Malte Meinshausen

List of Publications by Year
in descending order

99 papers	27,287 citations	51 h-index (36203)	98 g-index (34900)
148 all docs	148 docs citations	148 times ranked	27938 citing authors

#	Article	IF	Citations
1	The representative concentration pathways: an overview. Climatic Change, 2011, 109, 5-31.	1.7	5,871
2	The RCP greenhouse gas concentrations and their extensions from 1765 to 2300. Climatic Change, 2011, 109, 213-241.	1.7	2,948
3	Paris Agreement climate proposals need a boost to keep warming well below 2â€‰Â°C. Nature, 2016, 534, 631-639.	13.7	2,397
4	Greenhouse-gas emission targets for limiting global warming to 2â€‰Â°C. Nature, 2009, 458, 1158-1162.	13.7	2,245
5	Warming caused by cumulative carbon emissions towards the trillionth tonne. Nature, 2009, 458, 1163-1166.	13.7	1,282
6	Uncertainties in CMIP5 Climate Projections due to Carbon Cycle Feedbacks. Journal of Climate, 2014, 27, 511-526.	1.2	870
7	A roadmap for rapid decarbonization. Science, 2017, 355, 1269-1271.	6.0	815
8	The HadGEM2-ES implementation of CMIP5 centennial simulations. Geoscientific Model Development, 2011, 4, 543-570.	1.3	803
9	Global warming under old and new scenarios using IPCC climate sensitivity range estimates. Nature Climate Change, 2012, 2, 248-253.	8.1	632
10	Emulating coupled atmosphere-ocean and carbon cycle models with a simpler model, MAGICC6 â€“ Part 1: Model description and calibration. Atmospheric Chemistry and Physics, 2011, 11, 1417-1456.	1.9	590
11	The shared socio-economic pathway (SSP) greenhouse gas concentrations and their extensions to 2500. Geoscientific Model Development, 2020, 13, 3571-3605.	1.3	539
12	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.	1.9	517
13	Limiting global warming to 2â€‰Â°C is unlikely to save most coral reefs. Nature Climate Change, 2013, 3, 165-170.	8.1	410
14	Global and regional evolution of short-lived radiatively-active gases and aerosols in the Representative Concentration Pathways. Climatic Change, 2011, 109, 191-212.	1.7	393
15	The effects of climate extremes on global agricultural yields. Environmental Research Letters, 2019, 14, 054010.	2.2	382
16	Historical greenhouse gas concentrations for climate modelling (CMIP6). Geoscientific Model Development, 2017, 10, 2057-2116.	1.3	350
17	A new scenario logic for the Paris Agreement long-term temperature goal. Nature, 2019, 573, 357-363.	13.7	307
18	Equitable mitigation to achieve the Paris Agreement goals. Nature Climate Change, 2017, 7, 38-43.	8.1	270

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19	Emission pathways consistent with a 2â€‰Â°C global temperature limit. Nature Climate Change, 2011, 1, 413-418.	8.1	262
20	Probabilistic cost estimates for climate change mitigation. Nature, 2013, 493, 79-83.	13.7	255
21	Realization of Paris Agreement pledges may limit warming just below 2â€‰Â°C. Nature, 2022, 604, 304-309.	13.7	242
22	Climate model projections from the Scenario Model Intercomparison ProjectÂ(ScenarioMIP) of CMIP6. Earth System Dynamics, 2021, 12, 253-293.	2.7	236
23	Zero emission targets as long-term global goals for climate protection. Environmental Research Letters, 2015, 10, 105007.	2.2	220
24	A Review of Uncertainties in Global Temperature Projections over the Twenty-First Century. Journal of Climate, 2008, 21, 2651-2663.	1.2	209
25	Copenhagen Accord pledges are paltry. Nature, 2010, 464, 1126-1128.	13.7	207
26	Economic mitigation challenges: how further delay closes the door for achieving climate targets. Environmental Research Letters, 2013, 8, 034033.	2.2	172
27	Estimating the near-surface permafrost-carbon feedback on global warming. Biogeosciences, 2012, 9, 649-665.	1.3	160
28	The PMIP4 contribution to CMIP6 â€" Part 3: The last millennium, scientific objective, and experimental design for the PMIP4 <i>past1000</i> simulations. Geoscientific Model Development, 2017, 10, 4005-4033.	1.3	155
29	Temperature increase of 21st century mitigation scenarios. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 15258-15262.	3.3	139
30	How well do integrated assessment models simulate climate change?. Climatic Change, 2011, 104, 255-285.	1.7	127
31	Emulating atmosphere-ocean and carbon cycle models with a simpler model, MAGICC6 â€" Part 2: Applications. Atmospheric Chemistry and Physics, 2011, 11, 1457-1471.	1.9	126
32	A scaling approach to project regional sea level rise and its uncertainties. Earth System Dynamics, 2013, 4, 11-29.	2.7	120
33	Disentangling the effects of CO ₂ and short-lived climate forcer mitigation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 16325-16330.	3.3	114
34	Observation-based modelling of permafrost carbon fluxes with accounting for deep carbon deposits and thermokarst activity. Biogeosciences, 2015, 12, 3469-3488.	1.3	114
35	How Much Warming are We Committed to and How Much can be Avoided?. Climatic Change, 2006, 75, 111-149.	1.7	105
36	Projecting Antarctic ice discharge using response functions from SeaRISE ice-sheet models. Earth System Dynamics, 2014, 5, 271-293.	2.7	103

