

Sinke Zaehle

List of Publications by Citations

Source: <https://exaly.com/author-pdf/288327/sonke-zaehle-publications-by-citations.pdf>

Version: 2024-04-27

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

198
papers

24,675
citations

72
h-index

156
g-index

282
ext. papers

30,067
ext. citations

9.5
avg, IF

6.42
L-index

#	Paper	IF	Citations
198	TRY global database of plant traits. <i>Global Change Biology</i> , 2011 , 17, 2905-2935	11.4	1623
197	Recent decline in the global land evapotranspiration trend due to limited moisture supply. <i>Nature</i> , 2010 , 467, 951-4	50.4	1382
196	Ecosystem service supply and vulnerability to global change in Europe. <i>Science</i> , 2005 , 310, 1333-7	33.3	1181
195	Greening of the Earth and its drivers. <i>Nature Climate Change</i> , 2016 , 6, 791-795	21.4	1036
194	Modelling the role of agriculture for the 20th century global terrestrial carbon balance. <i>Global Change Biology</i> , 2007 , 13, 679-706	11.4	959
193	Global Carbon Budget 2018. <i>Earth System Science Data</i> , 2018 , 10, 2141-2194	10.5	831
192	Global Carbon Budget 2019. <i>Earth System Science Data</i> , 2019 , 11, 1783-1838	10.5	776
191	Global Carbon Budget 2016. <i>Earth System Science Data</i> , 2016 , 8, 605-649	10.5	730
190	Carbon cycle. The dominant role of semi-arid ecosystems in the trend and variability of the land CO ₂ sink. <i>Science</i> , 2015 , 348, 895-9	33.3	684
189	Global Carbon Budget 2017. <i>Earth System Science Data</i> , 2018 , 10, 405-448	10.5	614
188	Global Carbon Budget 2020. <i>Earth System Science Data</i> , 2020 , 12, 3269-3340	10.5	533
187	Global Carbon Budget 2015. <i>Earth System Science Data</i> , 2015 , 7, 349-396	10.5	513
186	Evaluation of terrestrial carbon cycle models for their response to climate variability and to CO ₂ trends. <i>Global Change Biology</i> , 2013 , 19, 2117-32	11.4	481
185	The global carbon budget 1959-2011. <i>Earth System Science Data</i> , 2013 , 5, 165-185	10.5	436
184	Recent trends and drivers of regional sources and sinks of carbon dioxide. <i>Biogeosciences</i> , 2015 , 12, 653-679	4.79	432
183	Changes in climate and land use have a larger direct impact than rising CO ₂ on global river runoff trends. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 15242-7	11.5	422
182	Terrestrial biogeochemical feedbacks in the climate system. <i>Nature Geoscience</i> , 2010 , 3, 525-532	18.3	390

