

Volker Krey

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

101
papers

15,516
citations

46
h-index

108
g-index

108
ext. papers

19,165
ext. citations

13.3
avg. IF

6.21
L-index

#	Paper	IF	Citations
101	The representative concentration pathways: an overview. <i>Climatic Change</i> , 2011 , 109, 5-31	4.5	454 ⁰
100	RCP 8.5 scenario of comparatively high greenhouse gas emissions. <i>Climatic Change</i> , 2011 , 109, 33-57	4.5	1707
99	The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview. <i>Global Environmental Change</i> , 2017 , 42, 153-168	10.1	1479
98	Biophysical and economic limits to negative CO2 emissions. <i>Nature Climate Change</i> , 2016 , 6, 42-50	21.4	684
97	Energy system transformations for limiting end-of-century warming to below 1.5 °C. <i>Nature Climate Change</i> , 2015 , 5, 519-527	21.4	541
96	Scenarios towards limiting global mean temperature increase below 1.5 °C. <i>Nature Climate Change</i> , 2018 , 8, 325-332	21.4	456
95	A low energy demand scenario for meeting the 1.5 °C target and sustainable development goals without negative emission technologies. <i>Nature Energy</i> , 2018 , 3, 515-527	62.3	428
94	The marker quantification of the Shared Socioeconomic Pathway 2: A middle-of-the-road scenario for the 21st century. <i>Global Environmental Change</i> , 2017 , 42, 251-267	10.1	349
93	International climate policy architectures: Overview of the EMF 22 International Scenarios. <i>Energy Economics</i> , 2009 , 31, S64-S81	8.3	332
92	The role of technology for achieving climate policy objectives: overview of the EMF 27 study on global technology and climate policy strategies. <i>Climatic Change</i> , 2014 , 123, 353-367	4.5	284
91	Locked into Copenhagen pledges – Implications of short-term emission targets for the cost and feasibility of long-term climate goals. <i>Technological Forecasting and Social Change</i> , 2015 , 90, 8-23	9.5	222
90	Residual fossil CO2 emissions in 1.5 °C pathways. <i>Nature Climate Change</i> , 2018 , 8, 626-633	21.4	219
89	Energy investment needs for fulfilling the Paris Agreement and achieving the Sustainable Development Goals. <i>Nature Energy</i> , 2018 , 3, 589-599	62.3	207
88	Determinants of household energy consumption in India. <i>Energy Policy</i> , 2010 , 38, 5696-5707	7.2	171
87	Connecting the sustainable development goals by their energy inter-linkages. <i>Environmental Research Letters</i> , 2018 , 13, 033006	6.2	168
86	Shared Socio-Economic Pathways of the Energy Sector – Quantifying the Narratives. <i>Global Environmental Change</i> , 2017 , 42, 316-330	10.1	165
85	A new scenario logic for the Paris Agreement long-term temperature goal. <i>Nature</i> , 2019 , 573, 357-363	50.4	153

