List of Publications by Year in descending order

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| | | 5896 | 4342 |
|----------|----------------|--------------|----------------|
| 214 | 33,687 | 81 | 173 |
| papers | citations | h-index | g-index |
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| 312 | 312 | 312 | 28162 |
| all docs | docs citations | times ranked | citing authors |
| | | | |

| # | Article | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Anthropogenic ocean acidification over the twenty-first century and its impact on calcifying organisms. Nature, 2005, 437, 681-686. | 27.8 | 3,772 |
| 2 | Climate–Carbon Cycle Feedback Analysis: Results from the C4MIP Model Intercomparison. Journal of Climate, 2006, 19, 3337-3353. | 3.2 | 2,647 |
| 3 | Mid- to Late Holocene climate change: an overview. Quaternary Science Reviews, 2008, 27, 1791-1828. | 3.0 | 1,389 |
| 4 | The Global Methane Budget 2000–2017. Earth System Science Data, 2020, 12, 1561-1623. | 9.9 | 1,199 |
| 5 | Contrasting futures for ocean and society from different anthropogenic CO ₂ emissions scenarios. Science, 2015, 349, aac4722. | 12.6 | 1,059 |
| 6 | Anthropogenic perturbation of the carbon fluxes from land to ocean. Nature Geoscience, 2013, 6, 597-607. | 12.9 | 937 |
| 7 | The global methane budget 2000–2012. Earth System Science Data, 2016, 8, 697-751. | 9.9 | 824 |
| 8 | A comprehensive quantification of global nitrous oxide sources and sinks. Nature, 2020, 586, 248-256. | 27.8 | 814 |
| 9 | Holocene carbon-cycle dynamics based on CO2 trapped in ice at Taylor Dome, Antarctica. Nature, 1999, 398, 121-126. | 27.8 | 686 |
| 10 | Climate and human influences on globalÂbiomass burning over the past twoÂmillennia. Nature Geoscience, 2008, 1, 697-702. | 12.9 | 686 |
| 11 | Carbon balance of the terrestrial biosphere in the Twentieth Century: Analyses of CO2, climate and land use effects with four process-based ecosystem models. Global Biogeochemical Cycles, 2001, 15, 183-206. | 4.9 | 680 |
| 12 | Projected 21st century decrease in marine productivity: a multi-model analysis. Biogeosciences, 2010, 7, 979-1005. | 3.3 | 520 |
| 13 | Carbon dioxide and climate impulse response functions for the computation of greenhouse gas metrics: a multi-model analysis. Atmospheric Chemistry and Physics, 2013, 13, 2793-2825. | 4.9 | 517 |
| 14 | Oceanic sources, sinks, and transport of atmospheric CO ₂ . Global Biogeochemical Cycles, 2009, 23, . | 4.9 | 455 |
| 15 | Imminent ocean acidification in the Arctic projected with the NCAR global coupled carbon cycle-climate model. Biogeosciences, 2009, 6, 515-533. | 3.3 | 417 |
| 16 | Global warming feedbacks on terrestrial carbon uptake under the Intergovernmental Panel on Climate Change (IPCC) Emission Scenarios. Global Biogeochemical Cycles, 2001, 15, 891-907. | 4.9 | 368 |
| 17 | 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. | 7.1 | 366 |
| 18 | Climate forcing reconstructions for use in PMIP simulations of the last millennium (v1.0). Geoscientific Model Development, 2011, 4, 33-45. | 3.6 | 349 |

| # | Article | IF | CITATIONS |
|----|--|------|-----------|
| 19 | Constraints on radiative forcing and future climate change from observations and climate model ensembles. Nature, 2002, 416, 719-723. | 27.8 | 345 |
| 20 | Carbon Isotope Constraints on the Deglacial CO ₂ Rise from Ice Cores. Science, 2012, 336, 711-714. | 12.6 | 339 |
| 21 | Inverse estimates of anthropogenic CO2uptake, transport, and storage by the ocean. Global Biogeochemical Cycles, 2006, 20, n/a-n/a. | 4.9 | 331 |
