Lianhong Gu

List of Publications by Year in descending order

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30070 18130 15,598 129 54 120 citations h-index g-index papers 138 138 138 14416 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	FLUXNET: A New Tool to Study the Temporal and Spatial Variability of Ecosystem–Scale Carbon Dioxide, Water Vapor, and Energy Flux Densities. Bulletin of the American Meteorological Society, 2001, 82, 2415-2434.	3.3	3,018
2	Environmental controls over carbon dioxide and water vapor exchange of terrestrial vegetation. Agricultural and Forest Meteorology, 2002, 113, 97-120.	4.8	1,133
3	Response of a Deciduous Forest to the Mount Pinatubo Eruption: Enhanced Photosynthesis. Science, 2003, 299, 2035-2038.	12.6	566
4	Observed increase in local cooling effect of deforestation at higher latitudes. Nature, 2011, 479, 384-387.	27.8	543
5	Biogenic Hydrocarbons in the Atmospheric Boundary Layer: A Review. Bulletin of the American Meteorological Society, 2000, 81, 1537-1575.	3.3	532
6	Advantages of diffuse radiation for terrestrial ecosystem productivity. Journal of Geophysical Research, 2002, 107, ACL 2-1-ACL 2-23.	3.3	518
7	The 2007 Eastern US Spring Freeze: Increased Cold Damage in a Warming World?. BioScience, 2008, 58, 253-262.	4.9	506
8	OCO-2 advances photosynthesis observation from space via solar-induced chlorophyll fluorescence. Science, 2017, 358, .	12.6	438
9	The relationship of leaf photosynthetic traits – <i>V</i> _{cmax} and <i>J</i> _{max} – to leaf nitrogen, leaf phosphorus, and specific leaf area: a metaâ€analysis and modeling study. Ecology and Evolution, 2014, 4, 3218-3235.	1.9	338
10	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
11	Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO ₂ . New Phytologist, 2021, 229, 2413-2445.	7.3	286
12	A modelâ€data comparison of gross primary productivity: Results from the North American Carbon Program site synthesis. Journal of Geophysical Research, 2012, 117, .	3.3	274
13	The MODIS (Collection V005) BRDF/albedo product: Assessment of spatial representativeness over forested landscapes. Remote Sensing of Environment, 2009, 113, 2476-2498.	11.0	272
14	A modelâ€data intercomparison of CO ₂ exchange across North America: Results from the North American Carbon Program site synthesis. Journal of Geophysical Research, 2010, 115, .	3.3	247
15	Objective threshold determination for nighttime eddy flux filtering. Agricultural and Forest Meteorology, 2005, 128, 179-197.	4.8	241
16	Drought onset mechanisms revealed by satellite solarâ€induced chlorophyll fluorescence: Insights from two contrasting extreme events. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2427-2440.	3.0	224
17	Responses of net ecosystem exchanges of carbon dioxide to changes in cloudiness: Results from two North American deciduous forests. Journal of Geophysical Research, 1999, 104, 31421-31434.	3.3	222
18	Estimation of net ecosystem carbon exchange for the conterminous United States by combining MODIS and AmeriFlux data. Agricultural and Forest Meteorology, 2008, 148, 1827-1847.	4.8	221

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19	A continuous measure of gross primary production for the conterminous United States derived from MODIS and AmeriFlux data. Remote Sensing of Environment, 2010, 114, 576-591.	11.0	210
20	How the environment, canopy structure and canopy physiological functioning influence carbon, water and energy fluxes of a temperate broad-leaved deciduous forestan assessment with the biophysical model CANOAK. Tree Physiology, 2002, 22, 1065-1077.	3.1	204
21	The Great 2008 Chinese Ice Storm: Its Socioeconomic–Ecological Impact and Sustainability Lessons Learned. Bulletin of the American Meteorological Society, 2011, 92, 47-60.	3.3	201
