Renato Spahni

List of Publications by Year
in descending order

54 papers	11,931 citations	81743 39 h-index	161609 54 g-index
78 all docs	78 docs citations	78 times ranked	12895 citing authors

#	Article	IF	Citations
1	Orbital and Millennial Antarctic Climate Variability over the Past 800,000 Years. Science, 2007, 317, 793-796.	6.0	1,880
2	Three decades of global methane sources and sinks. Nature Geoscience, 2013, 6, 813-823.	5.4	1,649
3	Anthropogenic perturbation of the carbon fluxes from land to ocean. Nature Geoscience, 2013, 6, 597-607.	5.4	937
4	Orbital and millennial-scale features of atmospheric CH4 over the past 800,000â€‰years. Nature, 2008, 453, 383-386.	13.7	840
5	The global methane budget 2000â€“2012. Earth System Science Data, 2016, 8, 697-751.	3.7	824
6	Present state of global wetland extent and wetland methane modelling: conclusions from a model inter-comparison project (WETCHIMP). Biogeosciences, 2013, 10, 753-788.	1.3	475
7	Atmospheric Methane and Nitrous Oxide of the Late Pleistocene from Antarctic Ice Cores. Science, 2005, 310, 1317-1321.	6.0	424
8	The EDC3 chronology for the EPICA Dome C ice core. Climate of the Past, 2007, 3, 485-497.	1.3	396
9	Rates of change in natural and anthropogenic radiative forcing over the past 20,000 years. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1425-1430.	3.3	366
10	Isotope calibrated Greenland temperature record over Marine Isotope Stage 3 and its relation to CH4. Earth and Planetary Science Letters, 2006, 243, 504-519.	1.8	338
11	Multiple greenhouse-gas feedbacks from the land biosphere under future climate change scenarios. Nature Climate Change, 2013, 3, 666-672.	8.1	209
12	Long-Term Climate Change Commitment and Reversibility: An EMIC Intercomparison. Journal of Climate, 2013, 26, 5782-5809.	1.2	208
13	Constraining global methane emissions and uptake by ecosystems. Biogeosciences, 2011, 8, 1643-1665.	1.3	202
14	Spatial variability and temporal trends in waterâ€use efficiency of European forests. Global Change Biology, 2014, 20, 3700-3712.	4.2	175
15	Changing boreal methane sources and constant biomass burning during the last termination. Nature, 2008, 452, 864-867.	13.7	173
16	N2O and CH4variations during the last glacial epoch: Insight into global processes. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	171
17	Present state of global wetland extent and wetland methane modelling: methodology of a model inter-comparison project (WETCHIMP). Geoscientific Model Development, 2013, 6, 617-641.	1.3	165
18	Glacialâ€“interglacial and millennial-scale variations in the atmospheric nitrous oxide concentration during the last 800,000 years. Quaternary Science Reviews, 2010, 29, 182-192.	1.4	163

#	Article	IF	Citations
19	Historical and idealized climate model experiments: an intercomparison of Earth system models of intermediate complexity. Climate of the Past, 2013, 9, 1111-1140.	1.3	157
20	Atmospheric nitrous oxide during the last 140,000years. Earth and Planetary Science Letters, 2010, 300, 33-43.	1.8	154
21	Global wetland contribution to 2000â€“2012 atmospheric methane growth rate dynamics. Environmental Research Letters, 2017, 12, 094013.	2.2	129
22	The attenuation of fast atmospheric CH4variations recorded in polar ice cores. Geophysical Research Letters, 2003, 30, .	1.5	126
23	New constraints on the gas age-ice age difference along the EPICA ice cores, 0â€“50 kyr. Climate of the Past, 2007, 3, 527-540.	1.3	110
24	Modelling terrestrial nitrous oxide emissions and implications for climate feedback. New Phytologist, 2012, 196, 472-488.	3.5	106
25	Transient simulations of the carbon and nitrogen dynamics in northern peatlands: from the Last Glacial Maximum to the 21st century. Climate of the Past, 2013, 9, 1287-1308.	1.3	102
26	Variability and quasi-decadal changes in the methane budget over the period 2000â€“2012. Atmospheric Chemistry and Physics, 2017, 17, 11135-11161.	1.9	85
27	WETCHIMP-WSL: intercomparison of wetland methane emissions models over West Siberia. Biogeosciences, 2015, 12, 3321-3349.	1.3	81
28	Anomalous flow below 2700 m in the EPICA Dome C ice core detected using Î´¹⁸O of atmospheric oxygen measurements. Climate of the Past, 2007, 3, 341-353.	1.3	74
29	Supporting evidence from the EPICA Dronning Maud Land ice core for atmospheric CO2 changes during the past millennium. Tellus, Series B: Chemical and Physical Meteorology, 2005, 57, 51-57.	0.8	71
30	Evidence for molecular size dependent gas fractionation in firn air derived from noble gases, oxygen, and nitrogen measurements. Earth and Planetary Science Letters, 2006, 243, 61-73.	1.8	71
31	Past and future carbon fluxes from land use change, shifting cultivation and wood harvest. Tellus, Series B: Chemical and Physical Meteorology, 2022, 66, 23188.	0.8	71
32	Synchronization of ice core records via atmospheric gases. Climate of the Past, 2007, 3, 325-330.	1.3	70
33	Past and future evolution of Abies alba forests in Europe â€“ comparison of a dynamic vegetation model with palaeo data and observations. Global Change Biology, 2016, 22, 727-740.	4.2	70
34	Hydrogen Isotopes Preclude Marine Hydrate CH ₄ Emissions at the Onset of Dansgaard-Oeschger Events. Science, 2010, 328, 1686-1689.	6.0	69
35	DYPTOP: a cost-efficient TOPMODEL implementation to simulate sub-grid spatio-temporal dynamics of global wetlands and peatlands. Geoscientific Model Development, 2014, 7, 3089-3110.	1.3	69
36	NGRIP CH₄ concentration from 120 to 10 kyr before present and its relation to a Î´¹⁵N temperature reconstruction from the same ice core. Climate of the Past, 2014, 10, 903-920.	1.3	61

