Ana Bastos

List of Publications by Year in descending order

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81 papers	6,408 citations	117625 34 h-index	69250 77 g-index
146 all docs	146 docs citations	146 times ranked	9557 citing authors

#	Article	IF	Citations
1	Global Carbon Budget 2018. Earth System Science Data, 2018, 10, 2141-2194.	9.9	1,167
2	Global Carbon Budget 2019. Earth System Science Data, 2019, 11, 1783-1838.	9.9	1,159
3	Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO₂. New Phytologist, 2021, 229, 2413-2445.	7.3	286
4	Direct and seasonal legacy effects of the 2018 heat wave and drought on European ecosystem productivity. Science Advances, 2020, 6, eaba2724.	10.3	229
5	Interannual variation of terrestrial carbon cycle: Issues and perspectives. Global Change Biology, 2020, 26, 300-318.	9.5	214
6	Land-use emissions play a critical role in land-based mitigation for Paris climate targets. Nature Communications, 2018, 9, 2938.	12.8	194
7	Global trends in carbon sinks and their relationships with CO2 and temperature. Nature Climate Change, 2019, 9, 73-79.	18.8	163
8	Satellite-observed pantropical carbon dynamics. Nature Plants, 2019, 5, 944-951.	9.3	141
9	Impact of extreme weather conditions on European crop production in 2018. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190510.	4.0	138
10	ORCHIDEE-MICT (v8.4.1), aÂland surface model for the high latitudes: model description and validation. Geoscientific Model Development, 2018, 11, 121-163.	3.6	135
11	Tropical forests did not recover from the strong 2015â€“2016 El NiÃ±o event. Science Advances, 2020, 6, eaay4603.	10.3	127
12	Climate Change Risks to Global Forest Health: Emergence of Unexpected Events of Elevated Tree Mortality Worldwide. Annual Review of Plant Biology, 2022, 73, 673-702.	18.7	117
13	Lower land-use emissions responsible for increased net land carbon sink during the slow warming period. Nature Geoscience, 2018, 11, 739-743.	12.9	110
14	Analysing the spatio-temporal impacts of the 2003 and 2010 extreme heatwaves on plant productivity in Europe. Biogeosciences, 2014, 11, 3421-3435.	3.3	102
15	The global NPP dependence on ENSO: La NiÃ±a and the extraordinary year of 2011. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 1247-1255.	3.0	101
16	Atmospheric dryness reduces photosynthesis along a large range of soil water deficits. Nature Communications, 2022, 13, 989.	12.8	100
17	A historical, geographical and ecological perspective on the 2018 European summer drought. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190505.	4.0	89
18	European land CO2 sink influenced by NAO and East-Atlantic Pattern coupling. Nature Communications, 2016, 7, 10315.	12.8	74

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19	Sensitivity of gross primary productivity to climatic drivers during the summer drought of 2018 in Europe. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190747.	4.0	71
20	Empirical estimates of regional carbon budgets imply reduced global soil heterotrophic respiration. National Science Review, 2021, 8, nwaa145.	9.5	70
21	Guidelines for Studying Diverse Types of Compound Weather and Climate Events. Earth's Future, 2021, 9, e2021EF002340.	6.3	66
22	Impacts of extreme summers on European ecosystems: a comparative analysis of 2003, 2010 and 2018. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190507.	4.0	64
23	Drought impacts on vegetation in the pre- and post-fire events over Iberian Peninsula. Natural Hazards and Earth System Sciences, 2012, 12, 3123-3137.	3.6	63
24	Impact of the 2015/2016 El NiÃ±o on the terrestrial carbon cycle constrained by bottom-up and top-down approaches. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20170304.	4.0	63
25	Sources of Uncertainty in Regional and Global Terrestrial CO₂ Exchange Estimates. Global Biogeochemical Cycles, 2020, 34, e2019GB006393.	4.9	59
26	The effects of teleconnections on carbon fluxes of global terrestrial ecosystems. Geophysical Research Letters, 2017, 44, 3209-3218.	4.0	58
27	Comparing national greenhouse gas budgets reported in UNFCCC inventories against atmospheric inversions. Earth System Science Data, 2022, 14, 1639-1675.	9.9	58
28	Contrasting biosphere responses to hydrometeorological extremes: revisiting the 2010 western Russian heatwave. Biogeosciences, 2018, 15, 6067-6085.	3.3	57
29	Vulnerability of European ecosystems to two compound dry and hot summers in 2018 and 2019. Earth System Dynamics, 2021, 12, 1015-1035.	7.1	49
30	The outstanding synergy between drought, heatwaves and fuel on the 2007 Southern Greece exceptional fire season. Agricultural and Forest Meteorology, 2016, 218-219, 135-145.	4.8	46
31	State of the science in reconciling topâ€down and bottomâ€up approaches for terrestrial CO₂ budget. Global Change Biology, 2020, 26, 1068-1084.	9.5	43
32	Accelerated terrestrial ecosystem carbon turnover and its drivers. Global Change Biology, 2020, 26, 5052-5062.	9.5	42
33	Precipitation thresholds regulate net carbon exchange at the continental scale. Nature Communications, 2018, 9, 3596.	12.8	39
34	Modelling post-fire vegetation recovery in Portugal. Biogeosciences, 2011, 8, 3593-3607.	3.3	38
35	How Well Do We Understand the Landâ€Oceanâ€Atmosphere Carbon Cycle?. Reviews of Geophysics, 2022, 60, .	23.0	38
36	Novel Representation of Leaf Phenology Improves Simulation of Amazonian Evergreen Forest Photosynthesis in a Land Surface Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2018MS001565.	3.8	36

