Joeri Rogelj

List of Publications by Year
in descending order

116 papers	22,990 citations	20817 60 h-index	16650 123 g-index
155 all docs	155 docs citations	155 times ranked	19441 citing authors

#	Article	IF	Citations
1	The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview. Global Environmental Change, 2017, 42, 153-168.	7.8	2,966
2	Paris Agreement climate proposals need a boost to keep warming well below 2â€‰Â°C. Nature, 2016, 534, 631-639.	27.8	2,397
3	Biophysical and economic limits to negative CO2 emissions. Nature Climate Change, 2016, 6, 42-50.	18.8	973
4	Negative emissionsâ€"Part 2: Costs, potentials and side effects. Environmental Research Letters, 2018, 13, 063002.	5.2	823
5	A roadmap for rapid decarbonization. Science, 2017, 355, 1269-1271.	12.6	815
6	Scenarios towards limiting global mean temperature increase below 1.5 Â°C. Nature Climate Change, 2018, 8, 325-332.	18.8	795
7	A low energy demand scenario for meeting the 1.5â€‰Â°C target and sustainable development goals without negative emission technologies. Nature Energy, 2018, 3, 515-527.	39.5	733
8	Energy system transformations for limiting end-of-century warming to below 1.5 Â°C. Nature Climate Change, 2015, 5, 519-527.	18.8	708
9	Global warming under old and new scenarios using IPCC climate sensitivity range estimates. Nature Climate Change, 2012, 2, 248-253.	18.8	632
10	Persistent growth of CO2 emissions and implications for reaching climate targets. Nature Geoscience, 2014, 7, 709-715.	12.9	615
11	The marker quantification of the Shared Socioeconomic Pathway 2: A middle-of-the-road scenario for the 21st century. Global Environmental Change, 2017, 42, 251-267.	7.8	590
12	Science and policy characteristics of the Paris Agreement temperature goal. Nature Climate Change, 2016, 6, 827-835.	18.8	536
13	Differential climate impacts for policy-relevant limits to global warming: the case of 1.5â€¯Â°C and 2â€¯Â°C. Earth System Dynamics, 2016, 7, 327-351.	7.1	508
14	Negative emissionsâ€"Part 1: Research landscape and synthesis. Environmental Research Letters, 2018, 13, 063001.	5.2	498
15	Emission budgets and pathways consistent with limiting warming to 1.5â€‰Â°C. Nature Geoscience, 2017, 10, 741-747.	12.9	422
16	Current and future global climate impacts resulting from COVID-19. Nature Climate Change, 2020, 10, 913-919.	18.8	400
17	Residual fossil CO2 emissions in 1.5â€"2â€‰Â°C pathways. Nature Climate Change, 2018, 8, 626-633.	18.8	380
18	A new scenario logic for the Paris Agreement long-term temperature goal. Nature, 2019, 573, 357-363.	27.8	307

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19	A scientific critique of the two-degree climate change target. Nature Geoscience, 2016, 9, 13-18.	12.9	282
20	Equitable mitigation to achieve the Paris Agreement goals. Nature Climate Change, 2017, 7, 38-43.	18.8	270
21	Connecting the sustainable development goals by their energy inter-linkages. Environmental Research Letters, 2018, 13, 033006.	5.2	263
22	Emission pathways consistent with a 2â€‰Â°C global temperature limit. Nature Climate Change, 2011, 1, 413-418.	18.8	262
23	Can Paris pledges avert severe climate change?. Science, 2015, 350, 1168-1169.	12.6	260
24	Probabilistic cost estimates for climate change mitigation. Nature, 2013, 493, 79-83.	27.8	255
25	Net-zero emissions targets are vague: three ways to fix. Nature, 2021, 591, 365-368.	27.8	240
26	Estimating and tracking the remaining carbon budget for stringent climate targets. Nature, 2019, 571, 335-342.	27.8	229
27	Differences between carbon budget estimates unravelled. Nature Climate Change, 2016, 6, 245-252.	18.8	228
28	Zero emission targets as long-term global goals for climate protection. Environmental Research Letters, 2015, 10, 105007.	5.2	220
29	Copenhagen Accord pledges are paltry. Nature, 2010, 464, 1126-1128.	27.8	207
30	Characterizing halfâ€aâ€degree difference: a review of methods for identifying regional climate responses to global warming targets. Wiley Interdisciplinary Reviews: Climate Change, 2017, 8, e457.	8.1	177
31	Global exposure and vulnerability to multi-sector development and climate change hotspots. Environmental Research Letters, 2018, 13, 055012.	5.2	162
32	2020 emissions levels required to limit warming to below 2â€‰Â°C. Nature Climate Change, 2013, 3, 405-412.	18.8	159
33	Emissions: world has four times the work or one-third of the time. Nature, 2020, 579, 25-28.	27.8	136
34	Stranded on a low-carbon planet: Implications of climate policy for the phase-out of coal-based power plants. Technological Forecasting and Social Change, 2015, 90, 89-102.	11.6	132
35	Wave of net zero emission targets opens window to meeting the Paris Agreement. Nature Climate Change, 2021, 11, 820-822.	18.8	129
36	CurrentÂfossil fuel infrastructure does not yet commit us to 1.5â€‰Â°C warming. Nature Communications, 2019, 10, 101.	12.8	125