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37	High-resolution interpolar difference of atmospheric methane around the Last Glacial Maximum. Biogeosciences, 2012, 9, 3961-3977.	1.3	54
38	Independent variations of CH4 emissions and isotopic composition over the past 160,000 years. Nature Geoscience, 2013, 6, 885-890.	5.4	54
39	A Combined Tree Ring and Vegetation Model Assessment of European Forest Growth Sensitivity to Interannual Climate Variability. Global Biogeochemical Cycles, 2018, 32, 1226-1240.	1.9	54
40	Supporting evidence from the EPICA Dronning Maud Land ice core for atmospheric CO₂ changes during the past millennium. Tellus, Series B: Chemical and Physical Meteorology, 2022, 57, 51.	0.8	50
41	Methane emissions from floodplains in the Amazon Basin: challenges in developing a process-based model for global applications. Biogeosciences, 2014, 11, 1519-1558.	1.3	43
42	Global methane emission estimates for 2000â€“2012 from CarbonTracker Europe-CH₄ v1.0. Geoscientific Model Development, 2017, 10, 1261-1289.	1.3	40
43	Isotopic constraints on marine and terrestrial N2O emissions during the last deglaciation. Nature, 2014, 516, 234-237.	13.7	38
44	Retrieving the paleoclimatic signal from the deeper part of the EPICA Dome C ice core. Cryosphere, 2015, 9, 1633-1648.	1.5	32
45	Natural and anthropogenic methane fluxes in Eurasia: a mesoscale quantification by generalized atmospheric inversion. Biogeosciences, 2015, 12, 5393-5414.	1.3	31
46	Using a maximum simplicity paleoclimate model to simulate millennial variability during the last four glacial periods. Quaternary Science Reviews, 2006, 25, 3185-3197.	1.4	30
47	Impact of an abrupt cooling event on interglacial methane emissions in northern peatlands. Biogeosciences, 2013, 10, 1963-1981.	1.3	30
48	Patterns of millennial variability over the last 500 ka. Climate of the Past, 2010, 6, 295-303.	1.3	26
49	Comparative carbon cycle dynamics of the present and last interglacial. Quaternary Science Reviews, 2016, 137, 15-32.	1.4	26
50	Simulating oxygen isotope ratios in tree ring cellulose using a dynamic global vegetation model. Biogeosciences, 2016, 13, 3869-3886.	1.3	23
51	Application of eco-physiological models to the climatic interpretation of Î´13C and Î´18O measured in Siberian larch tree-rings. Dendrochronologia, 2016, 39, 51-59.	1.0	21
52	Marine Isotope Stage (MIS) 8 millennial variability stratigraphically identical to MIS 3. Paleoceanography, 2007, 22, n/a-n/a.	3.0	19
53	N₂O changes from the Last Glacial Maximum to the preindustrial â€“ Part 1: Quantitative reconstruction of terrestrial and marine emissions using N₂O stable isotopes in ice cores. Biogeosciences, 2019, 16, 3997-4021.	1.3	12
54	N₂O changes from the Last Glacial Maximum to the preindustrial â€“ PartÂ2: terrestrial N₂O emissions and carbonâ€“nitrogen cycle interactions. Biogeosciences, 2020, 17, 3511-3543.	1.3	7