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37	Impacts of the 1.5â€Â°C global warming target on future burned area in the Brazilian Cerrado. Forest Ecology and Management, 2019, 446, 193-203.	3.2	35
38	Definitions and methods to estimate regional land carbon fluxes for the second phase of the REgional Carbon Cycle Assessment and Processes Project (RECCAP-2). Geoscientific Model Development, 2022, 15, 1289-1316.	3.6	34
39	A multi-data assessment of land use and land cover emissions from Brazil during 2000â€“2019. Environmental Research Letters, 2021, 16, 074004.	5.2	33
40	The fingerprint of the summer 2018 drought in Europe on ground-based atmospheric CO₂measurements. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190513.	4.0	31
41	Vapor Pressure Deficit and Sunlight Explain Seasonality of Leaf Phenology and Photosynthesis Across Amazonian Evergreen Broadleaved Forest. Global Biogeochemical Cycles, 2021, 35, e2020GB006893.	4.9	31
42	European anthropogenic AFOLU greenhouse gas emissions: a review and benchmark data. Earth System Science Data, 2020, 12, 961-1001.	9.9	31
43	Contrasting effects of CO₂ fertilization, land-use change and warming on seasonal amplitude of Northern Hemisphere CO₂ exchange. Atmospheric Chemistry and Physics, 2019, 19, 12361-12375.	4.9	30
44	Modelled land use and land cover change emissions â€“ a spatio-temporal comparison of different approaches. Earth System Dynamics, 2021, 12, 635-670.	7.1	29
45	Increased Global Land Carbon Sink Due to Aerosolâ€Induced Cooling. Global Biogeochemical Cycles, 2019, 33, 439-457.	4.9	27
46	The influence of the main large-scale circulation patterns on wind power production in Portugal. Renewable Energy, 2017, 102, 214-223.	8.9	26
47	Ten new insights in climate science 2021: a horizon scan. Global Sustainability, 2021, 4, .	3.3	26
48	Was the extreme Northern Hemisphere greening in 2015 predictable?. Environmental Research Letters, 2017, 12, 044016.	5.2	25
49	Comparison of forest aboveâ€ground biomass from dynamic global vegetation models with spatially explicit remotely sensed observationâ€based estimates. Global Change Biology, 2020, 26, 3997-4012.	9.5	25
50	Modeling the impacts of diffuse light fraction on photosynthesis in ORCHIDEE (v5453) land surface model. Geoscientific Model Development, 2020, 13, 5401-5423.	3.6	23
51	Uncovering the critical soil moisture thresholds of plant water stress for European ecosystems. Global Change Biology, 2022, 28, 2111-2123.	9.5	23
52	Re-evaluating the 1940s CO₂ plateau. Biogeosciences, 2016, 13, 4877-4897.	3.3	22
53	Regime shifts of Mediterranean forest carbon uptake and reduced resilience driven by multidecadal ocean surface temperatures. Global Change Biology, 2019, 25, 2825-2840.	9.5	22
54	Comparison of uncertainties in land-use change fluxes from bookkeeping model parameterisation. Earth System Dynamics, 2021, 12, 745-762.	7.1	22

