Benjamin Smith

List of Publications by Year
in descending order

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140	23,854	18465 62	11047 137
papers	citations	h-index	g-index

187	187	187	22113
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A model of the coupled dynamics of climate, vegetation and terrestrial ecosystem biogeochemistry for regional applications. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 63, 87.	0.8	70
2	High-resolution regional simulation of last glacial maximum climate in Europe. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 63, 107.	0.8	101
3	Future changes in the Baltic Sea acidâ€“base (pH) and oxygen balances. Tellus, Series B: Chemical and Physical Meteorology, 2022, 64, 19586.	0.8	84
4	A strong mitigation scenario maintains climate neutrality of northern peatlands. One Earth, 2022, 5, 86-97.	3.6	14
5	The EC-Earth3 Earth system model for the Coupled Model Intercomparison Project 6. Geoscientific Model Development, 2022, 15, 2973-3020.	1.3	192
6	Matrix Approach to Land Carbon Cycle Modeling. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	7
7	Declining global leaf nitrogen content: smart resource use by flexible plants?. New Phytologist, 2022, 235, 1683-1685.	3.5	1
8	Impacts of Largeâ€Scale Sahara Solar Farms on Global Climate and Vegetation Cover. Geophysical Research Letters, 2021, 48, e2020GL090789.	1.5	27
9	Examining the sensitivity of the terrestrial carbon cycle to the expression of El NiÃ±o. Biogeosciences, 2021, 18, 2181-2203.	1.3	2
10	Vegetationâ€Climate Feedbacks Enhance Spatial Heterogeneity of Panâ€Amazonian Ecosystem States Under Climate Change. Geophysical Research Letters, 2021, 48, e2020GL092001.	1.5	7
11	Responses of Arctic cyclones to biogeophysical feedbacks under future warming scenarios in a regional Earth system model. Environmental Research Letters, 2021, 16, 064076.	2.2	5
12	Accounting for forest management in the estimation of forest carbon balance using the dynamic vegetation model LPJ-GUESS (v4.0, r9710): implementation and evaluation of simulations for Europe. Geoscientific Model Development, 2021, 14, 6071-6112.	1.3	17
13	Nitrogen restricts future sub-arctic treeline advance in an individual-based dynamic vegetation model. Biogeosciences, 2021, 18, 6329-6347.	1.3	6
14	Applications of the Google Earth Engine and Phenology-Based Threshold Classification Method for Mapping Forest Cover and Carbon Stock Changes in Siem Reap Province, Cambodia. Remote Sensing, 2020, 12, 3110.	1.8	19
15	Mapping the Natural Distribution of Bamboo and Related Carbon Stocks in the Tropics Using Google Earth Engine, Phenological Behavior, Landsat 8, and Sentinel-2. Remote Sensing, 2020, 12, 3109.	1.8	11
16	The Interplay of Recent Vegetation and Sea Ice Dynamicsâ€"Results From a Regional Earth System Model Over the Arctic. Geophysical Research Letters, 2020, 47, e2019GL085982.	1.5	7
17	The fate of carbon in a mature forest under carbon dioxide enrichment. Nature, 2020, 580, 227-231.	13.7	218
18	Modelling past and future peatland carbon dynamics across the panâ€Arctic. Global Change Biology, 2020, 26, 4119-4133.	4.2	58

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19	Higher than expected CO₂ fertilization inferred from leaf to global observations. Global Change Biology, 2020, 26, 2390-2402.	4.2	98
20	Understanding the uncertainty in global forest carbon turnover. Biogeosciences, 2020, 17, 3961-3989.	1.3	45
21	Nitrogen cycling in CMIP6 land surface models: progress and limitations. Biogeosciences, 2020, 17, 5129-5148.	1.3	60
22	Important role of forest disturbances in the global biomass turnover and carbon sinks. Nature Geoscience, 2019, 12, 730-735.	5.4	105