181	Implications of incorporating N cycling and N limitations on primary production in an individual-based dynamic vegetation model. <i>Biogeosciences</i> , 2014 , 11, 2027-2054	4.6	345
180	Compensatory water effects link yearly global land CO sink changes to temperature. <i>Nature</i> , 2017 , 541, 516-520	50.4	341
179	Carbon and nitrogen cycle dynamics in the O-CN land surface model: 1. Model description, site-scale evaluation, and sensitivity to parameter estimates. <i>Global Biogeochemical Cycles</i> , 2010 , 24, n/a-n/a	5.9	301
178	Evaluation of 11 terrestrial carbon-nitrogen cycle models against observations from two temperate Free-Air CO ₂ Enrichment studies. <i>New Phytologist</i> , 2014 , 202, 803-822	9.8	300
177	Evidence for a weakening relationship between interannual temperature variability and northern vegetation activity. <i>Nature Communications</i> , 2014 , 5, 5018	17.4	274
176	Forest water use and water use efficiency at elevated CO ₂ : a model-data intercomparison at two contrasting temperate forest FACE sites. <i>Global Change Biology</i> , 2013 , 19, 1759-79	11.4	271
175	A comprehensive quantification of global nitrous oxide sources and sinks. <i>Nature</i> , 2020 , 586, 248-256	50.4	270
174	Global carbon budget 2013. <i>Earth System Science Data</i> , 2014 , 6, 235-263	10.5	264
173	Projected changes in mineral soil carbon of European croplands and grasslands, 1990-2080.. <i>Global Change Biology</i> , 2005 , 11, 2141-2152	11.4	262
172	A roadmap for improving the representation of photosynthesis in Earth system models. <i>New Phytologist</i> , 2017 , 213, 22-42	9.8	245
171	Enhanced seasonal CO ₂ exchange caused by amplified plant productivity in northern ecosystems. <i>Science</i> , 2016 , 351, 696-9	33.3	240
170	A framework for benchmarking land models. <i>Biogeosciences</i> , 2012 , 9, 3857-3874	4.6	238
169	Effects of parameter uncertainties on the modeling of terrestrial biosphere dynamics. <i>Global Biogeochemical Cycles</i> , 2005 , 19,	5.9	229
168	Carbon accumulation in European forests. <i>Nature Geoscience</i> , 2008 , 1, 425-429	18.3	227
167	Terrestrial nitrogen feedbacks may accelerate future climate change. <i>Geophysical Research Letters</i> , 2010 , 37, n/a-n/a	4.9	209
166	Carbon and nitrogen cycle dynamics in the O-CN land surface model: 2. Role of the nitrogen cycle in the historical terrestrial carbon balance. <i>Global Biogeochemical Cycles</i> , 2010 , 24, n/a-n/a	5.9	209
165	The European carbon balance. Part 3: forests. <i>Global Change Biology</i> , 2010 , 16, 1429-1450	11.4	206
164	FLUXNET and modelling the global carbon cycle. <i>Global Change Biology</i> , 2007 , 13, 610-633	11.4	201

163	Historical carbon dioxide emissions caused by land-use changes are possibly larger than assumed. <i>Nature Geoscience</i> , 2017 , 10, 79-84	18.3	195
162	Where does the carbon go? A model-data intercomparison of vegetation carbon allocation and turnover processes at two temperate forest free-air CO ₂ enrichment sites. <i>New Phytologist</i> , 2014 , 203, 883-99	9.8	194
161	Using ecosystem experiments to improve vegetation models. <i>Nature Climate Change</i> , 2015 , 5, 528-534	21.4	191
160	Carbon benefits of anthropogenic reactive nitrogen offset by nitrous oxide emissions. <i>Nature Geoscience</i> , 2011 , 4, 601-605	18.3	183
159	Carbon-nitrogen interactions on land at global scales: current understanding in modelling climate biosphere feedbacks. <i>Current Opinion in Environmental Sustainability</i> , 2011 , 3, 311-320	7.2	179
158	Multiple greenhouse-gas feedbacks from the land biosphere under future climate change scenarios. <i>Nature Climate Change</i> , 2013 , 3, 666-672	21.4	161
157	A few extreme events dominate global interannual variability in gross primary production. <i>Environmental Research Letters</i> , 2014 , 9, 035001	6.2	134
156	Uncertainties of modeling gross primary productivity over Europe: A systematic study on the effects of using different drivers and terrestrial biosphere models. <i>Global Biogeochemical Cycles</i> , 2007 , 21, n/a-n/a	5.9	132
155	Global patterns and substrate-based mechanisms of the terrestrial nitrogen cycle. <i>Ecology Letters</i> , 2016 , 19, 697-709	10	128
154	Model-data synthesis for the next generation of forest free-air CO ₂ enrichment (FACE) experiments. <i>New Phytologist</i> , 2016 , 209, 17-28	9.8	128
153	C4MIP The Coupled Climate-Carbon Cycle Model Intercomparison Project: experimental protocol for CMIP6. <i>Geoscientific Model Development</i> , 2016 , 9, 2853-2880	6.3	123
152	The global carbon budget 1959-2011 2012 ,		122
151	Analyzing the causes and spatial pattern of the European 2003 carbon flux anomaly using seven models. <i>Biogeosciences</i> , 2008 , 5, 561-583	4.6	122
150	Implementing plant hydraulic architecture within the LPJ Dynamic Global Vegetation Model. <i>Global Ecology and Biogeography</i> , 2006 , 15, 567-577	6.1	120
149	Plant functional traits and canopy structure control the relationship between photosynthetic CO ₂ uptake and far-red sun-induced fluorescence in a Mediterranean grassland under different nutrient availability. <i>New Phytologist</i> , 2017 , 214, 1078-1091	9.8	116
148	Climate change cannot be entirely responsible for soil carbon loss observed in England and Wales, 1978-2003. <i>Global Change Biology</i> , 2007 , 13, 2605-2609	11.4	113
147	Effects of global change during the 21st century on the nitrogen cycle. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 13849-13893	6.8	112
146	Global soil nitrous oxide emissions since the preindustrial era estimated by an ensemble of terrestrial biosphere models: Magnitude, attribution, and uncertainty. <i>Global Change Biology</i> , 2019 , 25, 640-659	11.4	111