84	Limited impact on decadal-scale climate change from increased use of natural gas. <i>Nature</i> , 2014 , 514, 482-5	50.4	151
83	The role of renewable energy in climate stabilization: results from the EMF27 scenarios. <i>Climatic Change</i> , 2014 , 123, 427-441	4.5	148
82	Getting from here to there [Energy technology transformation pathways in the EMF27 scenarios. <i>Climatic Change</i> , 2014 , 123, 369-382	4.5	146
81	The role of Asia in mitigating climate change: Results from the Asia modeling exercise. <i>Energy Economics</i> , 2012 , 34, S251-S260	8.3	113
80	Taking stock of national climate policies to evaluate implementation of the Paris Agreement. <i>Nature Communications</i> , 2020 , 11, 2096	17.4	108
79	Climate policies can help resolve energy security and air pollution challenges. <i>Climatic Change</i> , 2013 , 119, 479-494	4.5	105
78	Global exposure and vulnerability to multi-sector development and climate change hotspots. <i>Environmental Research Letters</i> , 2018 , 13, 055012	6.2	100
77	Improving the behavioral realism of global integrated assessment models: An application to consumers' vehicle choices. <i>Transportation Research, Part D: Transport and Environment</i> , 2017 , 55, 322-342	6.4	97
76	Stranded on a low-carbon planet: Implications of climate policy for the phase-out of coal-based power plants. <i>Technological Forecasting and Social Change</i> , 2015 , 90, 89-102	9.5	93
75	Urban and rural energy use and carbon dioxide emissions in Asia. <i>Energy Economics</i> , 2012 , 34, S272-S283	8.3	89
74	WHAT DOES THE 2°C TARGET IMPLY FOR A GLOBAL CLIMATE AGREEMENT IN 2020? THE LIMITS STUDY ON DURBAN PLATFORM SCENARIOS. <i>Climate Change Economics</i> , 2013 , 04, 1340008	0.9	89
73	Future capacity growth of energy technologies: are scenarios consistent with historical evidence?. <i>Climatic Change</i> , 2013 , 118, 381-395	4.5	83
72	Diagnostic indicators for integrated assessment models of climate policy. <i>Technological Forecasting and Social Change</i> , 2015 , 90, 45-61	9.5	81
71	A multi-model assessment of food security implications of climate change mitigation. <i>Nature Sustainability</i> , 2019 , 2, 386-396	22.1	71
70	Interaction of consumer preferences and climate policies in the global transition to low-carbon vehicles. <i>Nature Energy</i> , 2018 , 3, 664-673	62.3	69
69	Global energy-climate scenarios and models: a review. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , 2014 , 3, 363-383	4.7	69
68	Impacts of considering electric sector variability and reliability in the MESSAGE model. <i>Energy Strategy Reviews</i> , 2013 , 1, 157-163	9.8	68
67	Limited emission reductions from fuel subsidy removal except in energy-exporting regions. <i>Nature</i> , 2018 , 554, 229-233	50.4	66

66	Transport electrification: A key element for energy system transformation and climate stabilization. <i>Climatic Change</i> , 2014 , 123, 651-664	4.5	66
65	Analysing interactions among Sustainable Development Goals with Integrated Assessment Models. <i>Global Transitions</i> , 2019 , 1, 210-225	8.4	65
64	The MESSAGE Integrated Assessment Model and the ix modeling platform (ixmp): An open framework for integrated and cross-cutting analysis of energy, climate, the environment, and sustainable development. <i>Environmental Modelling and Software</i> , 2019 , 112, 143-156	5.2	64
63	Understanding the origin of Paris Agreement emission uncertainties. <i>Nature Communications</i> , 2017 , 8, 15748	17.4	63
62	Role of renewable energy in climate mitigation: a synthesis of recent scenarios. <i>Climate Policy</i> , 2011 , 11, 1131-1158	5.3	63
61	Looking under the hood: A comparison of techno-economic assumptions across national and global integrated assessment models. <i>Energy</i> , 2019 , 172, 1254-1267	7.9	62
60	Gas hydrates: entrance to a methane age or climate threat?. <i>Environmental Research Letters</i> , 2009 , 4, 034007	6.2	60
59	Implications of delayed participation and technology failure for the feasibility, costs, and likelihood of staying below temperature targets: Greenhouse gas mitigation scenarios for the 21st century. <i>Energy Economics</i> , 2009 , 31, S94-S106	8.3	57
58	The impact of near-term climate policy choices on technology and emission transition pathways. <i>Technological Forecasting and Social Change</i> , 2015 , 90, 73-88	9.5	49
57	Synergies in the Asian energy system: Climate change, energy security, energy access and air pollution. <i>Energy Economics</i> , 2012 , 34, S470-S480	8.3	44
56	Air-pollution emission ranges consistent with the representative concentration pathways. <i>Nature Climate Change</i> , 2014 , 4, 446-450	21.4	41
55	Air Quality Improvement Co-benefits of Low-Carbon Pathways toward Well Below the 2 °C Climate Target in China. <i>Environmental Science & Technology</i> , 2019 , 53, 5576-5584	10.3	40
54	A multi-criteria model analysis framework for assessing integrated water-energy system transformation pathways. <i>Applied Energy</i> , 2018 , 210, 477-486	10.7	40
53	Carbon budgets and energy transition pathways. <i>Environmental Research Letters</i> , 2016 , 11, 075002	6.2	39
52	Effects of stochastic energy prices on long-term energy-economic scenarios. <i>Energy</i> , 2007 , 32, 2340-2349	9.9	38
51	Enhancing global climate policy ambition towards a 1.5 °C stabilization: a short-term multi-model assessment. <i>Environmental Research Letters</i> , 2018 , 13, 044039	6.2	36
50	Comparison and interactions between the long-term pursuit of energy independence and climate policies. <i>Nature Energy</i> , 2016 , 1,	62.3	36
49	A Continental-Scale Hydroeconomic Model for Integrating Water-Energy-Land Nexus Solutions. <i>Water Resources Research</i> , 2018 , 54, 7511-7533	5.4	34