23	Vegetation Pattern and Terrestrial Carbon Variation in Past Warm and Cold Climates. Geophysical Research Letters, 2019, 46, 8133-8143.	1.5	13
24	Approaching the potential of model-data comparisons of global land carbon storage. Scientific Reports, 2019, 9, 3367.	1.6	15
25	Role of forest regrowth in global carbon sink dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4382-4387.	3.3	370
26	Spring photosynthetic onset and net <scp>CO</scp>₂ uptake in Alaska triggered by landscape thawing. Global Change Biology, 2018, 24, 3416-3435.	4.2	48
27	Biotic and Abiotic Drivers of Peatland Growth and Microtopography: A Model Demonstration. Ecosystems, 2018, 21, 1196-1214.	1.6	15
28	Drivers of dissolved organic carbon export in a subarctic catchment: Importance of microbial decomposition, sorption-desorption, peatland and lateral flow. Science of the Total Environment, 2018, 622-623, 260-274.	3.9	20
29	Vegetation demographics in Earth System Models: A review of progress and priorities. Global Change Biology, 2018, 24, 35-54.	4.2	478
30	A new version of the CABLE land surface model (Subversion revision r4601) incorporating land use and land cover change, woody vegetation demography, and a novel optimisation-based approach to plant coordination of photosynthesis. Geoscientific Model Development, 2018, 11, 2995-3026.	1.3	114
31	Frost and leafâ€size gradients in forests: global patterns and experimental evidence. New Phytologist, 2018, 219, 565-573.	3.5	26
32	Selfâ€Amplifying Feedbacks Accelerate Greening and Warming of the Arctic. Geophysical Research Letters, 2018, 45, 7102-7111.	1.5	35
33	Climate Sensitivity Controls Uncertainty in Future Terrestrial Carbon Sink. Geophysical Research Letters, 2018, 45, 4329-4336.	1.5	16
34	Dynamic Vegetation Simulations of the Midâ€Holocene Green Sahara. Geophysical Research Letters, 2018, 45, 8294-8303.	1.5	27
35	Terrestrial ecosystem model performance in simulating productivity and its vulnerability to climate change in the northern permafrost region. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 430-446.	1.3	47
36	Quantifying the effects of land use and climate on Holocene vegetation in Europe. Quaternary Science Reviews, 2017, 171, 20-37.	1.4	97

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37	The large influence of climate model bias on terrestrial carbon cycle simulations. Environmental Research Letters, 2017, 12, 014004.	2.2	33
38	Climate data induced uncertainty in model-based estimations of terrestrial primary productivity. Environmental Research Letters, 2017, 12, 064013.	2.2	55
39	Impacts of land use on climate and ecosystem productivity over the Amazon and the South American continent. Environmental Research Letters, 2017, 12, 054016.	2.2	18
40	Carbon cycle responses of semiâ€arid ecosystems to positive asymmetry in rainfall. Global Change Biology, 2017, 23, 793-800.	4.2	66
41	Modelling Holocene peatland dynamics with an individual-based dynamic vegetation model. Biogeosciences, 2017, 14, 2571-2596.	1.3	20
42	Nitrogen leaching from natural ecosystems under global change: a modelling study. Earth System Dynamics, 2017, 8, 1121-1139.	2.7	17
43	Modelling past, present and future peatland carbon accumulation across the pan-Arctic region. Biogeosciences, 2017, 14, 4023-4044.	1.3	36
44	Challenges and opportunities in land surface modelling of savanna ecosystems. Biogeosciences, 2017, 14, 4711-4732.	1.3	45
45	Impacts of climate mitigation strategies in the energy sector on global land use and carbon balance. Earth System Dynamics, 2017, 8, 773-799.	2.7	3
46	A model inter-comparison study to examine limiting factors in modelling Australian tropical savannas. Biogeosciences, 2016, 13, 3245-3265.	1.3	32
47	Evaluation of airâ€“soil temperature relationships simulated by land surface models during winter across the permafrost region. Cryosphere, 2016, 10, 1721-1737.	1.5	38
