David S Schimel

List of Publications by Year
in descending order

91 papers	12,975 citations	34105 52 h-index	51608 86 g-index
109 all docs	109 docs citations	109 times ranked	14934 citing authors

#	Article	IF	Citations
1	Terrestrial ecosystems and the carbon cycle. Global Change Biology, 1995, 1, 77-91.	9.5	1,282
2	Recent patterns and mechanisms of carbon exchange by terrestrial ecosystems. Nature, 2001, 414, 169-172.	27.8	1,162
3	Reconciling Carbon-cycle Concepts, Terminology, and Methods. Ecosystems, 2006, 9, 1041-1050.	3.4	904
4	Texture, Climate, and Cultivation Effects on Soil Organic Matter Content in U.S. Grassland Soils. Soil Science Society of America Journal, 1989, 53, 800-805.	2.2	724
5	The future of evapotranspiration: Global requirements for ecosystem functioning, carbon and climate feedbacks, agricultural management, and water resources. Water Resources Research, 2017, 53, 2618-2626.	4.2	552
6	Effect of increasing CO ₂ on the terrestrial carbon cycle. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 436-441.	7.1	487
7	OCO-2 advances photosynthesis observation from space via solar-induced chlorophyll fluorescence. Science, 2017, 358, .	12.6	438
8	The Response of Global Terrestrial Ecosystems to Interannual Temperature Variability. Science, 1997, 278, 870-873.	12.6	435
9	Observing terrestrial ecosystems and the carbon cycle from space. Global Change Biology, 2015, 21, 1762-1776.	9.5	339
10	Spatial analysis of growing season length control over net ecosystem exchange. Global Change Biology, 2005, 11, 1777-1787.	9.5	313
11	Contrasting carbon cycle responses of the tropical continents to the 2015â€“2016 El NiÃ±o. Science, 2017, 358, .	12.6	307
12	Estimating diurnal to annual ecosystem parameters by synthesis of a carbon flux model with eddy covariance net ecosystem exchange observations. Global Change Biology, 2005, 11, 335-355.	9.5	298
13	BIOGEOCHEMICAL CHANGES ACCOMPANYING WOODY PLANT ENCROACHMENT IN A SUBTROPICAL SAVANNA. Ecology, 2001, 82, 1999-2011.	3.2	273
14	A continental strategy for the National Ecological Observatory Network. Frontiers in Ecology and the Environment, 2008, 6, 282-284.	4.0	246
15	Monitoring plant functional diversity from space. Nature Plants, 2016, 2, 16024.	9.3	221
16	Mapping functional diversity from remotely sensed morphological and physiological forest traits. Nature Communications, 2017, 8, 1441.	12.8	214
17	Carbon and nitrogen turnover in adjacent grassland and cropland ecosystems. Biogeochemistry, 1986, 2, 345-357.	3.5	202
18	CONTINENTAL SCALE VARIABILITY IN ECOSYSTEM PROCESSES: MODELS, DATA, AND THE ROLE OF DISTURBANCE. Ecological Monographs, 1997, 67, 251-271.	5.4	202

#	ARTICLE	IF	CITATIONS
19	Application of satellite solar-induced chlorophyll fluorescence to understanding large-scale variations in vegetation phenology and function over northern high latitude forests. Remote Sensing of Environment, 2017, 190, 178-187.	11.0	175
20	Effect of Tillage Practices on Microbial Biomass Dynamics. Soil Science Society of America Journal, 1989, 53, 1091-1096.	2.2	159
21	The Orbiting Carbon Observatory-2 early science investigations of regional carbon dioxide fluxes. Science, 2017, 358, .	12.6	157
22	NASA's surface biology and geology designated observable: A perspective on surface imaging algorithms. Remote Sensing of Environment, 2021, 257, 112349.	11.0	148
23	Effect of environmental conditions on the relationship between solarâ€induced fluorescence and gross primary productivity at an OzFlux grassland site. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 716-733.	3.0	139
24	Changes in global terrestrial live biomass over the 21st century. Science Advances, 2021, 7, eabe9829.	10.3	136
25	Carbon source/sink information provided by column CO₂ measurements from the Orbiting Carbon Observatory. Atmospheric Chemistry and Physics, 2010, 10, 4145-4165.	4.9	127
26	Spaceborne detection of localized carbon dioxide sources. Science, 2017, 358, .	12.6	127
27	Effects of available P and N:P ratios on non-symbiotic dinitrogen fixation in tallgrass prairie soils. Oecologia, 1989, 79, 471-474.	2.0	122
28	The role of cattle in the volatile loss of nitrogen from a shortgrass steppe. Biogeochemistry, 1986, 2, 39-52.	3.5	121
29	Variational data assimilation for atmospheric CO2. Tellus, Series B: Chemical and Physical Meteorology, 2006, 58, 359-365.	1.6	113
30	The 2015â€"2016 carbon cycle as seen from OCO-2 and the global in situ network. Atmospheric Chemistry and Physics, 2019, 19, 9797-9831.	4.9	113
31	Flux towers in the sky: global ecology from space. New Phytologist, 2019, 224, 570-584.	7.3	111
32	The wildfire factor. Nature, 2002, 420, 29-30.	27.8	109
33	Modeling the effects of climatic and co2 changes on grassland storage of soil C. Water, Air, and Soil Pollution, 1993, 70, 643-657.	2.4	106
34	Carbon and Climate System Coupling on Timescales from the Precambrian to the Anthropocene. Annual Review of Environment and Resources, 2007, 32, 31-66.	13.4	104
35	Observing changing ecological diversity in the Anthropocene. Frontiers in Ecology and the Environment, 2013, 11, 129-137.	4.0	101
36	GRASSLAND TO WOODLAND TRANSITIONS: INTEGRATING CHANGES IN LANDSCAPE STRUCTURE AND BIOGEOCHEMISTRY. , 2003, 13, 911-926.		100

