photosynthesis. Science, 2020, 370, 1295-1300.	12.6	317
5	The seasonal cycle of satellite chlorophyll fluorescence observations and its relationship to vegetation phenology and ecosystem atmosphere carbon exchange. Remote Sensing of Environment, 2014, 152, 375-391.	11.0	287
6	Estimation of vegetation photosynthetic capacity from space-based measurements of chlorophyll fluorescence for terrestrial biosphere models. Global Change Biology, 2014, 20, 3727-3742.	9.5	260
7	Improving the monitoring of crop productivity using spaceborne solar-induced fluorescence. Global Change Biology, 2016, 22, 716-726.	9.5	240
8	Satellite chlorophyll fluorescence measurements reveal large-scale decoupling of photosynthesis and greenness dynamics in boreal evergreen forests. Global Change Biology, 2016, 22, 2979-2996.	9.5	225
9	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.	11.0	185
10	Canopy structure explains the relationship between photosynthesis and sun-induced chlorophyll fluorescence in crops. Remote Sensing of Environment, 2020, 241, 111733.	11.0	183
11	Consistency between sun-induced chlorophyll fluorescence and gross primary production of vegetation in North America. Remote Sensing of Environment, 2016, 183, 154-169.	11.0	180
12	Characteristics and factors controlling the development of ephemeral gullies in cultivated catchments of black soil region, Northeast China. Soil and Tillage Research, 2007, 96, 28-41.	5.6	163
13	Satellite sun-induced chlorophyll fluorescence detects early response of winter wheat to heat stress in the Indian Indo-Gangetic Plains. Global Change Biology, 2018, 24, 4023-4037.	9.5	152
14	Chlorophyll fluorescence tracks seasonal variations of photosynthesis from leaf to canopy in a temperate forest. Global Change Biology, 2017, 23, 2874-2886.	9.5	135
15	Tracking the seasonal and inter-annual variations of global gross primary production during last four decades using satellite near-infrared reflectance data. Science of the Total Environment, 2021, 755, 142569.	8.0	125
16	Estimating crop primary productivity with Sentinel-2 and Landsat 8 using machine learning methods trained with radiative transfer simulations. Remote Sensing of Environment, 2019, 225, 441-457.	11.0	112
17	Development of gullies and sediment production in the black soil region of northeastern China. Geomorphology, 2008, 101, 683-691.	2.6	103
18	Projected rainfall erosivity changes under climate change from multimodel and multiscenario projections in Northeast China. Journal of Hydrology, 2010, 384, 97-106.	5.4	98

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19	Urban-rural gradients reveal joint control of elevated CO ₂ and temperature on extended photosynthetic seasons. <i>Nature Ecology and Evolution</i> , 2019, 3, 1076-1085.	7.8	98
20	On the relationship between sub-daily instantaneous and daily total gross primary production: Implications for interpreting satellite-based SIF retrievals. <i>Remote Sensing of Environment</i> , 2018, 205, 276-289.	11.0	91
21	Chlorophyll a fluorescence illuminates a path connecting plant molecular biology to Earth-system science. <i>Nature Plants</i> , 2021, 7, 998-1009.	9.3	88
22	Drought rapidly diminishes the large net CO ₂ uptake in 2011 over semi-arid Australia. <i>Scientific Reports</i> , 2016, 6, 37747.	3.3	83
23	Reduction of structural impacts and distinction of photosynthetic pathways in a global estimation of GPP from space-borne solar-induced chlorophyll fluorescence. <i>Remote Sensing of Environment</i> , 2020, 240, 111722.	11.0	83
24	Comparison of solar-induced chlorophyll fluorescence, light-use efficiency, and process-based <sc>GPP</sc> models in maize. <i>Ecological Applications</i> , 2016, 26, 1211-1222.	3.8	82
25	Solar-induced chlorophyll fluorescence and its link to canopy photosynthesis in maize from continuous ground measurements. <i>Remote Sensing of Environment</i> , 2020, 236, 111420.	11.0	81
26	NIRVP: A robust structural proxy for sun-induced chlorophyll fluorescence and photosynthesis across scales. <i>Remote Sensing of Environment</i> , 2022, 268, 112763.	11.0	77