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37	A new scenario resource for integrated 1.5 Â°C research. Nature Climate Change, 2018, 8, 1027-1030.	18.8	120
38	The Antarctic Peninsula Under a 1.5Â°C Global Warming Scenario. Frontiers in Environmental Science, 2019, 7, .	3.3	117
39	The many possible climates from the Paris Agreementâ€™s aim of 1.5 Â°C warming. Nature, 2018, 558, 41-49.	27.8	116
40	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.	7.1	114
41	Committed sea-level rise under the Paris Agreement and the legacy of delayed mitigation action. Nature Communications, 2018, 9, 601.	12.8	106
42	Cost and attainability of meeting stringent climate targets without overshoot. Nature Climate Change, 2021, 11, 1063-1069.	18.8	102
43	COVID-19 recovery funds dwarf clean energy investment needs. Science, 2020, 370, 298-300.	12.6	101
44	Simulating the Earth system response to negative emissions. Environmental Research Letters, 2016, 11, 095012.	5.2	98
45	National post-2020 greenhouse gas targets and diversity-aware leadership. Nature Climate Change, 2015, 5, 1098-1106.	18.8	91
46	The legacy of our CO2 emissions: a clash of scientific facts, politics and ethics. Climatic Change, 2015, 133, 361-373.	3.6	90
47	Is there warming in the pipeline? A multi-model analysis of the Zero Emissions Commitment from CO₂. Biogeosciences, 2020, 17, 2987-3016.	3.3	87
48	Carbon prices across countries. Nature Climate Change, 2018, 8, 648-650.	18.8	86
49	Pathways limiting warming to 1.5Â°C: a tale of turning around in no time?. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20160457.	3.4	84
50	Understanding the origin of Paris Agreement emission uncertainties. Nature Communications, 2017, 8, 15748.	12.8	82
51	Policy trade-offs between climate mitigation and clean cook-stove access in South Asia. Nature Energy, 2016, 1, .	39.5	81
52	Can updated climate pledges limit warming well below 2Â°C?. Science, 2021, 374, 693-695.	12.6	80
53	Crop productivity changes in 1.5â€‰Â°C and 2â€‰Â°C worlds under climate sensitivity uncertainty. Environmental Research Letters, 2018, 13, 064007.	5.2	79
54	Mapping the climate change challenge. Nature Climate Change, 2016, 6, 663-668.	18.8	75

