

# Marcy E Litvak

## List of Publications by Year in descending order

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Version: 2024-02-01

94  
papers

6,040  
citations

81900

39  
h-index

74163

75  
g-index

97  
all docs

97  
docs citations

97  
times ranked

8329  
citing authors

#	ARTICLE	IF	CITATIONS
1	Global patterns of drought recovery. <i>Nature</i> , 2017, 548, 202-205.	27.8	560
2	Warm spring reduced carbon cycle impact of the 2012 US summer drought. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 5880-5885.	7.1	340
3	Positive feedback between microclimate and shrub encroachment in the northern Chihuahuan desert. <i>Ecosphere</i> , 2010, 1, 1-11.	2.2	290
4	Environmental and developmental controls over the seasonal pattern of isoprene emission from aspen leaves. <i>Oecologia</i> , 1994, 99, 260-270.	2.0	230
5	Estimation of net ecosystem carbon exchange for the conterminous United States by combining MODIS and AmeriFlux data. <i>Agricultural and Forest Meteorology</i> , 2008, 148, 1827-1847.	4.8	221
6	Broadband, red-edge information from satellites improves early stress detection in a New Mexico conifer woodland. <i>Remote Sensing of Environment</i> , 2011, 115, 3640-3646.	11.0	194
7	Global satellite monitoring of climate-induced vegetation disturbances. <i>Trends in Plant Science</i> , 2015, 20, 114-123.	8.8	183
8	Patterns of induced and constitutive monoterpene production in conifer needles in relation to insect herbivory. <i>Oecologia</i> , 1998, 114, 531-540.	2.0	169
9	An eddy covariance mesonet to measure the effect of forest age on land-atmosphere exchange. <i>Global Change Biology</i> , 2006, 12, 2146-2162.	9.5	169
10	$\text{CO}_2$ exchange and evapotranspiration across dryland ecosystems of southwestern North America. <i>Global Change Biology</i> , 2017, 23, 4204-4221.	9.5	164
11	Assessing net ecosystem carbon exchange of U.S. terrestrial ecosystems by integrating eddy covariance flux measurements and satellite observations. <i>Agricultural and Forest Meteorology</i> , 2011, 151, 60-69.	4.8	157
12	Differential responses of production and respiration to temperature and moisture drive the carbon balance across a climatic gradient in New Mexico. <i>Global Change Biology</i> , 2011, 17, 410-424.	9.5	148
13	Extracellular enzyme kinetics scale with resource availability. <i>Biogeochemistry</i> , 2014, 121, 287-304.	3.5	147
14	Terrestrial carbon balance in a drier world: the effects of water availability in southwestern North America. <i>Global Change Biology</i> , 2016, 22, 1867-1879.	9.5	142
15	Ecohydrological controls on snowmelt partitioning in mixed-conifer subalpine forests. <i>Ecohydrology</i> , 2009, 2, 129-142.	2.4	137
16	Plant chemical defense: monoterpenes and the growth-differentiation balance hypothesis. <i>Trends in Ecology and Evolution</i> , 1994, 9, 58-61.	8.7	133
17	Representativeness of Eddy-Covariance flux footprints for areas surrounding AmeriFlux sites. <i>Agricultural and Forest Meteorology</i> , 2021, 301-302, 108350.	4.8	125
18	Isoprene Emission from Velvet Bean Leaves (Interactions among Nitrogen Availability, Growth Photon) <i>Trends in Ecology and Evolution</i> , 2021, 36, 114-114.	4.8	114