48	Coupling carbon allocation with leaf and root phenology predicts treeâ€“grass partitioning along a savanna rainfall gradient. Biogeosciences, 2016, 13, 761-779.	1.3	32
49	Vegetationâ€“climate feedbacks modulate rainfall patterns in Africa under future climate change. Earth System Dynamics, 2016, 7, 627-647.	2.7	46
50	Simulated high-latitude soil thermal dynamics during the past 4 decades. Cryosphere, 2016, 10, 179-192.	1.5	17
51	Process contributions of Australian ecosystems to interannual variations in the carbon cycle. Environmental Research Letters, 2016, 11, 054013.	2.2	26
52	Modelâ€“data synthesis for the next generation of forest freeâ€air <scp>CO</scp>₂ enrichment (<scp>FACE</scp>) experiments. New Phytologist, 2016, 209, 17-28.	3.5	178
53	Variability in the sensitivity among model simulations of permafrost and carbon dynamics in the permafrost region between 1960 and 2009. Global Biogeochemical Cycles, 2016, 30, 1015-1037.	1.9	116
54	Dryland vegetation response to wet episode, not inherent shift in sensitivity to rainfall, behind Australia's role in 2011 global carbon sink anomaly. Global Change Biology, 2016, 22, 2315-2316.	4.2	35

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55	Using models to guide field experiments: a priori predictions for the <scp>CO</scp>₂ response of a nutrientâ€•and waterâ€limited native Eucalypt woodland. Global Change Biology, 2016, 22, 2834-2851.	4.2	77
56	Key knowledge and data gaps in modelling the influence of CO2 concentration on the terrestrial carbon sink. Journal of Plant Physiology, 2016, 203, 3-15.	1.6	41
57	Low historical nitrogen deposition effect on carbon sequestration in the boreal zone. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2542-2561.	1.3	29
58	Carbon budget estimation of a subarctic catchment using a dynamic ecosystem model at high spatial resolution. Biogeosciences, 2015, 12, 2791-2808.	1.3	19
59	Assessment of model estimates of land-atmosphere CO₂ exchange across Northern Eurasia. Biogeosciences, 2015, 12, 4385-4405.	1.3	25
60	Modelling the response of yields and tissue C : N to changes in atmospheric CO₂ and N management in the main wheat regions of western Europe. Biogeosciences, 2015, 12, 2489-2515.	1.3	47
61	Recent trends and drivers of regional sources and sinks of carbon dioxide. Biogeosciences, 2015, 12, 653-679.	1.3	587
62	Soil carbon management in large-scale Earth system modelling: implications for crop yields and nitrogen leaching. Earth System Dynamics, 2015, 6, 745-768.	2.7	40
63	The dominant role of semi-arid ecosystems in the trend and variability of the land CO ₂ sink. Science, 2015, 348, 895-899.	6.0	1,002
64	Importance of vegetation dynamics for future terrestrial carbon cycling. Environmental Research Letters, 2015, 10, 054019.	2.2	60
65	Forest management facing climate change - an ecosystem model analysis of adaptation strategies. Mitigation and Adaptation Strategies for Global Change, 2015, 20, 201-220.	1.0	42
66	Biogeophysical feedbacks enhance the Arctic terrestrial carbon sink in regional Earth system dynamics. Biogeosciences, 2014, 11, 5503-5519.	1.3	53
67	Nitrogen feedbacks increase future terrestrial ecosystem carbon uptake in an individual-based dynamic vegetation model. Biogeosciences, 2014, 11, 6131-6146.	1.3	54
68	Potential future dynamics of carbon fluxes and pools in New England forests and their climatic sensitivities: A modelâ€based study. Global Biogeochemical Cycles, 2014, 28, 286-299.	1.9	5
69	Regional climate model simulations for Europe at 6 and 0.2 k BP: sensitivity to changes in anthropogenic deforestation. Climate of the Past, 2014, 10, 661-680.	1.3	68