| 22 | Solar influence on climate during the past millennium: Results from transient simulations with the NCAR Climate System Model. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3713-3718. | 7.1 | 323 |
| 23 | Integrating the evidence for a terrestrial carbon sink caused by increasing atmospheric CO ₂ . New Phytologist, 2021, 229, 2413-2445. | 7.3 | 286 |
| 24 | Global Warming and Marine Carbon Cycle Feedbacks on Future Atmospheric CO2. Science, 1999, 284, 464-467. | 12.6 | 284 |
| 25 | Solar activity during the last 1000yr inferred from radionuclide records. Quaternary Science Reviews, 2007, 26, 82-97. | 3.0 | 284 |
| 26 | Ensemble reconstruction constraints on the global carbon cycle sensitivity to climate. Nature, 2010, 463, 527-530. | 27.8 | 256 |
| 27 | An efficient and accurate representation of complex oceanic and biospheric models of anthropogenic carbon uptake. Tellus, Series B: Chemical and Physical Meteorology, 1996, 48, 397-417. | 1.6 | 240 |
| 28 | Climate forcing reconstructions for use in PMIP simulations of the Last Millennium (v1.1). Geoscientific Model Development, 2012, 5, 185-191. | 3.6 | 238 |
| 29 | Long-Term Climate Commitments Projected with Climate–Carbon Cycle Models. Journal of Climate, 2008, 21, 2721-2751. | 3.2 | 232 |
| 30 | Global soil nitrous oxide emissions since the preindustrial era estimated by an ensemble of terrestrial biosphere models: Magnitude, attribution, and uncertainty. Global Change Biology, 2019, 25, 640-659. | 9.5 | 214 |
| 31 | Impact of circulation on export production, dissolved organic matter, and dissolved oxygen in the ocean: Results from Phase II of the Ocean Carbonâ€cycle Model Intercomparison Project (OCMIPâ€2). Global Biogeochemical Cycles, 2007, 21, . | 4.9 | 211 |
| 32 | Evaluating global ocean carbon models: The importance of realistic physics. Global Biogeochemical Cycles, 2004, 18, n/a-n/a. | 4.9 | 210 |
| 33 | Multiple greenhouse-gas feedbacks from the land biosphere under future climate change scenarios. Nature Climate Change, 2013, 3, 666-672. | 18.8 | 209 |
| 34 | Long-Term Climate Change Commitment and Reversibility: An EMIC Intercomparison. Journal of Climate, 2013, 26, 5782-5809. | 3.2 | 208 |
| 35 | Stable isotope constraints on Holocene carbon cycle changes from an Antarctic ice core. Nature, 2009, 461, 507-510. | 27.8 | 203 |
| 36 | Constraining global methane emissions and uptake by ecosystems. Biogeosciences, 2011, 8, 1643-1665. | 3.3 | 202 |

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| 37 | Transient simulations of Holocene atmospheric carbon dioxide and terrestrial carbon since the Last Glacial Maximum. Global Biogeochemical Cycles, 2004, 18, n/a-n/a. | 4.9 | 197 |
| 38 | Evaluation of ocean model ventilation with CFC-11: comparison of 13 global ocean models. Ocean Modelling, 2002, 4, 89-120. | 2.4 | 192 |
| 39 | Probabilistic climate change projections using neural networks. Climate Dynamics, 2003, 21, 257-272. | 3.8 | 185 |
| 40 | Stability of the Atlantic meridional overturning circulation: A model intercomparison. Geophysical Research Letters, 2012, 39, . | 4.0 | 185 |
| 41 | The past ecology of <i>Abies alba</i> provides new perspectives on future responses of silver fir forests to global warming. Ecological Monographs, 2013, 83, 419-439. | 5.4 | 176 |
| 42 | Spatial variability and temporal trends in waterâ€use efficiency of European forests. Global Change Biology, 2014, 20, 3700-3712. | 9.5 | 175 |