27	Functional response of U.S. grasslands to the early 21st-century drought. <i>Ecology</i> , 2014, 95, 2121-2133.	3.2	75
28	Extreme precipitation patterns and reductions of terrestrial ecosystem production across biomes. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2013, 118, 148-157.	3.0	74
29	Short-term gully retreat rates over rolling hill areas in black soil of Northeast China. <i>Catena</i> , 2007, 71, 321-329.	5.0	71
30	Progress and Trends in the Application of Google Earth and Google Earth Engine. <i>Remote Sensing</i> , 2021, 13, 3778.	4.0	71
31	Spatially-explicit monitoring of crop photosynthetic capacity through the use of space-based chlorophyll fluorescence data. <i>Remote Sensing of Environment</i> , 2018, 210, 362-374.	11.0	69
32	FluoSpec 2-An Automated Field Spectroscopy System to Monitor Canopy Solar-Induced Fluorescence. <i>Sensors</i> , 2018, 18, 2063.	3.8	67
33	Satellite-based survey of extreme methane emissions in the Permian basin. <i>Science Advances</i> , 2021, 7, .	10.3	66
34	Angle matters: Bidirectional effects impact the slope of relationship between gross primary productivity and sun-induced chlorophyll fluorescence from Orbiting Carbon Observatory-2 across biomes. <i>Global Change Biology</i> , 2018, 24, 5017-5020.	9.5	62
35	An Overview of the Applications of Earth Observation Satellite Data: Impacts and Future Trends. <i>Remote Sensing</i> , 2022, 14, 1863.	4.0	61
36	Modeling canopy conductance and transpiration from solar-induced chlorophyll fluorescence. <i>Agricultural and Forest Meteorology</i> , 2019, 268, 189-201.	4.8	60

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37	From Canopy-Leafing to Total Canopy Far-Red Fluorescence Emission for Remote Sensing of Photosynthesis: First Results From TROPOMI. <i>Geophysical Research Letters</i> , 2019, 46, 12030-12040.	4.0	59
38	The TROPOSIF global sun-induced fluorescence dataset from the Sentinel-5P TROPOMI mission. <i>Earth System Science Data</i> , 2021, 13, 5423-5440.	9.9	54
39	Spatio-Temporal Convergence of Maximum Daily Light-Use Efficiency Based on Radiation Absorption by Canopy Chlorophyll. <i>Geophysical Research Letters</i> , 2018, 45, 3508-3519.	4.0	48
40	Warmer spring alleviated the impacts of 2018 European summer heatwave and drought on vegetation photosynthesis. <i>Agricultural and Forest Meteorology</i> , 2020, 295, 108195.	4.8	48
41	Photoperiod decelerates the advance of spring phenology of six deciduous tree species under climate warming. <i>Global Change Biology</i> , 2021, 27, 2914-2927.	9.5	48
42	SIFSpec: Measuring Solar-Induced Chlorophyll Fluorescence Observations for Remote Sensing of Photosynthesis. <i>Sensors</i> , 2019, 19, 3009.	3.8	44
43	Advances in hyperspectral remote sensing of vegetation traits and functions. <i>Remote Sensing of Environment</i> , 2021, 252, 112121.	11.0	44
44	Satellite evidence for China's leading role in restoring vegetation productivity over global karst ecosystems. <i>Forest Ecology and Management</i> , 2022, 507, 120000.	3.2	44
45	Separating the effects of climate change and human activity on water use efficiency over the Beijing-Tianjin Sand Source Region of China. <i>Science of the Total Environment</i> , 2019, 690, 584-595.	8.0	43
46	Assessing bi-directional effects on the diurnal cycle of measured solar-induced chlorophyll fluorescence in crop canopies. <i>Agricultural and Forest Meteorology</i> , 2020, 295, 108147.	4.8	43
47	Satellite Chlorophyll Fluorescence and Soil Moisture Observations Lead to Advances in the Predictive Understanding of Global Terrestrial Coupled Carbon-Water Cycles. <i>Global Biogeochemical Cycles</i> , 2018, 32, 360-375.	4.9	42
48	Response of Ecosystem Water Use Efficiency to Drought over China during 1982-2015: Spatiotemporal Variability and Resilience. <i>Forests</i> , 2019, 10, 598.	2.1	42
49	The potential of satellite FPAR product for GPP estimation: An indirect evaluation using solar-induced chlorophyll fluorescence. <i>Remote Sensing of Environment</i> , 2020, 240, 111686.	11.0	42
50	A model for estimating transpiration from remotely sensed solar-induced chlorophyll fluorescence. <i>Remote Sensing of Environment</i> , 2021, 252, 112134.	11.0	39