22	Direct and indirect effects of atmospheric conditions and soil moisture on surface energy partitioning revealed by a prolonged drought at a temperate forest site. Journal of Geophysical Research, 2006, 111, .	3.3	191
23	Reliable estimation of biochemical parameters from C ₃ leaf photosynthesis–intercellular carbon dioxide response curves. Plant, Cell and Environment, 2010, 33, 1852-1874.	5.7	180
24	Predicting the onset of net carbon uptake by deciduous forests with soil temperature and climate data: a synthesis of FLUXNET data. International Journal of Biometeorology, 2005, 49, 377-387.	3.0	167
25	Assessing net ecosystem carbon exchange of U.S. terrestrial ecosystems by integrating eddy covariance flux measurements and satellite observations. Agricultural and Forest Meteorology, 2011, 151, 60-69.	4.8	157
26	Sunâ€induced Chl fluorescence and its importance for biophysical modeling of photosynthesis based on light reactions. New Phytologist, 2019, 223, 1179-1191.	7.3	154
27	Albedo estimates for land surface models and support for a new paradigm based on foliage nitrogen concentration. Global Change Biology, 2010, 16, 696-710.	9.5	144
28	Climate control of terrestrial carbon exchange across biomes and continents. Environmental Research Letters, 2010, 5, 034007.	5.2	137
29	Fast labile carbon turnover obscures sensitivity of heterotrophic respiration from soil to temperature: A model analysis. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	4.9	135
30	Temperature-independent diel variation in soil respiration observed from a temperate deciduous forest. Global Change Biology, 2006, 12, 2136-2145.	9.5	134
31	Impact of mesophyll diffusion on estimated global land CO ₂ fertilization. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15774-15779.	7.1	129
32	Use of change-point detection for friction–velocity threshold evaluation in eddy-covariance studies. Agricultural and Forest Meteorology, 2013, 171-172, 31-45.	4.8	126
33	On the temporal upscaling of evapotranspiration from instantaneous remote sensing measurements to 8-day mean daily-sums. Agricultural and Forest Meteorology, 2012, 152, 212-222.	4.8	121
34	Attaining whole-ecosystem warming using air and deep-soil heating methods with an elevated CO ₂ atmosphere. Biogeosciences, 2017, 14, 861-883.	3.3	115
35	Microbial dormancy improves development and experimental validation of ecosystem model. ISME Journal, 2015, 9, 226-237.	9.8	113
36	Thermal optimality of net ecosystem exchange of carbon dioxide and underlying mechanisms. New Phytologist, 2012, 194, 775-783.	7.3	111

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37	Artefactual responses of mesophyll conductance to <scp>CO</scp> ₂ and irradiance estimated with the variable <i><scp>J</scp></i> and online isotope discrimination methods. Plant, Cell and Environment, 2014, 37, 1231-1249.	5.7	108
38	The many meanings of gross photosynthesis and their implication for photosynthesis research from leaf to globe. Plant, Cell and Environment, 2015, 38, 2500-2507.	5.7	92
39	Estimating nocturnal ecosystem respiration from the vertical turbulent flux and change in storage of CO2. Agricultural and Forest Meteorology, 2009, 149, 1919-1930.	4.8	91
40	Asymmetrical effects of mesophyll conductance on fundamental photosynthetic parameters and their relationships estimated from leaf gas exchange measurements. Plant, Cell and Environment, 2014, 37, 978-994.	5.7	90
41	Data-driven diagnostics of terrestrial carbon dynamics over North America. Agricultural and Forest Meteorology, 2014, 197, 142-157.	4.8	88
42	Vegetation restoration in <scp>N</scp> orthern China: A contrasted picture. Land Degradation and Development, 2020, 31, 669-676.	3.9	81
43	Micrometeorology, biophysical exchanges and NEE decomposition in a two-story boreal forest — development and test of an integrated model. Agricultural and Forest Meteorology, 1999, 94, 123-148.	4.8	78