#	Article	IF	Citations
37	Organic matter turnover in a sagebrush steppe landscape. Biogeochemistry, 1989, 7, 11.	3.5	97
38	ISS observations offer insights into plant function. Nature Ecology and Evolution, 2017, 1, 194.	7.8	94
39	Model-data synthesis of diurnal and seasonal CO2 fluxes at Niwot Ridge, Colorado. Global Change Biology, 2006, 12, 240-259.	9.5	92
40	Influence of El NiÃ±o on atmospheric CO ₂ over the tropical Pacific Ocean: Findings from NASAâ€™s OCO-2 mission. Science, 2017, 358, .	12.6	90
41	Quantifying 3D structure and occlusion in dense tropical and temperate forests using close-range LiDAR. Agricultural and Forest Meteorology, 2019, 268, 249-257.	4.8	88
42	Climate controls on C₃ vs. C₄ productivity in North American grasslands from carbon isotope composition of soil organic matter. Global Change Biology, 2008, 14, 1141-1155.	9.5	86
43	Integrating remote sensing with ecology and evolution to advance biodiversity conservation. Nature Ecology and Evolution, 2022, 6, 506-519.	7.8	84
44	Global atmospheric CO₂ inverse models converging on neutral tropical land exchange, but disagreeing on fossil fuel and atmospheric growth rate. Biogeosciences, 2019, 16, 117-134.	3.3	77
45	Towards mapping the diversity of canopy structure from space with GEDI. Environmental Research Letters, 2020, 15, 115006.	5.2	72
46	Remote sensing of the land biosphere and biogeochemistry in the EOS era: science priorities, methods and implementationâ€”EOS land biosphere and biogeochemical cycles panels. Global and Planetary Change, 1993, 7, 279-297.	3.5	70
47	Macrosystems ecology: big data, big ecology. Frontiers in Ecology and the Environment, 2014, 12, 3-3.	4.0	70
48	NEON: a hierarchically designed national ecological network. Frontiers in Ecology and the Environment, 2007, 5, 59-59.	4.0	65
49	CLIMATECHANGE, CLIMATEMODES,ANDCLIMATEIMPACTS. Annual Review of Environment and Resources, 2003, 28, 1-28.	13.4	62
50	The Potential of the Geostationary Carbon Cycle Observatory (GeoCarb) to Provide Multi-scale Constraints on the Carbon Cycle in the Americas. Frontiers in Environmental Science, 2018, 6, .	3.3	60
51	Concurrent and lagged impacts of an anomalously warm year on autotrophic and heterotrophic components of soil respiration: a deconvolution analysis. New Phytologist, 2010, 187, 184-198.	7.3	57
52	Accelerating rates of Arctic carbon cycling revealed by long-term atmospheric CO ₂ measurements. Science Advances, 2018, 4, eaao1167.	10.3	57
53	Seeing the forest beyond the trees. Global Ecology and Biogeography, 2015, 24, 606-610.	5.8	56
54	Evaluation of a Data Assimilation System for Land Surface Models Using CLM4.5. Journal of Advances in Modeling Earth Systems, 2018, 10, 2471-2494.	3.8	54