70	Implications of incorporating N cycling and N limitations on primary production in an individual-based dynamic vegetation model. Biogeosciences, 2014, 11, 2027-2054.	1.3	476
71	Where does the carbon go? A modelâ€“data intercomparison of vegetation carbon allocation and turnover processes at two temperate forest freeâ€air CO₂ enrichment sites. New Phytologist, 2014, 203, 883-899.	3.5	263
72	Contribution of Dynamic Vegetation Phenology to Decadal Climate Predictability. Journal of Climate, 2014, 27, 8563-8577.	1.2	22

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73	Biogeochemical Control of the Coupled CO2â€“O2 System of the Baltic Sea: A Review of the Results of Baltic-C. Ambio, 2014, 43, 49-59.	2.8	42
74	Creating spatially continuous maps of past land cover from point estimates: A new statistical approach applied to pollen data. Ecological Complexity, 2014, 20, 127-141.	1.4	31
75	A stand-alone tree demography and landscape structure module for Earth system models: integration with inventory data from temperate and boreal forests. Biogeosciences, 2014, 11, 4039-4055.	1.3	28
76	A standâ€alone tree demography and landscape structure module for Earth system models. Geophysical Research Letters, 2013, 40, 5234-5239.	1.5	28
77	Forest water use and water use efficiency at elevated <scp><scp>CO₂</scp></scp>: a modelâ€data intercomparison at two contrasting temperate forest <scp>FACE</scp> sites. Global Change Biology, 2013, 19, 1759-1779.	4.2	314
78	Impact of soil moistureâ€climate feedbacks on CMIP5 projections: First results from the GLACEâ€CMIP5 experiment. Geophysical Research Letters, 2013, 40, 5212-5217.	1.5	314
79	Modelling of growing season methane fluxes in a high-Arctic wet tundra ecosystem 1997â€“2010 using in situ and high-resolution satellite data. Tellus, Series B: Chemical and Physical Meteorology, 2013, 65, 19722.	0.8	24
80	Implications of accounting for land use in simulations of ecosystem carbon cycling in Africa. Earth System Dynamics, 2013, 4, 385-407.	2.7	118
81	GCM characteristics explain the majority of uncertainty in projected 21st century terrestrial ecosystem carbon balance. Biogeosciences, 2013, 10, 1517-1528.	1.3	40
82	Tundra shrubification and tree-line advance amplify arctic climate warming: results from an individual-based dynamic vegetation model. Environmental Research Letters, 2013, 8, 034023.	2.2	107
83	Robustness and uncertainty in terrestrial ecosystem carbon response to CMIP5 climate change projections. Environmental Research Letters, 2012, 7, 044008.	2.2	220
84	The potential transient dynamics of forests in New England under historical and projected future climate change. Climatic Change, 2012, 114, 357-377.	1.7	31
85	Too early to infer a global NPP decline since 2000. Geophysical Research Letters, 2012, 39, .	1.5	39
86	Guess the impact of Ips typographusâ€”An ecosystem modelling approach for simulating spruce bark beetle outbreaks. Agricultural and Forest Meteorology, 2012, 166-167, 188-200.	1.9	74
87	Implementing storm damage in a dynamic vegetation model for regional applications in Sweden. Ecological Modelling, 2012, 247, 71-82.	1.2	32
88	Modelling Tundra Vegetation Response to Recent Arctic Warming. Ambio, 2012, 41, 281-291.	2.8	66
89	Projecting the future distribution of European potential natural vegetation zones with a generalized, tree speciesâ€based dynamic vegetation model. Global Ecology and Biogeography, 2012, 21, 50-63.	2.7	372
90	High-resolution regional simulation of last glacial maximum climate in Europe. Tellus, Series A: Dynamic Meteorology and Oceanography, 2011, , .	0.8	2

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91	Impacts of changing frost regimes on Swedish forests: Incorporating cold hardiness in a regional ecosystem model. Ecological Modelling, 2010, 221, 303-313.	1.2	24