48	Regional energy system variation in global models: Results from the Asian Modeling Exercise scenarios. <i>Energy Economics</i> , 2012 , 34, S293-S305	8.3	33
47	Implications of high energy prices for energy system and emissions—the response from an energy model for Germany. <i>Energy Policy</i> , 2007 , 35, 4504-4515	7.2	31
46	Quantifying uncertainties influencing the long-term impacts of oil prices on energy markets and carbon emissions. <i>Nature Energy</i> , 2016 , 1,	62.3	29
45	Balancing clean water-climate change mitigation trade-offs. <i>Environmental Research Letters</i> , 2019 , 14, 014009	6.2	29
44	Inclusive climate change mitigation and food security policy under 1.5 °C climate goal. <i>Environmental Research Letters</i> , 2018 , 13, 074033	6.2	26
43	Mitigation Potential and Costs791-864		26
42	A Time Step Energy Process Model for Germany - Model Structure and Results. <i>Energy Studies Review</i> , 2014 , 14,	0	25
41	Co-designing Indus Water-Energy-Land Futures. <i>One Earth</i> , 2019 , 1, 185-194	8.1	24
40	Energy Primer99-150		22
39	The effect of financial constraints on energy-climate scenarios. <i>Energy Policy</i> , 2013 , 59, 562-572	7.2	20
38	The NEXus Solutions Tool (NEST) v1.0: an open platform for optimizing multi-scale energy-water-land system transformations. <i>Geoscientific Model Development</i> , 2020 , 13, 1095-1121	6.3	19
37	Energy Pathways for Sustainable Development1205-1306		19
36	Representing spatial technology diffusion in an energy system optimization model. <i>Technological Forecasting and Social Change</i> , 2016 , 103, 350-363	9.5	18
35	Impacts of Groundwater Constraints on Saudi Arabia’s Low-Carbon Electricity Supply Strategy. <i>Environmental Science & Technology</i> , 2016 , 50, 1653-62	10.3	18
34	A reduced-form approach for representing the impacts of wind and solar PV deployment on the structure and operation of the electricity system. <i>Energy Economics</i> , 2017 , 64, 651-664	8.3	18
33	Compromises in energy policy—Using fuzzy optimization in an energy systems model. <i>Energy Policy</i> , 2008 , 36, 2983-2994	7.2	16
32	Comparing transformation pathways across major economies. <i>Climatic Change</i> , 2020 , 162, 1787-1803	4.5	16
31	How well do integrated assessment models represent non-CO2 radiative forcing?. <i>Climatic Change</i> , 2015 , 133, 565-582	4.5	15