145	The fate of carbon in a mature forest under carbon dioxide enrichment. <i>Nature</i> , 2020 , 580, 227-231	50.4	109
144	Projected Changes in Terrestrial Carbon Storage in Europe under Climate and Land-use Change, 1990-2100. <i>Ecosystems</i> , 2007 , 10, 380-401	3.9	105
143	Semiempirical modeling of abiotic and biotic factors controlling ecosystem respiration across eddy covariance sites. <i>Global Change Biology</i> , 2011 , 17, 390-409	11.4	102
142	The importance of age-related decline in forest NPP for modeling regional carbon balances 2006 , 16, 1555-74		99
141	Terrestrial nitrogen-carbon cycle interactions at the global scale. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2013 , 368, 20130125	5.8	98
140	Global patterns of nitrogen limitation: confronting two global biogeochemical models with observations. <i>Global Change Biology</i> , 2013 , 19, 2986-98	11.4	98
139	Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO. <i>New Phytologist</i> , 2021 , 229, 2413-2445	9.8	94
138	Amazon forest response to CO ₂ fertilization dependent on plant phosphorus acquisition. <i>Nature Geoscience</i> , 2019 , 12, 736-741	18.3	92
137	Direct and seasonal legacy effects of the 2018 heat wave and drought on European ecosystem productivity. <i>Science Advances</i> , 2020 , 6, eaba2724	14.3	85
136	Comprehensive ecosystem model-data synthesis using multiple data sets at two temperate forest free-air CO ₂ enrichment experiments: Model performance at ambient CO ₂ concentration. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2014 , 119, 937-964	3.7	83
135	The carbon budget of terrestrial ecosystems in East Asia over the last two decades. <i>Biogeosciences</i> , 2012 , 9, 3571-3586	4.6	83
134	A representation of the phosphorus cycle for ORCHIDEE (revision 4520). <i>Geoscientific Model Development</i> , 2017 , 10, 3745-3770	6.3	78
133	Predicting long-term carbon sequestration in response to CO ₂ enrichment: How and why do current ecosystem models differ?. <i>Global Biogeochemical Cycles</i> , 2015 , 29, 476-495	5.9	77
132	Contemporary greenwater flows: Simulations with a dynamic global vegetation and water balance model. <i>Physics and Chemistry of the Earth</i> , 2005 , 30, 334-338	3	77
131	The BETHY/JSBACH Carbon Cycle Data Assimilation System: experiences and challenges. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2013 , 118, 1414-1426	3.7	75
130	Global carbon budget 2013 2013 ,		75
129	Improved understanding of drought controls on seasonal variation in Mediterranean forest canopy CO ₂ and water fluxes through combined in situ measurements and ecosystem modelling. <i>Biogeosciences</i> , 2009 , 6, 1423-1444	4.6	75
128	From biota to chemistry and climate: towards a comprehensive description of trace gas exchange between the biosphere and atmosphere. <i>Biogeosciences</i> , 2010 , 7, 121-149	4.6	74