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55	Negative emissions and international climate goalsâ€”learning from and about mitigation scenarios. Climatic Change, 2019, 157, 189-219.	3.6	74
56	Implications of possible interpretations of â€˜greenhouse gas balanceâ€™ in the Paris Agreement. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20160445.	3.4	72
57	Energy modellers should explore extremes more systematically in scenarios. Nature Energy, 2020, 5, 104-107.	39.5	71
58	The world's biggest gamble. Earth's Future, 2016, 4, 465-470.	6.3	70
59	Reduced Complexity Model Intercomparison Project Phase 1: introduction and evaluation of global-mean temperature response. Geoscientific Model Development, 2020, 13, 5175-5190.	3.6	70
60	A multi-model analysis of long-term emissions and warming implications of current mitigation efforts. Nature Climate Change, 2021, 11, 1055-1062.	18.8	69
61	Opportunities and challenges in using remaining carbon budgets to guide climate policy. Nature Geoscience, 2020, 13, 769-779.	12.9	68
62	Impact of short-lived non-CO ₂ mitigation on carbon budgets for stabilizing global warming. Environmental Research Letters, 2015, 10, 075001.	5.2	63
63	Changes to Carbon Isotopes in Atmospheric CO₂ Over the Industrial Era and Into the Future. Global Biogeochemical Cycles, 2020, 34, e2019GB006170.	4.9	63
64	Critical adjustment of land mitigation pathways for assessing countriesâ€™ climate progress. Nature Climate Change, 2021, 11, 425-434.	18.8	61
65	The UN's 'Sustainable Energy for All' initiative is compatible with a warming limit of 2 Â°C. Nature Climate Change, 2013, 3, 545-551.	18.8	57
66	Unintentional unfairness when applying new greenhouse gas emissions metrics at country level. Environmental Research Letters, 2019, 14, 114039.	5.2	57
67	Energy system changes in 1.5â€¯Â°C, well below 2â€¯Â°C and 2â€¯Â°C scenarios. Energy Strategy Reviews, 2019, 23, 69-80.	7.3	57
68	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.	3.6	56
69	Carbon budgets and energy transition pathways. Environmental Research Letters, 2016, 11, 075002.	5.2	53
70	Air-pollution emission ranges consistent with the representative concentration pathways. Nature Climate Change, 2014, 4, 446-450.	18.8	52
71	An integrated approach to quantifying uncertainties in the remaining carbon budget. Communications Earth & Environment, 2021, 2, .	6.8	52
72	Geosciences after Paris. Nature Geoscience, 2016, 9, 187-189.	12.9	51

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73	Getting It Right Matters: Temperature Goal Interpretations in Geoscience Research. Geophysical Research Letters, 2017, 44, 10,662.	4.0	51
74	Implications of potentially lower climate sensitivity on climate projections and policy. Environmental Research Letters, 2014, 9, 031003.	5.2	48
75	The cumulative carbon budget and its implications. Oxford Review of Economic Policy, 2016, 32, 323-342.	1.9	47
76	Climate mitigation scenarios with persistent COVID-19-related energy demand changes. Nature Energy, 2021, 6, 1114-1123.	39.5	47
77	Climate extremes, landâ€"climate feedbacks and land-use forcing at 1.5Â°C. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20160450.	3.4	46
78	Analysis of the Copenhagen Accord pledges and its global climatic impactsâ€"a snapshot of dissonant ambitions. Environmental Research Letters, 2010, 5, 034013.	5.2	44
79	The Climate Response to Emissions Reductions Due to COVIDâ€19: Initial Results From CovidMIP. Geophysical Research Letters, 2021, 48, e2020GL091883.	4.0	43
80	Linking sea level rise and socioeconomic indicators under the Shared Socioeconomic Pathways. Environmental Research Letters, 2017, 12, 114002.	5.2	39
81	Early retirement of power plants in climate mitigation scenarios. Environmental Research Letters, 2020, 15, 094064.	5.2	38
82	Inclusive climate change mitigation and food security policy under 1.5â€‰Â°C climate goal. Environmental Research Letters, 2018, 13, 074033.	5.2	37
83	Indicate separate contributions of long-lived and short-lived greenhouse gases in emission targets. Npj Climate and Atmospheric Science, 2022, 5, 5.	6.8	36
84	The cost of mitigation revisited. Nature Climate Change, 2021, 11, 1035-1045.	18.8	34
85	Halfway to Copenhagen, no way to 2 Â°C. Nature Climate Change, 2009, 1, 81-83.	18.8	32
86	An emission pathway classification reflecting the Paris Agreement climate objectives. Communications Earth & Environment, 2022, 3, .	6.8	32
87	Mitigation choices impact carbon budget size compatible with low temperature goals. Environmental Research Letters, 2015, 10, 075003.	5.2	29
88	Inconsistencies when applying novel metrics for emissions accounting to the Paris agreement. Environmental Research Letters, 2019, 14, 124055.	5.2	29
89	Key technological enablers for ambitious climate goals: insights from the IPCC special report on global warming of 1.5 Â°C. Environmental Research Letters, 2019, 14, 111001.	5.2	28
90	Path Independence of Carbon Budgets When Meeting a Stringent Global Mean Temperature Target After an Overshoot. Earth's Future, 2019, 7, 1283-1295.	6.3	28