#	Article	IF	Citations
55	Observing carbon cycleâ€“climate feedbacks from space. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7860-7868.	7.1	53
56	Big questions, big science: meeting the challenges of global ecology. Oecologia, 2015, 177, 925-934.	2.0	50
57	Active microwave observations of diurnal and seasonal variations of canopy water content across the humid African tropical forests. Geophysical Research Letters, 2017, 44, 2290-2299.	4.0	48
58	ECOLOGY: Climate Change and Crop Yields: Beyond Cassandra. Science, 2006, 312, 1889-1890.	12.6	47
59	The ECCOâ€Darwin Dataâ€Assimilative Global Ocean Biogeochemistry Model: Estimates of Seasonal to Multidecadal Surface Ocean <i>p</i>CO₂ and Airâ€Sea CO₂ Flux. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001888.	3.8	43
60	A diagnostic study of temperature controls on global terrestrial carbon exchange. Tellus, Series B: Chemical and Physical Meteorology, 2001, 53, 150-170.	1.6	41
61	Carbon Monitoring System Flux Net Biosphere Exchange 2020 (CMS-Flux NBE 2020). Earth System Science Data, 2021, 13, 299-330.	9.9	40
62	Shifting relative importance of climatic constraints on land surface phenology. Environmental Research Letters, 2018, 13, 024025.	5.2	39
63	Seasonal pattern of regional carbon balance in the central Rocky Mountains from surface and airborne measurements. Journal of Geophysical Research, 2011, 116, .	3.3	33
64	Global satellite-driven estimates of heterotrophic respiration. Biogeosciences, 2019, 16, 2269-2284.	3.3	32
65	Long term 15N studies in a catena of the shortgrass steppe. Biogeochemistry, 1996, 32, 41.	3.5	30
66	Fire decline in dry tropical ecosystems enhances decadal land carbon sink. Nature Communications, 2020, 11, 1900.	12.8	30
67	Lagged effects regulate the inter-annual variability of the tropical carbon balance. Biogeosciences, 2020, 17, 6393-6422.	3.3	26
68	Optimal inverse estimation of ecosystem parameters from observations of carbon and energy fluxes. Biogeosciences, 2019, 16, 77-103.	3.3	23
69	Aggregation and Aggregate Stability in Forest and Range Soils. Soil Science Society of America Journal, 1988, 52, 829-833.	2.2	22
70	Remote-sensing constraints on South America fire traits by Bayesian fusion of atmospheric and surface data. Geophysical Research Letters, 2015, 42, 1268-1274.	4.0	22
71	Detecting drought impact on terrestrial biosphere carbon fluxes over contiguous US with satellite observations. Environmental Research Letters, 2018, 13, 095003.	5.2	22
72	Factors influencing ammonia volatilization from urea in soils of the shortgrass steppe. Journal of Atmospheric Chemistry, 1988, 6, 323-340.	3.2	19

#	Article	IF	Citations
73	Analysis, Integration and Modeling of the Earth System (AIMES): Advancing the post-disciplinary understanding of coupled humanâ€“environment dynamics in the Anthropocene. Anthropocene, 2015, 12, 99-106.	3.3	19
74	Monitoring Methane Emissions from Oil and Gas Operations. , 2022, 1, .		19
75	Attribution of Spaceâ€Time Variability in Globalâ€Ocean Dissolved Inorganic Carbon. Global Biogeochemical Cycles, 2022, 36, .	4.9	14
76	Satellite Observations of the Tropical Terrestrial Carbon Balance and Interactions With the Water Cycle During the 21st Century. Reviews of Geophysics, 2021, 59, e2020RG000711.	23.0	13
77	What are the greenhouse gas observing system requirements for reducing fundamental biogeochemical process uncertainty? Amazon wetland CH₄ emissions as a case study. Atmospheric Chemistry and Physics, 2016, 16, 15199-15218.	4.9	12
78	NO and N 2 O fluxes from agricultural soils in Beijing area*. Progress in Natural Science: Materials International, 2004, 14, 489-494.	4.4	10
79	Ecosystem responses to elevated CO₂ using airborne remote sensing at Mammoth Mountain, California. Biogeosciences, 2018, 15, 7403-7418.	3.3	7
80	Prospects and Pitfalls for Spectroscopic Remote Sensing of Biodiversity at the Global Scale. , 2020, , 503-518.		7
81	Response to Comment on â€œContrasting carbon cycle responses of the tropical continents to the 2015â€“2016 El NiÃ±oâ€ Science, 2018, 362, .	12.6	6
82	Competing effects of soil fertility and toxicity on tropical greening. Scientific Reports, 2020, 10, 6725.	3.3	6
83	Biogeochemical Changes Accompanying Woody Plant Encroachment in a Subtropical Savanna. Ecology, 2001, 82, 1999.	3.2	6
84	Monitoring methane emissions from oil and gas operations^{â€¡}. Optics Express, 2022, 30, 24326.	3.4	5
85	The restructured Earth observing system: Instrument recommendations. Eos, 1991, 72, 505-505.	0.1	4
86	Continental Scale Variability in Ecosystem Processes: Models, Data, and the Role of Disturbance. Ecological Monographs, 1997, 67, 251.	5.4	3
87	U.S. climate and ecological data available on cd-rom and online. Eos, 1998, 79, 47-47.	0.1	1
88	PHOTOSYNTHESIS AND THE GLOBAL CARBON CYCLE. Series on Photoconversion of Solar Energy, 2004, , 613-627.	0.2	1
89	Illuminating next steps for NEON. Science, 2015, 349, 1176-1177.	12.6	1
90	Carbon futures: a valiant attempt to bring scientific order from modeling chaos. Environmental Research Letters, 2017, 12, 101001.	5.2	0

#	Article	IF	Citations
91	Thank You to Our 2021 Peer Reviewers. AGU Advances, 2022, 3, .	5.4	0