127	Parameter uncertainties in the modelling of vegetation dynamics Effects on tree community structure and ecosystem functioning in European forest biomes. <i>Ecological Modelling</i> , 2008 , 216, 277-290	3	73
126	Towards physiologically meaningful water-use efficiency estimates from eddy covariance data. <i>Global Change Biology</i> , 2018 , 24, 694-710	11.4	72
125	The Global N2O Model Intercomparison Project. <i>Bulletin of the American Meteorological Society</i> , 2018 , 99, 1231-1251	6.1	71
124	The carbon balance of South America: a review of the status, decadal trends and main determinants. <i>Biogeosciences</i> , 2012 , 9, 5407-5430	4.6	70
123	Evaluation of Land Surface Models in Reproducing Satellite-Derived LAI over the High-Latitude Northern Hemisphere. Part I: Uncoupled DGVMs. <i>Remote Sensing</i> , 2013 , 5, 4819-4838	5	69
122	Nitrogen Availability Reduces CMIP5 Projections of Twenty-First-Century Land Carbon Uptake*. <i>Journal of Climate</i> , 2015 , 28, 2494-2511	4.4	65
121	Assessing the ability of three land ecosystem models to simulate gross carbon uptake of forests from boreal to Mediterranean climate in Europe. <i>Biogeosciences</i> , 2007 , 4, 647-656	4.6	65
120	Identifying differences in carbohydrate dynamics of seedlings and mature trees to improve carbon allocation in models for trees and forests. <i>Environmental and Experimental Botany</i> , 2018 , 152, 7-18	5.9	64
119	Impact of changing wood demand, climate and land use on European forest resources and carbon stocks during the 21st century. <i>Global Change Biology</i> , 2008 , 14, 2288-2303	11.4	63
118	Evaluating stomatal models and their atmospheric drought response in a land surface scheme: A multibiome analysis. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2015 , 120, 1894-1911	3.7	62
117	Using models to guide field experiments: a priori predictions for the CO2 response of a nutrient- and water-limited native Eucalypt woodland. <i>Global Change Biology</i> , 2016 , 22, 2834-51	11.4	60
116	Global Carbon Budget 2017		60
115	Comparing observations and process-based simulations of biosphere-atmosphere exchanges on multiple timescales. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		59
114	The response of ecosystem water-use efficiency to rising atmospheric CO concentrations: sensitivity and large-scale biogeochemical implications. <i>New Phytologist</i> , 2017 , 213, 1654-1666	9.8	57
113	Reconciling global-model estimates and country reporting of anthropogenic forest CO2 sinks. <i>Nature Climate Change</i> , 2018 , 8, 914-920	21.4	57
112	Variability of projected terrestrial biosphere responses to elevated levels of atmospheric CO ₂ ; due to uncertainty in biological nitrogen fixation. <i>Biogeosciences</i> , 2016 , 13, 1491-1518	4.6	56
111	The role of stoichiometric flexibility in modelling forest ecosystem responses to nitrogen fertilization. <i>New Phytologist</i> , 2015 , 208, 1042-55	9.8	55
110	Evaluation of global terrestrial evapotranspiration using state-of-the-art approaches in remote sensing, machine learning and land surface modeling. <i>Hydrology and Earth System Sciences</i> , 2020 , 24, 1485-1509	5.5	52