| 43 | The PMIP4 contribution to CMIP6 – Part 2: Two interglacials, scientific objective and experimental design for Holocene and Last Interglacial simulations. Geoscientific Model Development, 2017, 10, 3979-4003. | 3.6 | 171 |
| 44 | Evaluation of ocean carbon cycle models with data-based metrics. Geophysical Research Letters, 2004, 31, n/a-n/a. | 4.0 | 168 |
| 45 | Towards real-time verification of CO2 emissions. Nature Climate Change, 2017, 7, 848-850. | 18.8 | 168 |
| 46 | Expert assessment of future vulnerability of the global peatland carbon sink. Nature Climate Change, 2021, 11, 70-77. | 18.8 | 167 |
| 47 | Palaeoclimate constraints on the impact of 2 °C anthropogenic warming and beyond. Nature Geoscience, 2018, 11, 474-485. | 12.9 | 166 |
| 48 | Historical and idealized climate model experiments: an intercomparison of Earth system models of intermediate complexity. Climate of the Past, 2013, 9, 1111-1140. | 3.4 | 157 |
| 49 | Inverse estimates of the oceanic sources and sinks of natural CO2 and the implied oceanic carbon transport. Global Biogeochemical Cycles, 2007, 21, . | 4.9 | 156 |
| 50 | The PMIP4 contribution to CMIP6 – Part 3: The last millennium, scientific objective, and experimental design for the PMIP4 <i>past1000</i> simulations. Geoscientific Model Development, 2017, 10, 4005-4033. | 3.6 | 155 |
| 51 | Simulating effects of land use changes on carbon fluxes: past contributions to atmospheric CO ₂ increases and future commitments due to losses of terrestrial sink capacity. Tellus, Series B: Chemical and Physical Meteorology, 2022, 60, 583. | 1.6 | 147 |
| 52 | Natural variability and anthropogenic trends in oceanic oxygen in a coupled carbon cycle–climate model ensemble. Global Biogeochemical Cycles, 2009, 23, . | 4.9 | 143 |
| 53 | What caused Earth's temperature variations during the last 800,000 years? Data-based evidence on radiative forcing and constraints on climate sensitivity. Quaternary Science Reviews, 2010, 29, 129-145. | 3.0 | 143 |
| 54 | Oxygen and indicators of stress for marine life in multi-model global warming projections. Biogeosciences, 2013, 10, 1849-1868. | 3.3 | 140 |

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| 55 | Temperature increase of 21st century mitigation scenarios. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 15258-15262. | 7.1 | 139 |
| 56 | Biogeochemical protocols and diagnostics for the CMIP6 Ocean Model Intercomparison Project (OMIP). Geoscientific Model Development, 2017, 10, 2169-2199. | 3.6 | 137 |
| 57 | Revision of the global carbon budget due to changing air-sea oxygen fluxes. Clobal Biogeochemical Cycles, 2002, 16, 43-1-43-12. | 4.9 | 136 |
| 58 | Modelling Nd-isotopes with a coarse resolution ocean circulation model: Sensitivities to model parameters and source/sink distributions. Geochimica Et Cosmochimica Acta, 2011, 75, 5927-5950. | 3.9 | 136 |
| 59 | Use of a simple model for studying oceanic tracer distributions and the global carbon cycle. Tellus, Series B: Chemical and Physical Meteorology, 1992, 44, 186-207. | 1.6 | 133 |
| 60 | Ocean thermohaline circulation and sedimentary231Pa/230Th ratio. Paleoceanography, 2000, 15, 625-641. | 3.0 | 133 |
| 61 | Global wetland contribution to 2000–2012 atmospheric methane growth rate dynamics. Environmental Research Letters, 2017, 12, 094013. | 5.2 | 129 |
| 62 | Trends in marine dissolved oxygen: Implications for ocean circulation changes and the carbon budget. Eos, 2003, 84, 197. | 0.1 | 124 |
| 63 | The Global N2O Model Intercomparison Project. Bulletin of the American Meteorological Society, 2018, 99, 1231-1251. | 3.3 | 123 |
