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	Attribution of Spaceâ€Time Variability in Globalâ€Ocean Dissolved Inorganic Carbon. Global Biogeochemical Cycles, 2022, 36, .	4.9	14
2	Integrating remote sensing with ecology and evolution to advance biodiversity conservation. Nature Ecology and Evolution, 2022, 6, 506-519.	7.8	84
3	Thank You to Our 2021 Peer Reviewers. AGU Advances, 2022, 3, .	5.4	0
4	Monitoring methane emissions from oil and gas operations^{â€¡}. Optics Express, 2022, 30, 24326.	3.4	5
5	Monitoring Methane Emissions from Oil and Gas Operations. , 2022, 1, .		19
6	Carbon Monitoring System Flux Net Biosphere Exchange 2020 (CMS-Flux NBE 2020). Earth System Science Data, 2021, 13, 299-330.	9.9	40
7	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
8	NASA's surface biology and geology designated observable: A perspective on surface imaging algorithms. Remote Sensing of Environment, 2021, 257, 112349.	11.0	148
9	Changes in global terrestrial live biomass over the 21st century. Science Advances, 2021, 7, eabe9829.	10.3	136
10	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
11	Towards mapping the diversity of canopy structure from space with GEDI. Environmental Research Letters, 2020, 15, 115006.	5.2	72
12	Fire decline in dry tropical ecosystems enhances decadal land carbon sink. Nature Communications, 2020, 11, 1900.	12.8	30
13	Competing effects of soil fertility and toxicity on tropical greening. Scientific Reports, 2020, 10, 6725.	3.3	6
14	Prospects and Pitfalls for Spectroscopic Remote Sensing of Biodiversity at the Global Scale. , 2020, , 503-518.		7
15	Lagged effects regulate the inter-annual variability of the tropical carbon balance. Biogeosciences, 2020, 17, 6393-6422.	3.3	26
16	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
17	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
18	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

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19	Optimal inverse estimation of ecosystem parameters from observations of carbon and energy fluxes. Biogeosciences, 2019, 16, 77-103.	3.3	23
20	Global satellite-driven estimates of heterotrophic respiration. Biogeosciences, 2019, 16, 2269-2284.	3.3	32
21	Flux towers in the sky: global ecology from space. New Phytologist, 2019, 224, 570-584.	7.3	111
22	Shifting relative importance of climatic constraints on land surface phenology. Environmental Research Letters, 2018, 13, 024025.	5.2	39
23	Ecosystem responses to elevated CO₂ using airborne remote sensing at Mammoth Mountain, California. Biogeosciences, 2018, 15, 7403-7418.	3.3	7
24	Detecting drought impact on terrestrial biosphere carbon fluxes over contiguous US with satellite observations. Environmental Research Letters, 2018, 13, 095003.	5.2	22
25	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
26	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
27	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
28	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
29	Accelerating rates of Arctic carbon cycling revealed by long-term atmospheric CO ₂ measurements. Science Advances, 2018, 4, eaao1167.	10.3	57
30	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
31	ISS observations offer insights into plant function. Nature Ecology and Evolution, 2017, 1, 194.	7.8	94
32	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
33	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
34	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
35	Contrasting carbon cycle responses of the tropical continents to the 2015â€“2016 El NiÃ±o. Science, 2017, 358, .	12.6	307
36	The Orbiting Carbon Observatory-2 early science investigations of regional carbon dioxide fluxes. Science, 2017, 358, .	12.6	157

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37	OCO-2 advances photosynthesis observation from space via solar-induced chlorophyll fluorescence. Science, 2017, 358, .	12.6	438
38	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
39	Spaceborne detection of localized carbon dioxide sources. Science, 2017, 358, .	12.6	127
40	Mapping functional diversity from remotely sensed morphological and physiological forest traits. Nature Communications, 2017, 8, 1441.	12.8	214
41	Carbon futures: a valiant attempt to bring scientific order from modeling chaos. Environmental Research Letters, 2017, 12, 101001.	5.2	0
42	Monitoring plant functional diversity from space. Nature Plants, 2016, 2, 16024.	9.3	221
43	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
44	Illuminating next steps for NEON. Science, 2015, 349, 1176-1177.	12.6	1
45	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
46	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
47	Big questions, big science: meeting the challenges of global ecology. Oecologia, 2015, 177, 925-934.	2.0	50
48	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
49	Seeing the forest beyond the trees. Global Ecology and Biogeography, 2015, 24, 606-610.	5.8	56
50	Observing terrestrial ecosystems and the carbon cycle from space. Global Change Biology, 2015, 21, 1762-1776.	9.5	339
51	Macrosystems ecology: big data, big ecology. Frontiers in Ecology and the Environment, 2014, 12, 3-3.	4.0	70
52	Observing changing ecological diversity in the Anthropocene. Frontiers in Ecology and the Environment, 2013, 11, 129-137.	4.0	101
53	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
54	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