109	Interactions between nitrogen deposition, land cover conversion, and climate change determine the contemporary carbon balance of Europe. <i>Biogeosciences</i> , 2010 , 7, 2749-2764	4.6	47
108	Global Carbon Budget 2021. <i>Earth System Science Data</i> , 2022 , 14, 1917-2005	10.5	47
107	Trends and drivers of regional sources and sinks of carbon dioxide over the past two decades		44
106	Benchmarking the seasonal cycle of CO ₂ fluxes simulated by terrestrial ecosystem models. <i>Global Biogeochemical Cycles</i> , 2015 , 29, 46-64	5.9	42
105	Land-use and land-cover change carbon emissions between 1901 and 2012 constrained by biomass observations. <i>Biogeosciences</i> , 2017 , 14, 5053-5067	4.6	42
104	The European land and inland water CO ₂ , CO, CH ₄ and N ₂ O balance between 2001 and 2005. <i>Biogeosciences</i> , 2012 , 9, 3357-3380	4.6	42
103	The dry season intensity as a key driver of NPP trends. <i>Geophysical Research Letters</i> , 2016 , 43, 2632-2639	4.9	42
102	Impact of the 2015/2016 El Niño on the terrestrial carbon cycle constrained by bottom-up and top-down approaches. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018 , 373,	5.8	41
101	Implementing the nitrogen cycle into the dynamic global vegetation, hydrology, and crop growth model LPJmL (version 5.0). <i>Geoscientific Model Development</i> , 2018 , 11, 2789-2812	6.3	38
100	Decadal biomass increment in early secondary succession woody ecosystems is increased by CO ₂ enrichment. <i>Nature Communications</i> , 2019 , 10, 454	17.4	37
99	Robust dynamics of Amazon dieback to climate change with perturbed ecosystem model parameters. <i>Global Change Biology</i> , 2010 , 16, 2476	11.4	37
98	Does the growth response of woody plants to elevated CO ₂ increase with temperature? A model-oriented meta-analysis. <i>Global Change Biology</i> , 2015 , 21, 4303-19	11.4	34
97	How does the terrestrial carbon exchange respond to inter-annual climatic variations? A quantification based on atmospheric CO ₂ data. <i>Biogeosciences</i> , 2018 , 15, 2481-2498	4.6	33
96	Towards a more physiological representation of vegetation phosphorus processes in land surface models. <i>New Phytologist</i> , 2019 , 222, 1223-1229	9.8	32
95	Organizing principles for vegetation dynamics. <i>Nature Plants</i> , 2020 , 6, 444-453	11.5	32
94	Bleaf-An R package for the calculation of physical and physiological ecosystem properties from eddy covariance data. <i>PLoS ONE</i> , 2018 , 13, e0201114	3.7	32
93	Modelling sun-induced fluorescence and photosynthesis with a land surface model at local and regional scales in northern Europe. <i>Biogeosciences</i> , 2017 , 14, 1969-1987	4.6	32
92	Challenging terrestrial biosphere models with data from the long-term multifactor Prairie Heating and CO ₂ Enrichment experiment. <i>Global Change Biology</i> , 2017 , 23, 3623-3645	11.4	31

91	Soil carbon management in large-scale Earth system modelling: implications for crop yields and nitrogen leaching. <i>Earth System Dynamics</i> , 2015 , 6, 745-768	4.8	31
90	Effect Of Height On Tree Hydraulic Conductance Incompletely Compensated By Xylem Tapering. <i>Functional Ecology</i> , 2005 , 19, 359-364	5.6	31
89	Future no-analogue vegetation produced by no-analogue combinations of temperature and insolation. <i>Global Ecology and Biogeography</i> , 2014 , 23, 156-167	6.1	27
88	Moderating the impact of agriculture on climate. <i>Agricultural and Forest Meteorology</i> , 2007 , 142, 278-287	5.8	27
87	Global Carbon Budget 2021		26
86	Gross primary production responses to warming, elevated CO ₂ , and irrigation: quantifying the drivers of ecosystem physiology in a semiarid grassland. <i>Global Change Biology</i> , 2017 , 23, 3092-3106	11.4	25
85	Effects of changes in CO ₂ , climate, and land use on the carbon balance of the land biosphere during the 21st century. <i>Journal of Geophysical Research</i> , 2007 , 112,		25
84	Towards a more objective evaluation of modelled land-carbon trends using atmospheric CO ₂ and satellite-based vegetation activity observations. <i>Biogeosciences</i> , 2013 , 10, 4189-4210	4.6	24
83	Assessing and improving the representativeness of monitoring networks: The European flux tower network example. <i>Journal of Geophysical Research</i> , 2011 , 116,		24
82	The role of plant functional trade-offs for biodiversity changes and biome shifts under scenarios of global climatic change. <i>Biogeosciences</i> , 2011 , 8, 1255-1266	4.6	24
81	Accounting for carbon and nitrogen interactions in the global terrestrial ecosystem model ORCHIDEE (trunk version, rev 4999): multi-scale evaluation of gross primary production. <i>Geoscientific Model Development</i> , 2019 , 12, 4751-4779	6.3	24
80	Sources of Uncertainty in Regional and Global Terrestrial CO ₂ Exchange Estimates. <i>Global Biogeochemical Cycles</i> , 2020 , 34, e2019GB006393	5.9	23
79	Impacts of extreme summers on European ecosystems: a comparative analysis of 2003, 2010 and 2018. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2020 , 375, 20190507	5.8	23
78	Constraining a land-surface model with multiple observations by application of the MPI-Carbon Cycle Data Assimilation System V1.0. <i>Geoscientific Model Development</i> , 2016 , 9, 2999-3026	6.3	23
77	Terrestrial nitrogen cycling in Earth system models revisited. <i>New Phytologist</i> , 2016 , 210, 1165-8	9.8	22
76	History of El Niño impacts on the global carbon cycle 1957-2017: a quantification from atmospheric CO ₂ data. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018 , 373,	5.8	22
75	Plant Regrowth as a Driver of Recent Enhancement of Terrestrial CO ₂ Uptake. <i>Geophysical Research Letters</i> , 2018 , 45, 4820-4830	4.9	21
74	Regional carbon fluxes from land use and land cover change in Asia, 1980-2009. <i>Environmental Research Letters</i> , 2016 , 11, 074011	6.2	21