30	Integrated Solutions for the Water-Energy-Land Nexus: Are Global Models Rising to the Challenge?. <i>Water (Switzerland)</i> , 2019 , 11, 2223	3	14
29	Uncertainty in an emissions-constrained world. <i>Climatic Change</i> , 2014 , 124, 459-476	4.5	14
28	Renewable Energy and Climate Change 161-208		13
27	A comparison of low carbon investment needs between China and Europe in stringent climate policy scenarios. <i>Environmental Research Letters</i> , 2019 , 14, 054017	6.2	12
26	Cost and attainability of meeting stringent climate targets without overshoot. <i>Nature Climate Change</i> , 2021 , 11, 1063-1069	21.4	11
25	Energy system developments and investments in the decisive decade for the Paris Agreement goals. <i>Environmental Research Letters</i> , 2021 , 16, 074020	6.2	11
24	A short note on integrated assessment modeling approaches: Rejoinder to the review of Making or breaking climate targets The AMPERE study on staged accession scenarios for climate policy Technological Forecasting and Social Change, 2015 , 99, 273-276	9.5	10
23	Early transformation of the Chinese power sector to avoid additional coal lock-in. <i>Environmental Research Letters</i> , 2020 , 15, 024007	6.2	10
22	A framework for national scenarios with varying emission reductions. <i>Nature Climate Change</i> , 2021 , 11, 472-480	21.4	10
21	Decarbonization pathways and energy investment needs for developing Asia in line with Well below 2°C. <i>Climate Policy</i> , 2020 , 20, 234-245	5.3	9
20	Integrated assessment model diagnostics: key indicators and model evolution. <i>Environmental Research Letters</i> , 2021 , 16, 054046	6.2	9
19	How climate metrics affect global mitigation strategies and costs: a multi-model study. <i>Climatic Change</i> , 2016 , 136, 203-216	4.5	7
18	What future for primary aluminium production in a decarbonizing economy?. <i>Global Environmental Change</i> , 2021 , 69, 102316	10.1	5
17	Beyond Rio: Sustainable energy scenarios for the 21st century. <i>Natural Resources Forum</i> , 2012 , 36, 215-230		4
16	Land-based implications of early climate actions without global net-negative emissions. <i>Nature Sustainability</i> ,	22.1	4
15	Evaluating process-based integrated assessment models of climate change mitigation. <i>Climatic Change</i> , 2021 , 166, 1	4.5	4
14	South Africa After Paris Bracking Its Way to the NDCs?. <i>Frontiers in Energy Research</i> , 2019 , 7,	3.8	3
13	The Nexus Solutions Tool (NEST): An open platform for optimizing multi-scale energy-water-land system transformations 2019 ,		3

12	Air quality and health implications of 1.5 °C climate pathways under considerations of ageing population: a multi-model scenario analysis. <i>Environmental Research Letters</i> , 2021 , 16, 045005	6.2	3
11	Risk Hedging Strategies Under Energy System and Climate Policy Uncertainties. <i>Profiles in Operations Research</i> , 2013 , 435-474	1	3
10	Net zero-emission pathways reduce the physical and economic risks of climate change. <i>Nature Climate Change</i> , 2021 , 11, 1070-1076	21.4	2
9	Reply to: Why fossil fuel producer subsidies matter. <i>Nature</i> , 2020 , 578, E5-E7	50.4	2
8	Emissions of electric vehicle charging in future scenarios: The effects of time of charging. <i>Journal of Industrial Ecology</i> , 2021 , 25, 1250	7.2	2
7	Long-term economic benefits of stabilizing warming without overshoot [the ENGAGE model intercomparison		2
6	Climate change scenario services: From science to facilitating action. <i>One Earth</i> , 2021 , 4, 1074-1082	8.1	2
5	The Role of Bioenergy with Carbon Capture and Storage (BECCS) for Climate Policy1-19		2
4	Regional Low-Emission Pathways from Global Models. <i>SSRN Electronic Journal</i> ,	1	1
3	Role of energy storage in energy and water security in Central Asia. <i>Journal of Energy Storage</i> , 2022 , 50, 104587	7.8	1
2	Technology Portfolios: Modelling Technological Uncertainty and Innovation Risks89-102		0
1	Modelling competition between natural gas pipeline projects to China. <i>International Journal of Global Environmental Issues</i> , 2010 , 10, 143	0.8	0