92	Implications of future climate and atmospheric CO₂ content for regional biogeochemistry, biogeography and ecosystem services across East Africa. Global Change Biology, 2010, 16, 617-640.	4.2	71
93	Holocene land-cover reconstructions for studies on land cover-climate feedbacks. Climate of the Past, 2010, 6, 483-499.	1.3	214
94	Estimating potential forest NPP, biomass and their climatic sensitivity in New England using a dynamic ecosystem model. Ecosphere, 2010, 1, 1-20.	1.0	50
95	Hot spots of vegetationâ€climate feedbacks under future greenhouse forcing in Europe. Journal of Geophysical Research, 2010, 115, .	3.3	78
96	Estimating carbon emissions from African wildfires. Biogeosciences, 2009, 6, 349-360.	1.3	84
97	Estimating Net Primary Production of Swedish Forest Landscapes by Combining Mechanistic Modeling and Remote Sensing. Ambio, 2009, 38, 316-324.	2.8	8
98	CO₂ fertilization in temperate FACE experiments not representative of boreal and tropical forests. Global Change Biology, 2008, 14, 1531-1542.	4.2	276
99	Exploring climatic and biotic controls on Holocene vegetation change in Fennoscandia. Journal of Ecology, 2008, 96, 247-259.	1.9	122
100	Parameter uncertainties in the modelling of vegetation dynamicsâ€"Effects on tree community structure and ecosystem functioning in European forest biomes. Ecological Modelling, 2008, 216, 277-290.	1.2	86
101	Climate-related Change in Terrestrial and Freshwater Ecosystems. , 2008, , 221-308.		12
102	Combining remote sensing data with process modelling to monitor boreal conifer forest carbon balances. Forest Ecology and Management, 2008, 255, 3985-3994.	1.4	65
103	Consequences of More Extreme Precipitation Regimes for Terrestrial Ecosystems. BioScience, 2008, 58, 811-821.	2.2	959
104	Process-based estimates of terrestrial ecosystem isoprene emissions: incorporating the effects of a direct CO₂-isoprene interaction. Atmospheric Chemistry and Physics, 2007, 7, 31-53.	1.9	276
105	CO₂ inhibition of global terrestrial isoprene emissions: Potential implications for atmospheric chemistry. Geophysical Research Letters, 2007, 34, .	1.5	111
106	Changes in European ecosystem productivity and carbon balance driven by regional climate model output. Global Change Biology, 2007, 13, 108-122.	4.2	135
107	Modelling the role of agriculture for the 20th century global terrestrial carbon balance. Global Change Biology, 2007, 13, 679-706.	4.2	1,133
108	Uncertainties in projected impacts of climate change on European agriculture and terrestrial ecosystems based on scenarios from regional climate models. Climatic Change, 2007, 81, 123-143.	1.7	304

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109	Projected Changes in Terrestrial Carbon Storage in Europe under Climate and Land-use Change, 1990â€“2100. Ecosystems, 2007, 10, 380-401.	1.6	131
110	THE IMPORTANCE OF AGE-RELATED DECLINE IN FOREST NPP FOR MODELING REGIONAL CARBON BALANCES. , 2006, 16, 1555-1574.		116
111	Sensitivity of African biomes to changes in the precipitation regime. Global Ecology and Biogeography, 2006, 15, 258-270.	2.7	73
112	Implementing plant hydraulic architecture within the LPJ Dynamic Global Vegetation Model. Global Ecology and Biogeography, 2006, 15, 567-577.	2.7	140
113	Vulnerability of Mediterranean Basin ecosystems to climate change and invasion by exotic plant species. Journal of Biogeography, 2006, 33, 145-157.	1.4	152
114	Modelling Regional Climate Change Effects On Potential Natural Ecosystems in Sweden. Climatic Change, 2006, 78, 381-406.	1.7	148
115	Sensitivity of African biomes to changes in the precipitation regime. Global Ecology and Biogeography, 2006, 15, 258-270.	2.7	86
116	Implementing plant hydraulic architecture within the LPJ Dynamic Global Vegetation Model. Global Ecology and Biogeography, 2006, .	2.7	7