73	Nitrogen cycling in CMIP6 land surface models: progress and limitations. <i>Biogeosciences</i> , 2020 , 17, 5129-5148	4.1	21
72	The carbon cycle in Mexico: past, present and future of C stocks and fluxes. <i>Biogeosciences</i> , 2016 , 13, 223-238	4.6	21
71	GOLUM-CNP v1.0: a data-driven modeling of carbon, nitrogen and phosphorus cycles in major terrestrial biomes. <i>Geoscientific Model Development</i> , 2018 , 11, 3903-3928	6.3	21
70	Using research networks to create the comprehensive datasets needed to assess nutrient availability as a key determinant of terrestrial carbon cycling. <i>Environmental Research Letters</i> , 2018 , 13, 125006	6.2	21
69	Multicriteria evaluation of discharge simulation in Dynamic Global Vegetation Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015 , 120, 7488-7505	4.4	20
68	Adaptation of microbial resource allocation affects modelled long term soil organic matter and nutrient cycling. <i>Soil Biology and Biochemistry</i> , 2017 , 115, 322-336	7.5	19
67	Role of CO ₂ , climate and land use in regulating the seasonal amplitude increase of carbon fluxes in terrestrial ecosystems: a multimodel analysis. <i>Biogeosciences</i> , 2016 , 13, 5121-5137	4.6	19
66	Comparative carbon cycle dynamics of the present and last interglacial. <i>Quaternary Science Reviews</i> , 2016 , 137, 15-32	3.9	19
65	A new model of the coupled carbon, nitrogen, and phosphorus cycles in the terrestrial biosphere (QUINCY v1.0; revision 1996). <i>Geoscientific Model Development</i> , 2019 , 12, 4781-4802	6.3	18
64	Ensemble projections elucidate effects of uncertainty in terrestrial nitrogen limitation on future carbon uptake. <i>Global Change Biology</i> , 2020 , 26, 3978-3996	11.4	18
63	Improved understanding of drought controls on seasonal variation in Mediterranean forest canopy CO ₂ and water fluxes through combined in situ measurements and ecosystem modelling		17
62	Low phosphorus supply constrains plant responses to elevated CO ₂ : A meta-analysis. <i>Global Change Biology</i> , 2020 , 26, 5856-5873	11.4	17
61	Effects of mesophyll conductance on vegetation responses to elevated CO ₂ concentrations in a land surface model. <i>Global Change Biology</i> , 2019 , 25, 1820-1838	11.4	17
60	Development and evaluation of an ozone deposition scheme for coupling to a terrestrial biosphere model. <i>Biogeosciences</i> , 2017 , 14, 45-71	4.6	15
59	Separation of the Effects of Land and Climate Model Errors on Simulated Contemporary Land Carbon Cycle Trends in the MPI Earth System Model version 1*. <i>Journal of Climate</i> , 2015 , 28, 272-291	4.4	15
58	Mesophyll conductance in land surface models: effects on photosynthesis and transpiration. <i>Plant Journal</i> , 2020 , 101, 858-873	6.9	15
57	Jena Soil Model (JSM v1.0; revision 1934): a microbial soil organic carbon model integrated with nitrogen and phosphorus processes. <i>Geoscientific Model Development</i> , 2020 , 13, 783-803	6.3	14
56	Comment on "Mycorrhizal association as a primary control of the CO ₂ fertilization effect". <i>Science</i> , 2017 , 355, 358	33.3	12