44	Cloud modulation of surface solar irradiance at a pasture site in southern Brazil. Agricultural and Forest Meteorology, 2001, 106, 117-129.	4.8	78
45	Reconstruction of false spring occurrences over the southeastern United States, 1901–2007: an increasing risk of spring freeze damage?. Environmental Research Letters, 2011, 6, 024015.	5.2	78
46	Ecosystemâ€scale volatile organic compound fluxes duringÂan extreme drought in a broadleaf temperate forestÂof the Missouri Ozarks (central <scp>USA</scp>). Global Change Biology, 2015, 21, 3657-3674.	9.5	76
47	Environmental controls on water use efficiency during severe drought in an Ozark Forest in Missouri, USA. Global Change Biology, 2010, 16, 2252-2271.	9.5	71
48	Seasonal Variations in Isoprene Emissions from a Boreal Aspen Forest. Journal of Applied Meteorology and Climatology, 1999, 38, 855-869.	1.7	66
49	Isoprene emission response to drought and the impact on global atmospheric chemistry. Atmospheric Environment, 2018, 183, 69-83.	4.1	62
50	Observed and modeled ecosystem isoprene fluxes from an oak-dominated temperate forest and the influence of drought stress. Atmospheric Environment, 2014, 84, 314-322.	4.1	61
51	Potential impacts of aerosol–land–atmosphere interactions on the Indian monsoonal rainfall characteristics. Natural Hazards, 2007, 42, 345-359.	3.4	60
52	<scp><i>S</i></scp> <i>phagnum</i> physiology in the context of changing climate: emergent influences of genomics, modelling and host†microbiome interactions on understanding ecosystem function. Plant, Cell and Environment, 2015, 38, 1737-1751.	5.7	60
53	Representation of Dormant and Active Microbial Dynamics for Ecosystem Modeling. PLoS ONE, 2014, 9, e89252.	2.5	59
54	Crown structure and growth efficiency of red spruce in uneven-aged, mixed-species stands in Maine. Canadian Journal of Forest Research, 1998, 28, 1233-1240.	1.7	58

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55	Moisture availability mediates the relationship between terrestrial gross primary production and solarâ€induced chlorophyll fluorescence: Insights from globalâ€scale variations. Global Change Biology, 2021, 27, 1144-1156.	9.5	57
56	The fundamental equation of eddy covariance and its application in flux measurements. Agricultural and Forest Meteorology, 2012, 152, 135-148.	4.8	56
57	Advancing Terrestrial Ecosystem Science With a Novel Automated Measurement System for Sunâ Cl nduced Chlorophyll Fluorescence for Integration With Eddy Covariance Flux Networks. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 127-146.	3.0	48
58	Photoperiod decelerates the advance of spring phenology of six deciduous tree species under climate warming. Global Change Biology, 2021, 27, 2914-2927.	9.5	48
59	Biotic and climatic controls on interannual variability in carbon fluxes across terrestrial ecosystems. Agricultural and Forest Meteorology, 2015, 205, 11-22.	4.8	47
60	Systematic Assessment of Retrieval Methods for Canopy Farâ€Red Solarâ€Induced Chlorophyll Fluorescence Using Highâ€Frequency Automated Field Spectroscopy. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2019JG005533.	3.0	47
61	Drought-influenced mortality of tree species with different predawn leaf water dynamics in a decade-long study of a central US forest. Biogeosciences, 2015, 12, 2831-2845.	3. 3	46
62	Informing models through empirical relationships between foliar phosphorus, nitrogen and photosynthesis across diverse woody species in tropical forests of Panama. New Phytologist, 2017, 215, 1425-1437.	7.3	46
63	Influences of biomass heat and biochemical energy storages on the land surface fluxes and radiative temperature. Journal of Geophysical Research, 2007, 112, .	3.3	45