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37	Cost and attainability of meeting stringent climate targets without overshoot. Nature Climate Change, 2021, 11, 1063-1069.	8.1	102
38	Multi-gas Emissions Pathways to Meet Climate Targets. Climatic Change, 2006, 75, 151-194.	1.7	95
39	Projecting Antarctica's contribution to future sea level rise from basal ice shelf melt using linear response functions of 16 ice sheet models (LARMIP-2). Earth System Dynamics, 2020, 11, 35-76.	2.7	92
40	National post-2020 greenhouse gas targets and diversity-aware leadership. Nature Climate Change, 2015, 5, 1098-1106.	8.1	91
41	Understanding the origin of Paris Agreement emission uncertainties. Nature Communications, 2017, 8, 15748.	5.8	82
42	Can updated climate pledges limit warming well below 2Â°C?. Science, 2021, 374, 693-695.	6.0	80
43	Multi-gas emission envelopes to meet greenhouse gas concentration targets: Costs versus certainty of limiting temperature increase. Global Environmental Change, 2007, 17, 260-280.	3.6	72
44	The world's biggest gamble. Earth's Future, 2016, 4, 465-470.	2.4	70
45	Synthesizing long-term sea level rise projections â€" the MAGICC sea level model v2.0. Geoscientific Model Development, 2017, 10, 2495-2524.	1.3	70
46	Reduced Complexity Model Intercomparison Project Phase 1: introduction and evaluation of global-mean temperature response. Geoscientific Model Development, 2020, 13, 5175-5190.	1.3	70
47	Opportunities and challenges in using remaining carbon budgets to guide climate policy. Nature Geoscience, 2020, 13, 769-779.	5.4	68
48	Warming assessment of the bottom-up Paris Agreement emissions pledges. Nature Communications, 2018, 9, 4810.	5.8	67
49	Misrepresentation of the IPCC CO2 emission scenarios. Nature Geoscience, 2010, 3, 376-377.	5.4	66
50	Impact of short-lived non-CO ₂ mitigation on carbon budgets for stabilizing global warming. Environmental Research Letters, 2015, 10, 075001.	2.2	63
51	Future changes in global warming potentials under representative concentration pathways. Environmental Research Letters, 2011, 6, 024020.	2.2	61
52	Uncertainties of global warming metrics: CO₂ and CH₄. Geophysical Research Letters, 2010, 37, .	1.5	56
53	The Zero Emissions Commitment Model Intercomparison Project (ZECMIP) contribution to C4MIP: quantifying committed climate changes following zero carbon emissions. Geoscientific Model Development, 2019, 12, 4375-4385.	1.3	56
54	Climate models without preindustrial volcanic forcing underestimate historical ocean thermal expansion. Geophysical Research Letters, 2013, 40, 1600-1604.	1.5	54

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55	Climate change under a scenario near 1.5 Â°C of global warming: monsoon intensification, ocean warming and steric sea level rise. Earth System Dynamics, 2011, 2, 25-35.	2.7	53
56	A Scaling Approach to Probabilistic Assessment of Regional Climate Change. Journal of Climate, 2012, 25, 3117-3144.	1.2	53
57	Copenhagen Accord Pledges imply higher costs for staying below 2Â°C warming. Climatic Change, 2012, 113, 551-561.	1.7	52
58	Changes in global-mean precipitation in response to warming, greenhouse gas forcing and black carbon. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	51
59	Implications of potentially lower climate sensitivity on climate projections and policy. Environmental Research Letters, 2014, 9, 031003.	2.2	48
60	Existing fossil fuel extraction would warm the world beyond 1.5 Â°C. Environmental Research Letters, 2022, 17, 064010.	2.2	47
61	Analysis of the Copenhagen Accord pledges and its global climatic impactsâ€"a snapshot of dissonant ambitions. Environmental Research Letters, 2010, 5, 034013.	2.2	44
62	Meeting the EU 2Â°C climate target: global and regional emission implications. Climate Policy, 2006, 6, 545-564.	2.6	40
63	Linking sea level rise and socioeconomic indicators under the Shared Socioeconomic Pathways. Environmental Research Letters, 2017, 12, 114002.	2.2	39
64	National contributions for decarbonizing the world economy in line with the G7 agreement. Environmental Research Letters, 2016, 11, 054005.	2.2	37
65	Probability-Weighted Ensembles of U.S. County-Level Climate Projections for Climate Risk Analysis. Journal of Applied Meteorology and Climatology, 2016, 55, 2301-2322.	0.6	36
66	Attributing long-term sea-level rise to Paris Agreement emission pledges. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23487-23492.	3.3	35
67	It Is Still Possible to Achieve the Paris Climate Agreement: Regional, Sectoral, and Land-Use Pathways. Energies, 2021, 14, 2103.	1.6	35
68	Halfway to Copenhagen, no way to 2 Â°C. Nature Climate Change, 2009, 1, 81-83.	8.1	32
69	Probabilistic projections of the Atlantic overturning. Climatic Change, 2014, 127, 579-586.	1.7	32
70	The benefits of climate change mitigation in integrated assessment models: the role of the carbon cycle and climate component. Climatic Change, 2012, 113, 897-917.	1.7	29
71	Mitigation choices impact carbon budget size compatible with low temperature goals. Environmental Research Letters, 2015, 10, 075003.	2.2	29
72	Reduced Complexity Model Intercomparison Project Phase 2: Synthesizing Earth System Knowledge for Probabilistic Climate Projections. Earth's Future, 2021, 9, e2020EF001900.	2.4	28