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19	How Water, Carbon, and Energy Drive Critical Zone Evolution: The Jemezâ€“Santa Catalina Critical Zone Observatory. <i>Vadose Zone Journal</i> , 2011, 10, 884-899.	2.2	111
20	Thermal optimality of net ecosystem exchange of carbon dioxide and underlying mechanisms. <i>New Phytologist</i> , 2012, 194, 775-783.	7.3	111
21	Chlorophyll Fluorescence Better Captures Seasonal and Interannual Gross Primary Productivity Dynamics Across Dryland Ecosystems of Southwestern North America. <i>Geophysical Research Letters</i> , 2018, 45, 748-757.	4.0	109
22	The response of isoprene emission rate and photosynthetic rate to photon flux and nitrogen supply in aspen and white oak trees. <i>Plant, Cell and Environment</i> , 1996, 19, 549-559.	5.7	102
23	Soil moisture response to snowmelt timing in mixedâ€“conifer subalpine forests. <i>Hydrological Processes</i> , 2015, 29, 2782-2798.	2.6	92
24	Grassland to shrubland state transitions enhance carbon sequestration in the northern Chihuahuan Desert. <i>Global Change Biology</i> , 2015, 21, 1226-1235.	9.5	91
25	Monoterpene emission from coniferous trees in response to elevated CO2 concentration and climate warming. <i>Global Change Biology</i> , 1999, 5, 252-267.	9.5	83
26	Climate sensitivity functions and net primary production: A framework for incorporating climate mean and variability. <i>Ecology</i> , 2018, 99, 576-582.	3.2	73
27	Factors that control <i>Typha</i> marsh evapotranspiration. <i>Aquatic Botany</i> , 2007, 86, 97-106.	1.6	72
28	Plant, microbial and ecosystem carbon use efficiencies interact to stabilize microbial growth as a fraction of gross primary production. <i>New Phytologist</i> , 2017, 214, 1518-1526.	7.3	62
29	Stream water carbon controls in seasonally snow-covered mountain catchments: impact of inter-annual variability of water fluxes, catchment aspect and seasonal processes. <i>Biogeochemistry</i> , 2014, 118, 273-290.	3.5	60
30	Critical Zone Services: Expanding Context, Constraints, and Currency beyond Ecosystem Services. <i>Vadose Zone Journal</i> , 2015, 14, vzt2014.10.0142.	2.2	60
31	Waterâ€“storage capacity controls energy partitioning and water use in karst ecosystems on the Edwards Plateau, Texas. <i>Ecohydrology</i> , 2014, 7, 127-138.	2.4	57
32	On the impact of shrub encroachment on microclimate conditions in the northern Chihuahuan desert. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	56
33	Evaluation of a Data Assimilation System for Land Surface Models Using CLM4.5. <i>Journal of Advances in Modeling Earth Systems</i> , 2018, 10, 2471-2494.	3.8	54
34	Toward accounting for ecoclimate teleconnections: intra- and inter-continental consequences of altered energy balance after vegetation change. <i>Landscape Ecology</i> , 2016, 31, 181-194.	4.2	53
35	Climatic and landscape influences on soil moisture are primary determinants of soil carbon fluxes in seasonally snow-covered forest ecosystems. <i>Biogeochemistry</i> , 2015, 123, 447-465.	3.5	50
36	Shrubland carbon sink depends upon winter water availability in the warm deserts of North America. <i>Agricultural and Forest Meteorology</i> , 2018, 249, 407-419.	4.8	49

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37	Exceptional heat and atmospheric dryness amplified losses of primary production during the 2020 U.S. Southwest hot drought. <i>Global Change Biology</i> , 2022, 28, 4794-4806.	9.5	46
38	Supply and demand processes as controls over needle monoterpene synthesis and concentration in Douglas fir [ <i>Pseudotsuga menziesii</i> (Mirb.) Franco]. <i>Oecologia</i> , 2002, 132, 382-391.	2.0	44
39	Coupling between Land Ecosystems and the Atmospheric Hydrologic Cycle through Biogenic Aerosol Pathways. <i>Bulletin of the American Meteorological Society</i> , 2005, 86, 1738-1742.	3.3	43
40	Long-Term (1986â€“2015) Crop Water Use Characterization over the Upper Rio Grande Basin of United States and Mexico Using Landsat-Based Evapotranspiration. <i>Remote Sensing</i> , 2019, 11, 1587.	4.0	41
41	The ecological role of small rainfall events in a desert grassland. <i>Ecohydrology</i> , 2015, 8, 1614-1622.	2.4	34
42	Synergistic use of SMAP and OCO-2 data in assessing the responses of ecosystem productivity to the 2018 U.S. drought. <i>Remote Sensing of Environment</i> , 2020, 251, 112062.	11.0	34
43	The sensitivity of carbon exchanges in Great Plains grasslands to precipitation variability. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2016, 121, 280-294.	3.0	33
44	Evaluating the effect of alternative carbon allocation schemes in a land surface model (CLM4.5) on carbon fluxes, pools, and turnover in temperate forests. <i>Geoscientific Model Development</i> , 2017, 10, 3499-3517.	3.6	32
45	Snowmelt-Driven Trade-Offs Between Early and Late Season Productivity Negatively Impact Forest Carbon Uptake During Drought. <i>Geophysical Research Letters</i> , 2018, 45, 3087-3096.	4.0	31
46	Transport in a coordinated soil-root-xylem-phloem leaf system. <i>Advances in Water Resources</i> , 2018, 119, 1-16.	3.8	31
47	Divergent responses of primary production to increasing precipitation variability in global drylands. <i>Global Change Biology</i> , 2021, 27, 5225-5237.	9.5	31
48	Conifer radial growth response to recent seasonal warming and drought from the southwestern USA. <i>Forest Ecology and Management</i> , 2018, 418, 55-62.	3.2	30
49	Influence of ENSO and the NAO on terrestrial carbon uptake in the Texasâ€“northern Mexico region. <i>Global Biogeochemical Cycles</i> , 2015, 29, 1247-1265.	4.9	29
50	Simulating the Effect of Vegetation in Formation of Pedogenic Carbonate. <i>Soil Science Society of America Journal</i> , 2014, 78, 914-924.	2.2	28
51	Informing Nature-based Climate Solutions for the United States with the best available science. <i>Global Change Biology</i> , 2022, 28, 3778-3794.	9.5	28
52	Deep Autotrophic Soil Respiration in Shrubland and Woodland Ecosystems in Central New Mexico. <i>Ecosystems</i> , 2012, 15, 83-96.	3.4	27
53	Detecting mortality induced structural and functional changes in a piñon-juniper woodland using Landsat and RapidEye time series. <i>Remote Sensing of Environment</i> , 2014, 151, 102-113.	11.0	26
54	Satellite solar-induced chlorophyll fluorescence and near-infrared reflectance capture complementary aspects of dryland vegetation productivity dynamics. <i>Remote Sensing of Environment</i> , 2022, 270, 112858.	11.0	26