| 64 | Constraining temperature variations over the last millennium by comparing simulated and observed atmospheric CO2. Climate Dynamics, 2003, 20, 281-299. | 3.8 | 115 |
| 65 | The role of Southern Ocean processes in orbital and millennial CO2 variations – A synthesis. Quaternary Science Reviews, 2010, 29, 193-205. | 3.0 | 115 |
| 66 | Estimates of the effect of Southern Ocean iron fertilization on atmospheric CO2 concentrations. Nature, 1991, 349, 772-775. | 27.8 | 114 |
| 67 | Feedback mechanisms and sensitivities of ocean carbon uptake under global warming. Tellus, Series B: Chemical and Physical Meteorology, 2001, 53, 564-592. | 1.6 | 114 |
| 68 | Water Mass Distribution and Ventilation Time Scales in a Cost-Efficient, Three-Dimensional Ocean Model. Journal of Climate, 2006, 19, 5479-5499. | 3.2 | 113 |
| 69 | Deep ocean ventilation, carbon isotopes, marine sedimentation and the deglacial CO ₂ rise. Climate of the Past, 2011, 7, 771-800. | 3.4 | 107 |
| 70 | Allowable carbon emissions lowered by multiple climate targets. Nature, 2013, 499, 197-201. | 27.8 | 105 |
| 71 | Climate-induced interannual variability of marine primary and export production in three global coupled climate carbon cycle models. Biogeosciences, 2008, 5, 597-614. | 3.3 | 104 |
| 72 | A reconstruction of radiocarbon production and total solar irradiance from the Holocene ¹⁴ C and CO ₂ records: implications of data and model uncertainties. Climate of the Past, 2013, 9, 1879-1909. | 3.4 | 104 |

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| 73 | 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. | 3.4 | 102 |
| 74 | Use of a simple model for studying oceanic tracer distributions and the global carbon cycle. Tellus, Series B: Chemical and Physical Meteorology, 2022, 44, 186. | 1.6 | 98 |
| 75 | Reversible and irreversible impacts of greenhouse gas emissions in multi-century projections with the NCAR global coupled carbon cycle-climate model. Climate Dynamics, 2010, 35, 1439-1459. | 3.8 | 98 |
| 76 | Modelling the concentration of atmospheric CO 2 during the Younger Dryas climate event. Climate Dynamics, 1999, 15, 341-354. | 3.8 | 97 |
| 77 | Evidence for distinct modes of solar activity. Astronomy and Astrophysics, 2014, 562, L10. | 5.1 | 97 |
| 78 | The variability in the carbon sinks as reconstructed for the last 1000 years. Geophysical Research Letters, 1999, 26, 1437-1440. | 4.0 | 95 |
| 79 | Regional Impacts of Climate Change and Atmospheric CO2 on Future Ocean Carbon Uptake: A Multimodel Linear Feedback Analysis. Journal of Climate, 2011, 24, 2300-2318. | 3.2 | 95 |
| 80 | A nonlinear impulse response model of the coupled carbon cycle-climate system (NICCS). Climate Dynamics, 2001, 18, 189-202. | 3.8 | 94 |
| 81 | The role of ocean transport in the uptake of anthropogenic CO ₂ . Biogeosciences, 2009, 6, 375-390. | 3.3 | 93 |
| 82 | Sensitivity of Holocene atmospheric CO ₂ and the modern carbon budget to early human land use: analyses with a process-based model. Biogeosciences, 2011, 8, 69-88. | 3.3 | 92 |
| 83 | A reconstruction of atmospheric carbon dioxide and its stable carbon isotopic composition from the penultimate glacial maximum to the last glacial inception. Climate of the Past, 2013, 9, 2507-2523. | 3.4 | 90 |
| 84 | A Coupled Dynamical Ocean–Energy Balance Atmosphere Model for Paleoclimate Studies. Journal of Climate, 2011, 24, 349-375. | 3.2 | 87 |