64	Characterizing the Seasonal Dynamics of Plant Community Photosynthesis Across a Range of Vegetation Types., 2009,, 35-58.		42
65	Controls on winter ecosystem respiration in temperate and boreal ecosystems. Biogeosciences, 2011, 8, 2009-2025.	3 . 3	42
66	New Particle Formation and Growth in an Isoprene-Dominated Ozark Forest: From Sub-5Ânm to CCN-Active Sizes. Aerosol Science and Technology, 2014, 48, 1285-1298.	3.1	41
67	Timing and magnitude of C partitioning through a young loblolly pine (Pinus taeda L.) stand using 13C labeling and shade treatments. Tree Physiology, 2012, 32, 799-813.	3.1	38
68	An Unmanned Aerial System (UAS) for concurrent measurements of solar-induced chlorophyll fluorescence and hyperspectral reflectance toward improving crop monitoring. Agricultural and Forest Meteorology, 2020, 294, 108145.	4.8	38
69	The importance of drought–pathogen interactions in driving oak mortality events in the Ozark Border Region. Environmental Research Letters, 2018, 13, 015004.	5.2	36
70	Phenology of Vegetation Photosynthesis. Tasks for Vegetation Science, 2003, , 467-485.	0.6	36
71	Biases of CO ₂ storage in eddy flux measurements in a forest pertinent to vertical configurations of a profile system and CO ₂ density averaging. Journal of Geophysical Research, 2007, 112, .	3.3	34
72	A novel approach for identifying the true temperature sensitivity from soil respiration measurements. Global Biogeochemical Cycles, 2008, 22, .	4.9	34

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73	Studying drought-induced forest mortality using high spatiotemporal resolution evapotranspiration data from thermal satellite imaging. Remote Sensing of Environment, 2021, 265, 112640.	11.0	34
74	Impacts of precipitation variability on plant species and community water stress in a temperate deciduous forest in the central US. Agricultural and Forest Meteorology, 2016, 217, 120-136.	4.8	33
75	Unpacking the drivers of diurnal dynamics of sun-induced chlorophyll fluorescence (SIF): Canopy structure, plant physiology, instrument configuration and retrieval methods. Remote Sensing of Environment, 2021, 265, 112672.	11.0	33
76	Impact of the 2008 ice storm on moso bamboo plantations in southeast China. Journal of Geophysical Research, 2011, 116, .	3.3	31
77	An ecosystem-scale perspective of the net land methanol flux: synthesis of micrometeorological flux measurements. Atmospheric Chemistry and Physics, 2015, 15, 7413-7427.	4.9	31
78	Evaluating atmospheric CO2 effects on gross primary productivity and net ecosystem exchanges of terrestrial ecosystems in the conterminous United States using the AmeriFlux data and an artificial neural network approach. Agricultural and Forest Meteorology, 2016, 220, 38-49.	4.8	31
79	Incorporating microbial dormancy dynamics into soil decomposition models to improve quantification of soil carbon dynamics of northern temperate forests. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2596-2611.	3.0	29
80	Testing a land model in ecosystem functional space via a comparison of observed and modeled ecosystem flux responses to precipitation regimes and associated stresses in a Central U.S. forest. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 1884-1902.	3.0	29
81	Forest greenness after the massive 2008 Chinese ice storm: integrated effects of natural processes and human intervention. Environmental Research Letters, 2012, 7, 035702.	5.2	26
82	The physiological basis for estimating photosynthesis from Chl <i>a</i> fluorescence. New Phytologist, 2022, 234, 1206-1219.	7.3	26
83	Estimating soil respiration using spatial data products: A case study in a deciduous broadleaf forest in the Midwest USA. Journal of Geophysical Research D: Atmospheres, 2014, 119, 6393-6408.	3.3	25