55	Effects of global change during the 21st century on the nitrogen cycle 2015 ,		12
54	Land use change and El Niño-Southern Oscillation drive decadal carbon balance shifts in Southeast Asia. <i>Nature Communications</i> , 2018 , 9, 1154	17.4	12
53	Whole-plant optimality predicts changes in leaf nitrogen under variable CO ₂ and nutrient availability. <i>New Phytologist</i> , 2020 , 225, 2331-2346	9.8	12
52	Can we model observed soil carbon changes from a dense inventory? A case study over England and Wales using three versions of the ORCHIDEE ecosystem model (AR5, AR5-PRIM and O-CN). <i>Geoscientific Model Development</i> , 2013 , 6, 2153-2163	6.3	11
51	Slowdown of the greening trend in natural vegetation with further rise in atmospheric CO ₂ . <i>Biogeosciences</i> , 2021 , 18, 4985-5010	4.6	11
50	Evaluation of biospheric components in Earth system models using modern and palaeo-observations: the state-of-the-art. <i>Biogeosciences</i> , 2013 , 10, 8305-8328	4.6	10
49	Analyzing the causes and spatial pattern of the European 2003 carbon flux anomaly in Europe using seven models		10
48	Modelled land use and land cover change emissions – a spatio-temporal comparison of different approaches. <i>Earth System Dynamics</i> , 2021 , 12, 635-670	4.8	10
47	JULES-CN: a coupled terrestrial carbon-nitrogen scheme (JULES vn5.1). <i>Geoscientific Model Development</i> , 2021 , 14, 2161-2186	6.3	9
46	A framework of benchmarking land models		8
45	JULES-CN: a coupled terrestrial Carbon-Nitrogen Scheme (JULES vn5.1)		8
44	The European carbon cycle response to heat and drought as seen from atmospheric CO ₂ data for 1999-2018. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2020 , 375, 20190506	5.8	8
43	Controls of terrestrial ecosystem nitrogen loss on simulated productivity responses to elevated CO ₂ . <i>Biogeosciences</i> , 2018 , 15, 5677-5698	4.6	8
42	The three major axes of terrestrial ecosystem function. <i>Nature</i> , 2021 , 598, 468-472	50.4	8
41	Does the integration of the dynamic nitrogen cycle in a terrestrial biosphere model improve the long-term trend of the leaf area index?. <i>Climate Dynamics</i> , 2013 , 40, 2535-2548	4.2	7
40	Nitrification amplifies the decreasing trends of atmospheric oxygen and implies a larger land carbon uptake. <i>Global Biogeochemical Cycles</i> , 2007 , 21, n/a-n/a	5.9	7
39	Assessing the representation of the Australian carbon cycle in global vegetation models. <i>Biogeosciences</i> , 2021 , 18, 5639-5668	4.6	7
38	Implications of incorporating N cycling and N limitations on primary production in an individual-based dynamic vegetation model		7

37	Evaluation of simulated ozone effects in forest ecosystems against biomass damage estimates from fumigation experiments. <i>Biogeosciences</i> , 2018 , 15, 6941-6957	4.6	7
36	Year-round simulated methane emissions from a permafrost ecosystem in Northeast Siberia. <i>Biogeosciences</i> , 2018 , 15, 2691-2722	4.6	7
35	Challenges and opportunities to reduce uncertainty in projections of future atmospheric CO ₂ : a combined marine and terrestrial biosphere perspective		6
34	From biota to chemistry and climate: towards a comprehensive description of trace gas exchange between the biosphere and atmosphere		6
33	Vulnerability of European ecosystems to two compound dry and hot summers in 2018 and 2019. <i>Earth System Dynamics</i> , 2021 , 12, 1015-1035	4.8	6
32	Parameter calibration and stomatal conductance formulation comparison for boreal forests with adaptive population importance sampler in the land surface model JSBACH. <i>Geoscientific Model Development</i> , 2019 , 12, 4075-4098	6.3	5
31	The quasi-equilibrium framework revisited: analyzing long-term CO ₂ enrichment responses in plant-Boil models. <i>Geoscientific Model Development</i> , 2019 , 12, 2069-2089	6.3	5
30	Reconciling Precipitation with Runoff: Observed Hydrological Change in the Midlatitudes. <i>Journal of Hydrometeorology</i> , 2015 , 16, 2403-2420	3.7	5
29	Assessing the ability of three land ecosystem models to simulate gross carbon uptake of forests from boreal to Mediterranean climate in Europe		5
28	The fate of carbon in a mature forest under carbon dioxide enrichment		5
27	Plant phenology evaluation of CRESCENDO land surface models [Part 1: Start and end of the growing season. <i>Biogeosciences</i> , 2021 , 18, 2405-2428	4.6	5
26	Dynamic global vegetation models underestimate net CO ₂ flux mean and inter-annual variability in dryland ecosystems. <i>Environmental Research Letters</i> , 2021 , 16, 094023	6.2	5
25	The C4MIP experimental protocol for CMIP6 2016 ,		4
24	Interactions between nitrogen deposition, land cover conversion, and climate change determine the contemporary carbon balance of Europe		4
23	Global Carbon Budget 2018		4
22	Three decades of simulated global terrestrial carbon fluxes from a data assimilation system confronted with different periods of observations. <i>Biogeosciences</i> , 2019 , 16, 3009-3032	4.6	4
21	Enhanced regional terrestrial carbon uptake over Korea revealed by atmospheric CO ₂ measurements from 1999 to 2017. <i>Global Change Biology</i> , 2020 , 26, 3368-3383	11.4	3
20	The role of plant functional trade-offs for biodiversity changes and biome shifts under scenarios of global climatic change		3