51	Distinguishing Anthropogenic CO ₂ Emissions From Different Energy Intensive Industrial Sources Using OCO ₂ Observations: A Case Study in Northern China. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 9462-9473.	3.3	36
52	Simulating emission and scattering of solar-induced chlorophyll fluorescence at far-red band in global vegetation with different canopy structures. <i>Remote Sensing of Environment</i> , 2019, 233, 111373.	11.0	36
53	The characteristics of gully erosion over rolling hilly black soil areas of Northeast China. <i>Journal of Chinese Geography</i> , 2009, 19, 309-320.	3.9	29
54	Variations and drivers of methane fluxes from a rice-wheat rotation agroecosystem in eastern China at seasonal and diurnal scales. <i>Science of the Total Environment</i> , 2019, 690, 973-990.	8.0	29

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55	Satellite-observed solar-induced chlorophyll fluorescence reveals higher sensitivity of alpine ecosystems to snow cover on the Tibetan Plateau. <i>Agricultural and Forest Meteorology</i> , 2019, 271, 126-134.	4.8	29
56	Satellite-Observed Variations and Trends in Carbon Monoxide over Asia and Their Sensitivities to Biomass Burning. <i>Remote Sensing</i> , 2020, 12, 830.	4.0	26
57	Wide discrepancies in the magnitude and direction of modeled solar-induced chlorophyll fluorescence in response to light conditions. <i>Biogeosciences</i> , 2020, 17, 3733-3755.	3.3	24
58	Widespread Decline in Vegetation Photosynthesis in Southeast Asia Due to the Prolonged Drought During the 2015/2016 El Niño. <i>Remote Sensing</i> , 2019, 11, 910.	4.0	23
59	ChinaSpec: A Network for Long-Term Ground-Based Measurements of Solar-Induced Fluorescence in China. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2020JG006042.	3.0	22
60	Comparative rates of wind versus water erosion from a small semiarid watershed in southern Arizona, USA. <i>Aeolian Research</i> , 2011, 3, 197-204.	2.7	20
61	Sensitivity of Estimated Total Canopy SIF Emission to Remotely Sensed LAI and BRDF Products. <i>Journal of Remote Sensing</i> , 2021, 2021, .	6.7	20
62	Intermediate Aerosol Loading Enhances Photosynthetic Activity of Croplands. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL091893.	4.0	19
63	Seasonal variations in the relationship between sun-induced chlorophyll fluorescence and photosynthetic capacity from the leaf to canopy level in a rice crop. <i>Journal of Experimental Botany</i> , 2020, 71, 7179-7197.	4.8	18
64	Performance of a two-leaf light use efficiency model for mapping gross primary productivity against remotely sensed sun-induced chlorophyll fluorescence data. <i>Science of the Total Environment</i> , 2018, 613-614, 977-989.	8.0	17
65	Tracking Seasonal and Interannual Variability in Photosynthetic Downregulation in Response to Water Stress at a Temperate Deciduous Forest. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020, 125, e2018JG005002.	3.0	17
66	The Ability of Sun-Induced Chlorophyll Fluorescence From OCO-2 and MODIS-EVI to Monitor Spatial Variations of Soybean and Maize Yields in the Midwestern USA. <i>Remote Sensing</i> , 2020, 12, 1111.	4.0	17
67	Assessing phenological change in China from 1982 to 2006 using AVHRR imagery. <i>Frontiers of Earth Science</i> , 2012, 6, 227-236.	2.1	16
68	Comparison of Bi-Hemispherical and Hemispherical-Conical Configurations for In Situ Measurements of Solar-Induced Chlorophyll Fluorescence. <i>Remote Sensing</i> , 2019, 11, 2642.	4.0	16
69	Correcting Clear-Sky Bias in Gross Primary Production Modeling From Satellite Solar-Induced Chlorophyll Fluorescence Data. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020, 125, e2020JG005822.	3.0	15
70	Response to Comments on "Recent global decline of CO ₂ fertilization effects on vegetation photosynthesis". <i>Science</i> , 2021, 373, eabg7484.	12.6	15
71	Resistance and resilience of grasslands to drought detected by SIF in inner Mongolia, China. <i>Agricultural and Forest Meteorology</i> , 2021, 308-309, 108567.	4.8	15
72	Adjusting solar-induced fluorescence to nadir-viewing provides a better proxy for GPP. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2022, 186, 157-169.	11.1	14