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55	Vegetation greenness and land carbon-flux anomalies associated with climate variations: a focus on the year 2015. Atmospheric Chemistry and Physics, 2017, 17, 13903-13919.	4.9	21
56	Changes in the Response of the Northern Hemisphere Carbon Uptake to Temperature Over the Last Three Decades. Geophysical Research Letters, 2018, 45, 4371-4380.	4.0	21
57	Consistency of Satellite Climate Data Records for Earth System Monitoring. Bulletin of the American Meteorological Society, 2020, 101, E1948-E1971.	3.3	21
58	Future Projections of Fire Occurrence in Brazil Using EC-Earth Climate Model. Revista Brasileira De Meteorologia, 2016, 31, 288-297.	0.5	20
59	Recent Changes in Global Photosynthesis and Terrestrial Ecosystem Respiration Constrained From Multiple Observations. Geophysical Research Letters, 2018, 45, 1058-1068.	4.0	19
60	Regional and seasonal partitioning of water and temperature controls on global land carbon uptake variability. Nature Communications, 2022, 13, .	12.8	18
61	Characterization of a commercial lower-cost medium-precision non-dispersive infrared sensor for atmospheric CO₂ monitoring in urban areas. Atmospheric Measurement Techniques, 2019, 12, 2665-2677.	3.1	16
62	The Accelerating Land Carbon Sink of the 2000s May Not Be Driven Predominantly by the Warming Hiatus. Geophysical Research Letters, 2018, 45, 1402-1409.	4.0	13
63	Amplified warming from physiological responses to carbon dioxide reduces the potential of vegetation for climate change mitigation. Communications Earth & Environment, 2022, 3, .	6.8	13
64	Discrete wavelet analysis of the influence of the North Atlantic Oscillation on Baltic Sea level. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 65, 20077.	1.7	12
65	Variations of carbon allocation and turnover time across tropical forests. Global Ecology and Biogeography, 2021, 30, 1271-1285.	5.8	12
66	Disentangling the Impacts of Anthropogenic Aerosols on Terrestrial Carbon Cycle During 1850â€“2014. Earth's Future, 2021, 9, e2021EF002035.	6.3	11
67	Drought Legacy in Subâ€Seasonal Vegetation State and Sensitivity to Climate Over the Northern Hemisphere. Geophysical Research Letters, 2022, 49, .	4.0	11
68	Effects of rising CO2 levels on carbon sequestration are coordinated above and below ground. Nature, 2021, 591, 532-534.	27.8	10
69	Bookkeeping estimates of the net land-use change flux â€“ a sensitivity study with the CMIP6 land-use dataset. Earth System Dynamics, 2021, 12, 763-782.	7.1	9
70	Past and Future Climate Variability Uncertainties in the Global Carbon Budget Using the MPI Grand Ensemble. Global Biogeochemical Cycles, 2021, 35, e2021GB007019.	4.9	7
71	Siberian 2020 heatwave increased spring CO₂ uptake but not annual CO₂ uptake. Environmental Research Letters, 2021, 16, 124030.	5.2	7
72	Decadal variability in land carbon sink efficiency. Carbon Balance and Management, 2021, 16, 15.	3.2	6

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73	Unusual characteristics of the carbon cycle during the 2015â^'2016 El NiÃ±o. Global Change Biology, 2021, 27, 3798-3809.	9.5	6
74	Statement of Contribution to Diversity, Equity, and Inclusion for JGR: Biogeosciences. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	3.0	5
75	Vegetation Productivity Losses Linked to Mediterranean Hot and Dry Events. Remote Sensing, 2021, 13, 4010.	4.0	4
76	Gross changes in forest area shape the future carbon balance of tropical forests. Biogeosciences, 2018, 15, 91-103.	3.3	3
77	Influence of high-latitude warming and land-use changes in the early 20th century northern Eurasian CO ₂ sink. Environmental Research Letters, 2018, 13, 065014.	5.2	3
78	Warmer Arctic weakens vegetation. Nature Geoscience, 2017, 10, 543-544.	12.9	1
79	Semiarid ecosystems. , 2022, , 311-335.		0
80	Bottom-up approaches for estimating terrestrial GHG budgets: Bookkeeping, process-based modeling, and data-driven methods. , 2022, , 59-85.		0
81	Balancing greenhouse gas sources and sinks: Inventories, budgets, and climate policy. , 2022, , 3-28.		0