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91	Modifying emissions scenario projections to account for the effects of COVID-19: protocol for CovidMIP. Geoscientific Model Development, 2021, 14, 3683-3695.	3.6	28
92	Reduced Complexity Model Intercomparison Project Phase 2: Synthesizing Earth System Knowledge for Probabilistic Climate Projections. Earth's Future, 2021, 9, e2020EF001900.	6.3	28
93	Mitigation scenarios must cater to new users. Nature Climate Change, 2018, 8, 845-848.	18.8	27
94	Where is the EU headed given its current climate policy? A stakeholder-driven model inter-comparison. Science of the Total Environment, 2021, 793, 148549.	8.0	26
95	Ten new insights in climate science 2021: a horizon scan. Global Sustainability, 2021, 4, .	3.3	26
96	Near-term transition and longer-term physical climate risks of greenhouse gas emissions pathways. Nature Climate Change, 2022, 12, 88-96.	18.8	26
97	National GHG emissions reduction pledges and 2Â°C: comparison of studies. Climate Policy, 2012, 12, 356-377.	5.1	25
98	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.	3.6	24
99	Recommended temperature metrics for carbon budget estimates, model evaluation and climate policy. Nature Geoscience, 2019, 12, 964-971.	12.9	23
100	Sea-level commitment as a gauge for climate policy. Nature Climate Change, 2018, 8, 653-655.	18.8	21
101	Decision support for international climate policy â€“ The PRIMAP emission module. Environmental Modelling and Software, 2011, 26, 1419-1433.	4.5	20
102	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.	5.2	19
103	Modelling the multi-scaled nature of pest outbreaks. Ecological Modelling, 2019, 409, 108745.	2.5	16
104	Global mean temperature indicators linked to warming levels avoiding climate risks. Environmental Research Letters, 2018, 13, 064015.	5.2	15
105	Impact of methane and black carbon mitigation on forcing and temperature: a multi-model scenario analysis. Climatic Change, 2020, 163, 1427-1442.	3.6	15
106	A new generation of emissions scenarios should cover blind spots in the carbon budget space. Nature Climate Change, 2019, 9, 798-800.	18.8	14
107	Emissions estimations should embed a precautionary principle. Nature Climate Change, 2021, 11, 638-640.	18.8	14
108	Economic damages from on-going climate change imply deeper near-term emission cuts. Environmental Research Letters, 2021, 16, 104053.	5.2	13

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109	Reply to â€˜Interpretations of the Paris climate targetâ€™. Nature Geoscience, 2018, 11, 222-222.	12.9	8
110	Radiative effects of reduced aerosol emissions during the COVID-19 pandemic and the future recovery. Atmospheric Research, 2021, 264, 105866.	4.1	7
111	Uncertainty in carbon budget estimates due to internal climate variability. Environmental Research Letters, 2020, 15, 104064.	5.2	7
112	A holistic approach to climate targets. Nature, 2013, 499, 160-161.	27.8	6
113	The role of energy in mitigating grain storage losses in India and the impact for nutrition. Resources, Conservation and Recycling, 2020, 163, 105100.	10.8	5
114	Questions of bias in climate models. Nature Climate Change, 2014, 4, 741-742.	18.8	4
115	Reply to Comment on â€˜Unintentional unfairness when applying new greenhouse gas emissions metrics at country levelâ€™. Environmental Research Letters, 2021, 16, 068002.	5.2	3
116	Estimated climate impact of replacing agriculture as the primary food production system. Environmental Research Letters, 0, , .	5.2	1