| 85 | Renewable CO ₂ recycling and synthetic fuel production in a marine environment. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12212-12219. | 7.1 | 86 |
| 86 | Poorly ventilated deep ocean at the Last Glacial Maximum inferred from carbon isotopes: A dataâ€model comparison study. Paleoceanography, 2017, 32, 2-17. | 3.0 | 85 |
| 87 | Variability and quasi-decadal changes in the methane budget over the period 2000–2012. Atmospheric Chemistry and Physics, 2017, 17, 11135-11161. | 4.9 | 85 |
| 88 | 231Pa/230Th fractionation by ocean transport, biogenic particle flux and particle type. Earth and Planetary Science Letters, 2005, 237, 135-155. | 4.4 | 84 |
| 89 | Simulating atmospheric CO2, 13C and the marine carbon cycle during the Last Glacial–Interglacial cycle: possible role for a deepening of the mean remineralization depth and an increase in the oceanic nutrient inventory. Quaternary Science Reviews, 2012, 56, 46-68. | 3.0 | 83 |
| 90 | How important are Southern Hemisphere wind changes for low glacial carbon dioxide? A model study. Paleoceanography, 2008, 23, . | 3.0 | 81 |

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|-----|---|------|-----------|
| 91 | Time of emergence of trends in ocean biogeochemistry. Biogeosciences, 2014, 11, 3647-3659. | 3.3 | 81 |
| 92 | 20thÂcentury changes in carbon isotopes and water-use efficiency: tree-ring-based evaluation of the CLM4.5 and LPX-Bern models. Biogeosciences, 2017, 14, 2641-2673. | 3.3 | 81 |
| 93 | Warm Mediterranean mid-Holocene summers inferred from fossil midge assemblages. Nature Geoscience, 2017, 10, 207-212. | 12.9 | 80 |
| 94 | Evaluation of terrestrial carbon cycle models with atmospheric CO2measurements: Results from transient simulations considering increasing CO2, climate, and land-use effects. Global Biogeochemical Cycles, 2002, 16, 39-1-39-15. | 4.9 | 79 |
| 95 | A modeling assessment of the interplay between aeolian iron fluxes and ironâ€binding ligands in controlling carbon dioxide fluctuations during Antarctic warm events. Paleoceanography, 2008, 23, . | 3.0 | 76 |
| 96 | Long-term variability of the terrestrial and oceanic carbon sinks and the budgets of the carbon isotopes13C and14C. Global Biogeochemical Cycles, 1998, 12, 277-295. | 4.9 | 75 |
| 97 | Taking Action Against Ocean Acidification: A Review of Management and Policy Options. Environmental Management, 2013, 52, 761-779. | 2.7 | 73 |
| 98 | Impact of oceanic reorganizations on the ocean carbon cycle and atmospheric carbon dioxide content. Paleoceanography, 1998, 13, 225-244. | 3.0 | 71 |
| 99 | Past and future carbon fluxes from land use change, shifting cultivation and wood harvest. Tellus, Series B: Chemical and Physical Meteorology, 2022, 66, 23188. | 1.6 | 71 |
| 100 | Simulated changes in vegetation distribution, land carbon storage, and atmospheric CO2 in response to a collapse of the North Atlantic thermohaline circulation. Climate Dynamics, 2005, 25, 689-708. | 3.8 | 70 |
| 101 | Modeled natural and excess radiocarbon: Sensitivities to the gas exchange formulation and ocean transport strength. Global Biogeochemical Cycles, 2008, 22, . | 4.9 | 70 |
| 102 | Past and future evolution of <i>Abies alba</i> forests in Europe – comparison of a dynamic vegetation model with palaeo data and observations. Global Change Biology, 2016, 22, 727-740. | 9.5 | 70 |
| 103 | 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. | 3.6 | 69 |
| 104 | Monthly gridded data product of northern wetland methane emissions based on upscaling eddy covariance observations. Earth System Science Data, 2019, 11, 1263-1289. | 9.9 | 69 |