84	Calibration of the E3SM Land Model Using Surrogateâ€Based Global Optimization. Journal of Advances in Modeling Earth Systems, 2018, 10, 1337-1356.	3.8	25
85	Assimilation of satellite reflectance data into a dynamical leaf model to infer seasonally varying leaf areas for climate and carbon models. Journal of Geophysical Research, 2008, 113, .	3.3	24
86	Performance of Linear and Nonlinear Two-Leaf Light Use Efficiency Models at Different Temporal Scales. Remote Sensing, 2015, 7, 2238-2278.	4.0	23
87	Biophysical drivers of seasonal variability in <i>Sphagnum</i> gross primary production in a northern temperate bog. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 1078-1097.	3.0	22
88	Granal thylakoid structure and function: explaining an enduring mystery of higher plants. New Phytologist, 2022, 236, 319-329.	7.3	22
89	A functional test platform for the Community Land Model. Environmental Modelling and Software, 2014, 55, 25-31.	4.5	21
90	Partitioning Climatic and Biotic Effects on Interannual Variability of Ecosystem Carbon Exchange in Three Ecosystems. Ecosystems, 2014, 17, 1186-1201.	3.4	21

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91	Direct and indirect effects of climatic variations on the interannual variability in net ecosystem exchange across terrestrial ecosystems. Tellus, Series B: Chemical and Physical Meteorology, 2022, 68, 30575.	1.6	21
92	A numerical issue in calculating the coupled carbon and water fluxes in a climate model. Journal of Geophysical Research, 2012, 117 , .	3.3	19
93	Seasonal variations in the relationship between sun-induced chlorophyll fluorescence and photosynthetic capacity from the leaf to canopy level in a rice crop. Journal of Experimental Botany, 2020, 71, 7179-7197.	4.8	18
94	Artificial light at night: an underappreciated effect on phenology of deciduous woody plants. , 2022, 1 , .		18
95	A new paradigm of quantifying ecosystem stress through chemical signatures. Ecosphere, 2016, 7, e01559.	2.2	16
96	Large drought-induced variations in oak leaf volatile organic compound emissions during PINOT NOIR 2012. Chemosphere, 2016, 146, 8-21.	8.2	16
97	Drought impacts on photosynthesis, isoprene emission and atmospheric formaldehyde in a mid-latitude forest. Atmospheric Environment, 2017, 167, 190-201.	4.1	16
98	Remote sensingâ€based estimation of annual soil respiration at two contrasting forest sites. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2306-2325.	3.0	15
99	The Phenology of Gross Ecosystem Productivity and Ecosystem Respiration in Temperate Hardwood and Conifer Chronosequences., 2009,, 59-85.		14
100	The multi-assumption architecture and testbed (MAAT v1.0): R code for generating ensembles with dynamic model structure and analysis of epistemic uncertainty from multiple sources. Geoscientific Model Development, 2018, 11 , $3159-3185$.	3.6	13
101	Seasonal, diurnal and vertical variation in photosynthetic parameters in Phyllostachys humilis bamboo plants. Photosynthesis Research, 2014, 120, 331-346.	2.9	12
102	Imposed drought effects on carbon storage of moso bamboo ecosystem in southeast China: results from a field experiment. Ecological Research, 2018, 33, 393-402.	1.5	12
103	Inference of photosynthetic capacity parameters from chlorophyll a fluorescence is affected by redox state of PSII reaction centers. Plant, Cell and Environment, 2022, 45, 1298-1314.	5.7	12
104	Comment on "Climate and Management Contributions to Recent Trends in U.S. Agricultural Yields". Science, 2003, 300, 1505b-1505.	12.6	11
105	Nitrogen control of & Dit; sup &	3.3	11
106	Using Time Series Segmentation for Deriving Vegetation Phenology Indices from MODIS NDVI Data. , 2010, , .		10
107	The interaction between nitrogen and phosphorous is a strong predictor of intra-plant variation in nitrogen isotope composition in a desert species. Biogeosciences, 2017, 14, 131-144.	3.3	10