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73	Southern Hemisphere subtropical drying as a transient response to warming. Nature Climate Change, 2019, 9, 232-236.	8.1	26
74	The exit strategy. Nature Climate Change, 2009, 1, 56-58.	8.1	24
75	A new climate dataset for systematic assessments of climate change impacts as a function of global warming. Geoscientific Model Development, 2013, 6, 1689-1703.	1.3	24
76	Silicone v1.0.0: an open-source Python package for inferring missing emissions data for climate change research. Geoscientific Model Development, 2020, 13, 5259-5275.	1.3	24
77	Country-resolved combined emission and socio-economic pathways based on the Representative Concentration Pathway (RCP) and Shared Socio-Economic Pathway (SSP) scenarios. Earth System Science Data, 2021, 13, 1005-1040.	3.7	22
78	Decision support for international climate policy â€“ The PRIMAP emission module. Environmental Modelling and Software, 2011, 26, 1419-1433.	1.9	20
79	Discrepancies in historical emissions point to a wider 2020 gap between 2â€‰Â°C benchmarks and aggregated national mitigation pledges. Environmental Research Letters, 2011, 6, 024002.	2.2	19
80	Multi-century dynamics of the climate and carbon cycle under both high and net negative emissions scenarios. Earth System Dynamics, 2022, 13, 885-909.	2.7	17
81	Carbon removals from nature restoration are no substitute for steep emission reductions. One Earth, 2022, 5, 812-824.	3.6	17
82	GWP*is a model, not a metric. Environmental Research Letters, 2022, 17, 041002.	2.2	16
83	Meeting the EU 2Â°C climate target: global and regional emission implications. Climate Policy, 2006, 6, 545-564.	2.6	15
84	Near-linear cost increase to reduce climate-change risk. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20621-20626.	3.3	14
85	Emulating Atlantic overturning strength for low emission scenarios: consequences for sea-level rise along the North American east coast. Earth System Dynamics, 2011, 2, 191-200.	2.7	12
86	Intercomparison of the capabilities of simplified climate models to project the effects of aviation CO2 on climate. Atmospheric Environment, 2013, 75, 321-328.	1.9	12
87	From emission scenarios to spatially resolved projections with a chain of computationally efficient emulators: coupling of MAGICC (v7.5.1) and MESMER (v0.8.3). Geoscientific Model Development, 2022, 15, 2085-2103.	1.3	12
88	Can air pollutant controls change global warming?. Environmental Science and Policy, 2014, 41, 33-43.	2.4	11
89	Complementing thermosteric sea level rise estimates. Geoscientific Model Development, 2015, 8, 2723-2734.	1.3	10
90	Missing the turn towards a low-emission path?. Climatic Change, 2008, 91, 233-236.	1.7	9

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91	Implications of non-linearities between cumulative CO₂ emissions and CO₂-induced warming for assessing the remaining carbon budget. Environmental Research Letters, 2020, 15, 074017.	2.2	9
92	Regionally aggregated, stitched and deâ€drifted CMIPâ€climate data, processed with netCDFâ€SCM v2.0.0. Geoscience Data Journal, 0, , .	1.8	8
93	Mitigation Scenarios for Non-energy GHG. , 2019, , 79-91.		8
94	Dynamic modelling shows substantial contribution of ecosystem restoration to climate change mitigation. Environmental Research Letters, 2021, 16, 124061.	2.2	8
95	Questions of bias in climate models. Nature Climate Change, 2014, 4, 741-742.	8.1	4
96	The impact of surplus units from the first Kyoto period on achieving the reduction pledges of the CancÃºn Agreements. Climatic Change, 2012, 114, 401-408.	1.7	3
97	Implications of the Developed Scenarios for Climate Change. , 2019, , 459-469.		3
98	A probabilistic study of the return of stratospheric ozone to 1960 levels. Geophysical Research Letters, 2016, 43, 9289-9297.	1.5	2
99	Temperature increase of 21st century mitigation scenarios. IOP Conference Series: Earth and Environmental Science, 2009, 6, 492012.	0.2	0