19	Global Carbon Budget 2016		3
18	Constraining a land surface model with multiple observations by application of the MPI-Carbon Cycle Data Assimilation System 2016 ,		3
17	Land-use and land-cover change carbon emissions between 1901 and 2012 constrained by biomass observations		
16	Variability of projected terrestrial biosphere responses to elevated levels of atmospheric CO ₂ ; due to uncertainty in biological nitrogen fixation		2
15	The European CO ₂ , CO, CH ₄ and N ₂ O balance between 2001 and 2005		2
14	Soil carbon management in large-scale Earth system modelling: implications for crop yields and nitrogen leaching		2
13	Linking global terrestrial CO ₂ fluxes and environmental drivers: inferences from the Orbiting Carbon Observatory-2 satellite and terrestrial biospheric models. <i>Atmospheric Chemistry and Physics</i> , 2021 , 21, 6663-6680	6.8	2
12	Competing effects of nitrogen deposition and ozone exposure on northern hemispheric terrestrial carbon uptake and storage, 1850-2009. <i>Biogeosciences</i> , 2021 , 18, 3219-3241	4.6	2
11	Five years of variability in the global carbon cycle: comparing an estimate from the Orbiting Carbon Observatory-2 and process-based models. <i>Environmental Research Letters</i> , 2021 , 16, 054041	6.2	2
10	Accounting for Carbon and Nitrogen interactions in the Global Terrestrial Ecosystem Model ORCHIDEE (trunk version, rev 4999): multi-scale evaluation of gross primary production 2018 ,		2
9	A new terrestrial biosphere model with coupled carbon, nitrogen, and phosphorus cycles (QUINCY v1.0; revision 1772) 2019 ,		1
8	Modeling Soil Responses to Nitrogen and Phosphorus Fertilization Along a Soil Phosphorus Stock Gradient. <i>Frontiers in Forests and Global Change</i> , 2020 , 3,	3.7	1
7	Magnitude and Uncertainty of Nitrous Oxide Emissions From North America Based on Bottom-Up and Top-Down Approaches: Informing Future Research and National Inventories. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL095264	4.9	1
6	Evaluating two soil carbon models within the global land surface model JSBACH using surface and spaceborne observations of atmospheric CO ₂ . <i>Biogeosciences</i> , 2020 , 17, 5721-5743	4.6	1
5	The carbon cycle in Mexico: past, present and future of C stocks and fluxes		1
4	Long-term ecosystem nitrogen limitation from foliar N data and a land surface model. <i>Global Change Biology</i> , 2021 , 28, 493	11.4	1
3	Constraints from atmospheric CO ₂ and satellite-based vegetation activity observations on current land carbon cycle trends		1
2	Evaluation of biospheric components in Earth system models using modern and palaeo observations: the state-of-the-art		1

- 1 Improving Our Understanding of Earth System Processes: GREENCYCLES Annual Network and Midterm Review Meeting, Barcelona, Spain, 21-23 March 2007. *Eos*, **2007**, 88, 372-372 1.5