| 105 | Modeling the marine aragonite cycle: changes under rising carbon dioxide and its role in shallow water CaCO ₃ dissolution. Biogeosciences, 2008, 5, 1057-1072. | 3.3 | 67 |
| 106 | Sensitivity of a dynamic global vegetation model to climate and atmospheric CO2. Global Change Biology, 2004, 10, 1223-1239. | 9.5 | 66 |
| 107 | Misrepresentation of the IPCC CO2 emission scenarios. Nature Geoscience, 2010, 3, 376-377. | 12.9 | 66 |
| 108 | Links between atmospheric carbon dioxide, theÂland carbon reservoir and climate over theÂpast millennium. Nature Geoscience, 2015, 8, 383-387. | 12.9 | 66 |

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|-----|--|------|-----------|
| 109 | The 1430s: a cold period of extraordinary internal climate variability during the early Spörer Minimum with social and economic impacts in north-western and central Europe. Climate of the Past, 2016, 12, 2107-2126. | 3.4 | 66 |
| 110 | Marine N ₂ O Emissions From Nitrification and Denitrification Constrained by Modern Observations and Projected in Multimillennial Global Warming Simulations. Global Biogeochemical Cycles, 2018, 32, 92-121. | 4.9 | 66 |
| 111 | An efficient and accurate representation of complex oceanic and biospheric models of anthropogenic carbon uptake. Tellus, Series B: Chemical and Physical Meteorology, 2022, 48, 397. | 1.6 | 64 |
| 112 | A Bayesian ensemble data assimilation to constrain model parameters and land-use carbon emissions. Biogeosciences, 2018, 15, 2909-2930. | 3.3 | 64 |
| 113 | The quiet crossing of ocean tipping points. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 7.1 | 64 |
| 114 | A field study on chemistry, S(IV) oxidation rates and vertical transport during fog conditions. Atmospheric Environment Part A General Topics, 1991, 25, 217-230. | 1.3 | 63 |
| 115 | Ice core evidence for the extent of past atmospheric CO2change due to iron fertilisation. Geophysical Research Letters, 2004, 31, . | 4.0 | 63 |
| 116 | Impact of the 2015/2016 El Niño 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 |
| 117 | A first-order analysis of the potential role of CO2 fertilization to affect the global carbon budget: a comparison of four terrestrial biosphere models. Tellus, Series B: Chemical and Physical Meteorology, 1999, 51, 343-366. | 1.6 | 60 |
| 118 | An updated synthesis of the observed and projected impacts of climate change on the chemical, physical and biological processes in the oceans. Frontiers in Marine Science, 2015, 2, . | 2.5 | 59 |
| 119 | How unusual is today's solar activity?. Nature, 2005, 436, E3-E4. | 27.8 | 58 |
| 120 | Terrestrial carbon storage during the past 200 years: A Monte Carlo Analysis of CO2data from ice core and atmospheric measurements. Global Biogeochemical Cycles, 1997, 11, 111-124. | 4.9 | 57 |
| 121 | A Combined Tree Ring and Vegetation Model Assessment of European Forest Growth Sensitivity to Interannual Climate Variability. Global Biogeochemical Cycles, 2018, 32, 1226-1240. | 4.9 | 54 |
| 122 | Probabilistic climate change projections for CO2stabilization profiles. Geophysical Research Letters, 2005, 32, . | 4.0 | 53 |
| 123 | Atmospheric CO ₂ response to volcanic eruptions: The role of ENSO, season, and variability. Global Biogeochemical Cycles, 2013, 27, 239-251. | 4.9 | 53 |
| 124 | Climate and carbon cycle dynamics in a CESM simulation from 850 to 2100 CE. Earth System Dynamics, 2015, 6, 411-434. | 7.1 | 52 |