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73	Potential of Sun-Induced Chlorophyll Fluorescence for Indicating Mangrove Canopy Photosynthesis. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2020JG006159.	3.0	13
74	Global assessment of partitioning transpiration from evapotranspiration based on satellite solar-induced chlorophyll fluorescence data. <i>Journal of Hydrology</i> , 2022, 612, 128044.	5.4	13
75	Reply to Magnani et al.: Linking large-scale chlorophyll fluorescence observations with cropland gross primary production. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E2511.	7.1	11
76	Constraining global terrestrial gross primary productivity in a global carbon assimilation system with OCO-2 chlorophyll fluorescence data. <i>Agricultural and Forest Meteorology</i> , 2021, 304-305, 108424.	4.8	10
77	Exploring Seasonal and Circadian Rhythms in Structural Traits of Field Maize from LiDAR Time Series. <i>Plant Phenomics</i> , 2021, 2021, 9895241.	5.9	10
78	Physiological dynamics dominate the response of canopy far-red solar-induced fluorescence to herbicide treatment. <i>Agricultural and Forest Meteorology</i> , 2022, 323, 109063.	4.8	10
79	Simulation of solar-induced chlorophyll fluorescence in a heterogeneous forest using 3-D radiative transfer modelling and airborne LiDAR. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2022, 191, 1-17.	11.1	7
80	Evaluating Multi-Angle Photochemical Reflectance Index and Solar-Induced Fluorescence for the Estimation of Gross Primary Production in Maize. <i>Remote Sensing</i> , 2020, 12, 2812.	4.0	6
81	Resolving temperature limitation on spring productivity in an evergreen conifer forest using a model-data fusion framework. <i>Biogeosciences</i> , 2022, 19, 541-558.	3.3	6
82	Recent advances in global monitoring of terrestrial sun-induced chlorophyll fluorescence. , 2016, , .		5
83	Evaluation of GOFP over four forest plots using RAMI and UAV measurements. <i>International Journal of Digital Earth</i> , 2021, 14, 1433-1451.	3.9	5
84	Temporal resolution of vegetation indices and solar-induced chlorophyll fluorescence data affects the accuracy of vegetation phenology estimation: A study using in-situ measurements. <i>Ecological Indicators</i> , 2022, 136, 108673.	6.3	5
85	The Effects of Sun-Viewer Geometry on Sun-Induced Fluorescence and Its Relationship with Gross Primary Production. , 2019, , .		4
86	Ground-Based Multiangle Solar-Induced Chlorophyll Fluorescence Observation and Angular Normalization for Assessing Crop Productivity. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2020JG006082.	3.0	4
87	Seasonal Variations in Leaf Maximum Photosynthetic Capacity and Its Dependence on Climate Factors Across Global FLUXNET Sites. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2022, 127, .	3.0	4
88	Sun-induced chlorophyll fluorescence is more strongly related to photosynthesis with hemispherical than nadir measurements: Evidence from field observations and model simulations. <i>Remote Sensing of Environment</i> , 2022, 279, 113118.	11.0	4
89	Can we retrieve vegetation photosynthetic capacity parameter from solar-induced fluorescence?. , 2016, , .		3
90	LINKING PHOTOSYNTHETIC LIGHT USE EFFICIENCY AND OPTICAL VEGETATION ACTIVE INDICATORS: IMPLICATIONS FOR GROSS PRIMARY PRODUCTION ESTIMATION BY REMOTE SENSING. <i>ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences</i> , 0, V-3-2020, 571-578.	0.0	2

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91	Modeling solar-induced fluorescence of forest with heterogeneous distribution of damaged foliage by extending the stochastic radiative transfer theory. Remote Sensing of Environment, 2022, 271, 112892.	11.0	2
92	Influences of fractional vegetation cover on the spatial variability of canopy SIF from unmanned aerial vehicle observations. International Journal of Applied Earth Observation and Geoinformation, 2022, 107, 102712.	2.8	2
93	Fusion of SCIAMACHY and GOME-2 satellite sun-induced fluorescence data. , 2016, , .		1
94	Beyond APAR and NPQ: Factors Coupling and Decoupling SIF and GPP Across Scales. , 2021, , .		0