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55	Tree Mortality Decreases Water Availability and Ecosystem Resilience to Drought in Piñon-Juniper Woodlands in the Southwestern U.S.. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017, 122, 3343-3361.	3.0	25
56	Woody Biomass Estimation in a Southwestern U.S. Juniper Savanna Using LiDAR-Derived Clumped Tree Segmentation and Existing Allometries. <i>Remote Sensing</i> , 2016, 8, 453.	4.0	24
57	Sensitivity of dryland plant allometry to climate. <i>Functional Ecology</i> , 2019, 33, 2290-2303.	3.6	24
58	Small-scale variability in water storage and plant available water in shallow, rocky soils. <i>Plant and Soil</i> , 2014, 385, 193-204.	3.7	23
59	Dynamic global vegetation models underestimate net CO <sub>2</sub> flux mean and inter-annual variability in dryland ecosystems. <i>Environmental Research Letters</i> , 2021, 16, 094023.	5.2	23
60	Montane forest productivity across a semiarid climatic gradient. <i>Global Change Biology</i> , 2020, 26, 6945-6958.	9.5	22
61	A multisite analysis of temporal random errors in soil CO <sub>2</sub> efflux. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2015, 120, 737-751.	3.0	17
62	A net ecosystem carbon budget for snow dominated forested headwater catchments: linking water and carbon fluxes to critical zone carbon storage. <i>Biogeochemistry</i> , 2018, 138, 225-243.	3.5	17
63	SoDaH: the SOils DAta Harmonization database, an open-source synthesis of soil data from research networks, version 1.0. <i>Earth System Science Data</i> , 2021, 13, 1843-1854.	9.9	17
64	Temperature memory and non-structural carbohydrates mediate legacies of a hot drought in trees across the southwestern USA. <i>Tree Physiology</i> , 2022, 42, 71-85.	3.1	17
65	Biocrust contribution to ecosystem carbon fluxes varies along an elevational gradient. <i>Ecosphere</i> , 2018, 9, e02315.	2.2	16
66	Testing water fluxes and storage from two hydrology configurations within the ORCHIDEE land surface model across US semi-arid sites. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 5203-5230.	4.9	16
67	Improved dryland carbon flux predictions with explicit consideration of water-carbon coupling. <i>Communications Earth &amp; Environment</i> , 2021, 2, .	6.8	16
68	A 3-dimensional model of <i>Pinus edulis</i> and <i>Juniperus monosperma</i> root distributions in New Mexico: implications for soil water dynamics. <i>Plant and Soil</i> , 2020, 450, 337-355.	3.7	14
69	Seasonality in aerodynamic resistance across a range of North American ecosystems. <i>Agricultural and Forest Meteorology</i> , 2021, 310, 108613.	4.8	14
70	Remote Sensing Based Simple Models of GPP in Both Disturbed and Undisturbed Piñon-Juniper Woodlands in the Southwestern U.S.. <i>Remote Sensing</i> , 2016, 8, 20.	4.0	13
71	Reevaluating growing season length controls on net ecosystem production in evergreen conifer forests. <i>Scientific Reports</i> , 2018, 8, 17973.	3.3	13
72	Recent land cover changes in the Southwestern US lead to an increase in surface temperature. <i>Agricultural and Forest Meteorology</i> , 2021, 297, 108246.	4.8	13