| 125 | Fingerprints of changes in the terrestrial carbon cycle in response to large reorganizations in ocean circulation. Climate of the Past, 2011, 7, 319-338. | 3.4 | 50 |
| 126 | Burial-nutrient feedbacks amplify the sensitivity of atmospheric carbon dioxide to changes in organic matter remineralisation. Earth System Dynamics, 2014, 5, 321-343. | 7.1 | 50 |

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| 127 | Implications of the Paris agreement for the ocean. Nature Climate Change, 2016, 6, 732-735. | 18.8 | 50 |
| 128 | A first-order analysis of the potential rôle of CO ₂ fertilization to affect the global carbon budget: a comparison of four terrestrial biosphere models. Tellus, Series B: Chemical and Physical Meteorology, 2022, 51, 343. | 1.6 | 49 |
| 129 | Projected pH reductions by 2100 might put deep North Atlantic biodiversity at risk. Biogeosciences, 2014, 11, 6955-6967. | 3.3 | 49 |
| 130 | Sensitivity of pelagic calcification to ocean acidification. Biogeosciences, 2011, 8, 433-458. | 3.3 | 47 |
| 131 | Simulation of atmospheric radiocarbon during abrupt oceanic circulation changes: trying to reconcile models and reconstructions. Quaternary Science Reviews, 2003, 22, 1647-1658. | 3.0 | 46 |
| 132 | Sensitivity of atmospheric CO ₂ and climate to explosive volcanic eruptions. Biogeosciences, 2011, 8, 2317-2339. | 3.3 | 46 |
| 133 | Mechanisms of millennial-scale atmospheric CO2 change in numerical model simulations. Quaternary Science Reviews, 2019, 220, 30-74. | 3.0 | 46 |
| 134 | Modeling the relationship between231Pa/230Th distribution in North Atlantic sediment and Atlantic meridional overturning circulation. Paleoceanography, 2007, 22, . | 3.0 | 45 |
| 135 | A latitude-depth, circulation-biogeochemical ocean model for paleoclimate studies. Development and sensitivities. Tellus, Series B: Chemical and Physical Meteorology, 1998, 50, 290-316. | 1.6 | 44 |
| 136 | Methane emissions from floodplains in the Amazon Basin: challenges in developing a process-based model for global applications. Biogeosciences, 2014, 11, 1519-1558. | 3.3 | 43 |
| 137 | Pulse response functions are cost-efficient tools to model the link between carbon emissions, atmospheric CO2 and global warming. Physics and Chemistry of the Earth, 1996, 21, 471-476. | 0.3 | 42 |
| 138 | Southern Ocean anthropogenic carbon sink constrained by sea surface salinity. Science Advances, 2021, 7, . | 10.3 | 42 |
| 139 | Growth enhancement due to global atmospheric change as predicted by terrestrial ecosystem models: consistent with US forest inventory data. Global Change Biology, 2002, 8, 299-303. | 9.5 | 41 |
| 140 | Toward explaining the Holocene carbon dioxide and carbon isotope records: Results from transient ocean carbon cycleâ€climate simulations. Paleoceanography, 2012, 27, . | 3.0 | 41 |
| 141 | Title is missing!. Environmental Modeling and Assessment, 1999, 4, 133-140. | 2.2 | 39 |
| 142 | Metrics to assess the mitigation of global warming by carbon capture and storage in the ocean and in geological reservoirs. Geophysical Research Letters, 2004, 31, . | 4.0 | 39 |
| 143 | Possible effects of iron fertilization in the Southern Ocean on atmospheric CO ₂ concentration. Global Biogeochemical Cycles, 1991, 5, 135-150. | 4.9 | 38 |
| 144 | Isotopic constraints on marine and terrestrial N2O emissions during the last deglaciation. Nature, 2014, 516, 234-237. | 27.8 | 38 |

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| 145 | Low terrestrial carbon storage at the Last Glacial Maximum: constraints from multi-proxy data. Climate of the Past, 2019, 15, 849-879. | 3.4 | 38 |