117	Comparing and evaluating process-based ecosystem model predictions of carbon and water fluxes in major European forest biomes. Global Change Biology, 2005, 11, 2211-2233.	4.2	246
118	Ecosystem Service Supply and Vulnerability to Global Change in Europe. Science, 2005, 310, 1333-1337.	6.0	1,355
119	Effects of parameter uncertainties on the modeling of terrestrial biosphere dynamics. Global Biogeochemical Cycles, 2005, 19, .	1.9	274
120	Precipitation controls Sahel greening trend. Geophysical Research Letters, 2005, 32, .	1.5	195
121	Tropical forests and the global carbon cycle: impacts of atmospheric carbon dioxide, climate change and rate of deforestation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2004, 359, 331-343.	1.8	184
122	USING A GENERALIZED VEGETATION MODEL TO SIMULATE VEGETATION DYNAMICS IN NORTHEASTERN USA. Ecology, 2004, 85, 519-530.	1.5	177
123	Evaluation of ecosystem dynamics, plant geography and terrestrial carbon cycling in the LPJ dynamic global vegetation model. Global Change Biology, 2003, 9, 161-185.	4.2	2,681
124	Properties of ecotones: Evidence from five ecotones objectively determined from a coastal vegetation gradient. Journal of Vegetation Science, 2003, 14, 579-590.	1.1	130
125	Climate change and Arctic ecosystems: 1. Vegetation changes north of 55Â°N between the last glacial maximum, mid-Holocene, and present. Journal of Geophysical Research, 2003, 108, .	3.3	261
126	Climate change and Arctic ecosystems: 2. Modeling, paleodata-model comparisons, and future projections. Journal of Geophysical Research, 2003, 108, .	3.3	429

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127	Simulating past and future dynamics of natural ecosystems in the United States. Global Biogeochemical Cycles, 2003, 17, n/a-n/a.	1.9	127
128	Climatic Control of the High-Latitude Vegetation Greening Trend and Pinatubo Effect. Science, 2002, 296, 1687-1689.	6.0	672
129	Community convergence: Ecological and evolutionary. Folia Geobotanica, 2002, 37, 171-183.	0.4	31
130	An introduction to the European Terrestrial Ecosystem Modelling Activity. Global Ecology and Biogeography, 2001, 10, 581-593.	2.7	45
131	Representation of vegetation dynamics in the modelling of terrestrial ecosystems: comparing two contrasting approaches within European climate space. Global Ecology and Biogeography, 2001, 10, 621-637.	2.7	269
132	Global response of terrestrial ecosystem structure and function to CO2 and climate change: results from six dynamic global vegetation models. Global Change Biology, 2001, 7, 357-373.	4.2	1,718
133	Title is missing!. Climatic Change, 2001, 51, 307-347.	1.7	67
134	Regeneration in Gap Models: Priority Issues for Studying Forest Responses to Climate Change. Climatic Change, 2001, 51, 475-508.	1.7	111
135	Representation of vegetation dynamics in the modelling of terrestrial ecosystems: comparing two contrasting approaches within European climate space. Global Ecology and Biogeography, 2001, 10, 621-637.	2.7	629
136	Methods for testing for texture convergence using abundance data: a randomisation test and a method for comparing the shape of distributions. Community Ecology, 2001, 2, 57-66.	0.5	15
137	The Relation between Community Biomass and Evenness: What Does Community Theory Predict, and Can These Predictions Be Tested?. Oikos, 1998, 82, 295.	1.2	59
138	LIFE HISTORY DIFFERENCES AND TREE SPECIES COEXISTENCE IN AN OLD-GROWTH NEW ZEALAND RAIN FOREST. Ecology, 1998, 79, 795-806.	1.5	92
139	A Consumer's Guide to Evenness Indices. Oikos, 1996, 76, 70.	1.2	980
140	A Functional Analysis of New Zealand Alpine Vegetation: Variation in Canopy Roughness and Functional Diversity in Response to an Experimental Wind Barrier. Functional Ecology, 1995, 9, 904.	1.7	17