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55	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
56	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
57	A continental strategy for the National Ecological Observatory Network. Frontiers in Ecology and the Environment, 2008, 6, 282-284.	4.0	246
58	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
59	NEON: a hierarchically designed national ecological network. Frontiers in Ecology and the Environment, 2007, 5, 59-59.	4.0	65
60	Model-data synthesis of diurnal and seasonal CO2 fluxes at Niwot Ridge, Colorado. Global Change Biology, 2006, 12, 240-259.	9.5	92
61	Variational data assimilation for atmospheric CO2. Tellus, Series B: Chemical and Physical Meteorology, 2006, 58, 359-365.	1.6	113
62	Reconciling Carbon-cycle Concepts, Terminology, and Methods. Ecosystems, 2006, 9, 1041-1050.	3.4	904
63	ECOLOGY: Climate Change and Crop Yields: Beyond Cassandra. Science, 2006, 312, 1889-1890.	12.6	47
64	Spatial analysis of growing season length control over net ecosystem exchange. Global Change Biology, 2005, 11, 1777-1787.	9.5	313
65	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
66	PHOTOSYNTHESIS AND THE GLOBAL CARBON CYCLE. Series on Photoconversion of Solar Energy, 2004, , 613-627.	0.2	1
67	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
68	GRASSLAND TO WOODLAND TRANSITIONS: INTEGRATING CHANGES IN LANDSCAPE STRUCTURE AND BIOGEOCHEMISTRY. , 2003, 13, 911-926.		100
69	CLIMATECHANGE, CLIMATEMODES,ANDCLIMATEIMPACTS. Annual Review of Environment and Resources, 2003, 28, 1-28.	13.4	62
70	The wildfire factor. Nature, 2002, 420, 29-30.	27.8	109
71	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
72	Recent patterns and mechanisms of carbon exchange by terrestrial ecosystems. Nature, 2001, 414, 169-172.	27.8	1,162

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73	BIOGEOCHEMICAL CHANGES ACCOMPANYING WOODY PLANT ENCROACHMENT IN A SUBTROPICAL SAVANNA. Ecology, 2001, 82, 1999-2011.	3.2	273
74	Biogeochemical Changes Accompanying Woody Plant Encroachment in a Subtropical Savanna. Ecology, 2001, 82, 1999.	3.2	6
75	U.S. climate and ecological data available on cd-rom and online. Eos, 1998, 79, 47-47.	0.1	1
76	CONTINENTAL SCALE VARIABILITY IN ECOSYSTEM PROCESSES: MODELS, DATA, AND THE ROLE OF DISTURBANCE. Ecological Monographs, 1997, 67, 251-271.	5.4	202
77	The Response of Global Terrestrial Ecosystems to Interannual Temperature Variability. Science, 1997, 278, 870-873.	12.6	435
78	Continental Scale Variability in Ecosystem Processes: Models, Data, and the Role of Disturbance. Ecological Monographs, 1997, 67, 251.	5.4	3
79	Long term 15N studies in a catena of the shortgrass steppe. Biogeochemistry, 1996, 32, 41.	3.5	30
80	Terrestrial ecosystems and the carbon cycle. Global Change Biology, 1995, 1, 77-91.	9.5	1,282
81	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
82	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
83	The restructured Earth observing system: Instrument recommendations. Eos, 1991, 72, 505-505.	0.1	4
84	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
85	Organic matter turnover in a sagebrush steppe landscape. Biogeochemistry, 1989, 7, 11.	3.5	97
86	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
87	Effect of Tillage Practices on Microbial Biomass Dynamics. Soil Science Society of America Journal, 1989, 53, 1091-1096.	2.2	159
88	Factors influencing ammonia volatilization from urea in soils of the shortgrass steppe. Journal of Atmospheric Chemistry, 1988, 6, 323-340.	3.2	19
89	Aggregation and Aggregate Stability in Forest and Range Soils. Soil Science Society of America Journal, 1988, 52, 829-833.	2.2	22
90	Carbon and nitrogen turnover in adjacent grassland and cropland ecosystems. Biogeochemistry, 1986, 2, 345-357.	3.5	202

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91	The role of cattle in the volatile loss of nitrogen from a shortgrass steppe. Biogeochemistry, 1986, 2, 39-52.	3.5	121