| 146 | A latitude-depth, circulation-biogeochemical ocean model for paleoclimate studies. Development and sensitivities. Tellus, Series B: Chemical and Physical Meteorology, 2022, 50, 290. | 1.6 | 37 |
| 147 | Imbalance in the budget. Nature, 1994, 370, 181-182. | 27.8 | 36 |
| 148 | Impact of oceanic circulation changes on atmospheric <i>δ</i> ¹³ CO ₂ . Global Biogeochemical Cycles, 2015, 29, 1944-1961. | 4.9 | 35 |
| 149 | Abrupt CO ₂ release to the atmosphere under glacial and early interglacial climate conditions. Science, 2020, 369, 1000-1005. | 12.6 | 35 |
| 150 | Evaluating timescales of carbon turnover in temperate forest soils with radiocarbon data. Global Biogeochemical Cycles, 1999, 13, 555-573. | 4.9 | 34 |
| 151 | Regional airâ€sea fluxes of anthropogenic carbon inferred with an Ensemble Kalman Filter. Global Biogeochemical Cycles, 2009, 23, . | 4.9 | 34 |
| 152 | Transient Earth system responses to cumulative carbon dioxide emissions: linearities, uncertainties, and probabilities in an observation-constrained model ensemble. Biogeosciences, 2016, 13, 1071-1103. | 3.3 | 34 |
| 153 | Holocene peatland and ice-core data constraints on the timing and magnitude of CO ₂ emissions from past land use. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 1492-1497. | 7.1 | 34 |
| 154 | New insights into cycling of 231 Pa and 230 Th in the Atlantic Ocean. Earth and Planetary Science Letters, 2017, 468, 27-37. | 4.4 | 34 |
| 155 | Impact of an abrupt cooling event on interglacial methane emissions in northern peatlands. Biogeosciences, 2013, 10, 1963-1981. | 3.3 | 30 |
| 156 | Global Patterns in Net Primary Production Allocation Regulated by Environmental Conditions and Forest Stand Age: A Modelâ€Data Comparison. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 2039-2059. | 3.0 | 30 |
| 157 | AÂprobabilistic assessment of calcium carbonate export and dissolution in the modern ocean. Biogeosciences, 2016, 13, 2823-2848. | 3.3 | 28 |
| 158 | Variability of the ocean carbon cycle in response to the North Atlantic Oscillation. Tellus, Series B: Chemical and Physical Meteorology, 2022, 64, 18738. | 1.6 | 27 |
| 159 | A radiative forcing analysis of tropical peatlands before and after their conversion to agricultural plantations. Global Change Biology, 2018, 24, 5518-5533. | 9.5 | 27 |
| 160 | Hysteresis of the Earth system under positive and negative CO ₂ emissions. Environmental Research Letters, 2020, 15, 124026. | 5.2 | 27 |
| 161 | Comparative carbon cycle dynamics of the present and last interglacial. Quaternary Science Reviews, 2016, 137, 15-32. | 3.0 | 26 |
| 162 | Ocean carbon transport in a box-diffusion versus a general circulation model. Journal of Geophysical Research, 1997, 102, 12367-12388. | 3.3 | 24 |

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| 163 | The substitution of high-resolution terrestrial biosphere models and carbon sequestration in response to changing CO2and climate. Global Biogeochemical Cycles, 1999, 13, 785-802. | 4.9 | 23 |
| 164 | Simulating oxygen isotope ratios in tree ring cellulose using a dynamic global vegetation model. Biogeosciences, 2016, 13, 3869-3886. | 3.3 | 23 |
| 165 | Coherent Response of Antarctic Intermediate Water and Atlantic Meridional Overturning Circulation During the Last Deglaciation: Reconciling Contrasting Neodymium Isotope Reconstructions From the Tropical Atlantic. Paleoceanography, 2017, 32, 1036-1053. | 3.0 | 23 |
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