108	A MODIS Photochemical Reflectance Index (PRI) as an Estimator of Isoprene Emissions in a Temperate Deciduous Forest. Remote Sensing, 2018, 10, 557.	4.0	10

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109	Photosynthetic and environmental regulations of the dynamics of soil respiration in a forest ecosystem revealed by analyses of decadal time series. Agricultural and Forest Meteorology, 2020, 282-283, 107863.	4.8	10
110	The roles of photochemical and non-photochemical quenching in regulating photosynthesis depend on the phases of fluctuating light conditions. Tree Physiology, 2022, 42, 848-861.	3.1	10
111	Crown structure and growth efficiency of red spruce in uneven-aged, mixed-species stands in Maine. Canadian Journal of Forest Research, 1998, 28, 1233-1240.	1.7	9
112	Evaluating the E3SM land model version 0 (ELMv0) at a temperate forest site using flux and soil water measurements. Geoscientific Model Development, 2019, 12, 1601-1612.	3.6	7
113	Correction to "Influences of biomass heat and biochemical energy storages on the land surface fluxes and radiative temperature― Journal of Geophysical Research, 2007, 112, .	3.3	6
114	Quantifying spatially and temporally explicit CO 2 fertilization effects on global terrestrial ecosystem carbon dynamics. Ecosphere, 2016, 7, e01391.	2.2	6
115	Temperature Sensitivity of Canopy Photosynthesis Phenology in Northern Ecosystems. , 2013, , 503-519.		6
116	Landâ€Atmosphere Responses to a Total Solar Eclipse in Three Ecosystems With Contrasting Structure and Physiology. Journal of Geophysical Research D: Atmospheres, 2019, 124, 530-543.	3.3	5
117	Partitioning Net Ecosystem Exchange (NEE) of CO 2 Using Solarâ€Induced Chlorophyll Fluorescence (SIF). Geophysical Research Letters, 2021, 48, e2020GL091247.	4.0	5
118	Comments on "a Practical Method for Relating Scalar Concentrations to Source Distributions in Vegetation Canopies―by M. R. Raupach. Boundary-Layer Meteorology, 1998, 87, 515-524.	2.3	4
119	The maximum carboxylation rate of Rubisco affects CO2 refixation in temperate broadleaved forest trees. Plant Physiology and Biochemistry, 2020, 155, 330-337.	5.8	4
120	Forest Drought Response Index (ForDRI): A New Combined Model to Monitor Forest Drought in the Eastern United States. Remote Sensing, 2020, 12, 3605.	4.0	4
121	An eddy covariance theory of using O2 to CO2 exchange ratio to constrain measurements of net ecosystem exchange of any gas species. Agricultural and Forest Meteorology, 2013, 176, 104-110.	4.8	3
122	Resprouting Responses Dynamics of Schima superba Following a Severe Ice Storm in Early 2008 in Southern China: A Six-Year Study. Forests, 2020, 11, 184.	2.1	3
123	CO2 refixation is higher in leaves of woody species with high mesophyll and stomatal resistances to CO2 diffusion. Tree Physiology, 2021, 41, 1450-1461.	3.1	3
124	Intensified Soil Moisture Extremes Decrease Soil Organic Carbon Decomposition: A Mechanistic Modeling Analysis. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2021JG006392.	3.0	3
125	Impact of the 2008 ice storm on China's forests. , 2011, , .		2
126	Aboveground and belowground contributions to ecosystem respiration in a temperate deciduous forest. Agricultural and Forest Meteorology, 2022, 314, 108807.	4.8	1

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127	FLUXNET Evaluates "Breathing patterns―of diverse ecosystems. Eos, 2000, 81, 565.	0.1	O
128	Peer review report 1 on "Continuous, long-term, high-frequency thermal imaging of vegetation: uncertainties and recommended best practicesâ€. Agricultural and Forest Meteorology, 2016, 217, 419.	4.8	0
129	Using Daily Stand-Scale Evapotranspiration (ET) Estimated From Remotely Sensed Data to Investigate Drought Impact on ET in a Temporate Forest in the Central Us. , 2019, , .		O