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73	Climate Change Impacts on Future Carbon Stores and Management of Warm Deserts of the United States. <i>Rangelands</i> , 2014, 36, 16-24.	1.9	12
74	Root-associated fungal community response to drought-associated changes in vegetation community. <i>Mycologia</i> , 2015, 107, 1089-1104.	1.9	12
75	Temporal controls on crown nonstructural carbohydrates in southwestern US tree species. <i>Tree Physiology</i> , 2021, 41, 388-402.	3.1	12
76	Seasonal Precipitation and Soil Moisture Relationships Across Forests and Woodlands in the Southwestern United States. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2020JG005986.	3.0	11
77	Species-specific water use by woody plants on the Edwards Plateau, Texas. <i>Ecohydrology</i> , 2014, 7, 278-290.	2.4	10
78	Integrating Species-specific Information in Models Improves Regional Projections Under Climate Change. <i>Geophysical Research Letters</i> , 2019, 46, 6554-6562.	4.0	10
79	Allometric Relationships for Predicting Aboveground Biomass and Sapwood Area of Oneseed Juniper ( <i>Juniperus monosperma</i> ) Trees. <i>Frontiers in Plant Science</i> , 2020, 11, 94.	3.6	10
80	Allometric relationships for <i>Quercus gambelii</i> and <i>Robinia neomexicana</i> for biomass estimation following disturbance. <i>Ecosphere</i> , 2019, 10, e02905.	2.2	9
81	Optimizing Carbon Cycle Parameters Drastically Improves Terrestrial Biosphere Model Underestimates of Dryland Mean Net CO <sub>2</sub> Flux and its Inter-Annual Variability. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, .	3.0	8
82	The aboveground and belowground growth characteristics of juvenile conifers in the southwestern United States. <i>Ecosphere</i> , 2021, 12, e03839.	2.2	8
83	Assessing drought-induced change in a piñon-juniper woodland with Landsat: a multiple endmember spectral mixture analysis approach. <i>International Journal of Remote Sensing</i> , 2017, 38, 4156-4176.	2.9	7
84	Sensitivity of soil organic matter to climate and fire in a desert grassland. <i>Biogeochemistry</i> , 2021, 156, 59-74.	3.5	7
85	Simple assessment of needleleaf and broadleaf chlorophyll content using a flatbed color scanner. <i>Canadian Journal of Forest Research</i> , 2011, 41, 1445-1451.	1.7	6
86	Atmosphere-Soil Interactions Govern Ecosystem Flux Sensitivity to Environmental Conditions in Semiarid Woody Ecosystems Over Varying Timescales. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020, 125, e2019JG005554.	3.0	6
87	State changes: insights from the U.S. Long Term Ecological Research Network. <i>Ecosphere</i> , 2021, 12, e03433.	2.2	6
88	Drought-induced piñon mortality alters the seasonal dynamics of microbial activity in piñon-juniper woodland. <i>Soil Biology and Biochemistry</i> , 2016, 92, 91-101.	8.8	5
89	Prototype campaign assessment of disturbance-induced tree loss effects on surface properties for atmospheric modeling. <i>Ecosphere</i> , 2017, 8, e01698.	2.2	5
90	Plant growth and defense: reply to Herms and Mattson. <i>Trends in Ecology and Evolution</i> , 1995, 10, 39.	8.7	2

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91	Ecosystem-Level Energy and Water Budgets Are Resilient to Canopy Mortality in Sparse Semiarid Biomes. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020, 125, e2020JG005858.	3.0	2
92	Future fire-driven landscape changes along a southwestern US elevation gradient. <i>Climatic Change</i> , 2021, 166, 1.	3.6	2
93	Allometric Relationships for Predicting Aboveground Biomass, Sapwood, and Leaf Area of Two-Needle Piñon Pine ( <i>Pinus edulis</i> ) Amid Open-Grown Conditions in Central New Mexico. <i>Forest Science</i> , 0, , .	1.0	2
94	Watching plants' dance: movements of live and dead branches linked to atmospheric water demand. <i>Ecosphere</i> , 2021, 12, e03705.	2.2	1