David L Mccollum

List of Publications by Year
in descending order

64 papers	7,540 citations	76196 40 h-index	114278 63 g-index
67 all docs	67 docs citations	67 times ranked	7218 citing authors

#	Article	IF	Citations
1	Biophysical and economic limits to negative CO2 emissions. Nature Climate Change, 2016, 6, 42-50.	8.1	973
2	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.	19.8	733
3	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.	3.6	590
4	Energy investment needs for fulfilling the Paris Agreement and achieving the Sustainable Development Goals. Nature Energy, 2018, 3, 589-599.	19.8	377
5	Mapping interactions between the sustainable development goals: lessons learned and ways forward. Sustainability Science, 2018, 13, 1489-1503.	2.5	375
6	Transport: A roadblock to climate change mitigation?. Science, 2015, 350, 911-912.	6.0	307
7	Locked into Copenhagen pledges â€" Implications of short-term emission targets for the cost and feasibility of long-term climate goals. Technological Forecasting and Social Change, 2015, 90, 8-23.	6.2	270
8	Connecting the sustainable development goals by their energy inter-linkages. Environmental Research Letters, 2018, 13, 033006.	2.2	263
9	Probabilistic cost estimates for climate change mitigation. Nature, 2013, 493, 79-83.	13.7	255
10	Meeting an 80% reduction in greenhouse gas emissions from transportation by 2050: A case study in California. Transportation Research, Part D: Transport and Environment, 2009, 14, 147-156.	3.2	163
11	2020 emissions levels required to limit warming to below 2â€‰Â°C. Nature Climate Change, 2013, 3, 405-412.	8.1	159
12	Post-2020 climate agreements in the major economies assessed in the light of global models. Nature Climate Change, 2015, 5, 119-126.	8.1	158
13	2 Â°C and SDGs: united they stand, divided they fall?. Environmental Research Letters, 2016, 11, 034022.	2.2	143
14	Improving the behavioral realism of global integrated assessment models: An application to consumersâ€™ vehicle choices. Transportation Research, Part D: Transport and Environment, 2017, 55, 322-342.	3.2	140
15	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.	6.2	132
16	Implications of various effort-sharing approaches for national carbon budgets and emission pathways. Climatic Change, 2020, 162, 1805-1822.	1.7	131
17	Climate policies can help resolve energy security and air pollution challenges. Climatic Change, 2013, 119, 479-494.	1.7	129
18	Limited emission reductions from fuel subsidy removal except in energy-exporting regions. Nature, 2018, 554, 229-233.	13.7	125

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19	Fossil resource and energy security dynamics in conventional and carbon-constrained worlds. Climatic Change, 2014, 123, 413-426.	1.7	123
20	Interaction of consumer preferences and climate policies in the global transition to low-carbon vehicles. Nature Energy, 2018, 3, 664-673.	19.8	122
21	Achieving California's 80% greenhouse gas reduction target in 2050: Technology, policy and scenario analysis using CA-TIMES energy economic systems model. Energy Policy, 2015, 77, 118-130.	4.2	120
22	Achieving deep reductions in US transport greenhouse gas emissions: Scenario analysis and policy implications. Energy Policy, 2009, 37, 5580-5596.	4.2	114
23	An integrated approach to energy sustainability. Nature Climate Change, 2011, 1, 428-429.	8.1	102
24	COVID-19 recovery funds dwarf clean energy investment needs. Science, 2020, 370, 298-300.	6.0	101
25	Transport electrification: A key element for energy system transformation and climate stabilization. Climatic Change, 2014, 123, 651-664.	1.7	90
26	Integrating Global Climate Change Mitigation Goals with Other Sustainability Objectives: A Synthesis. Annual Review of Environment and Resources, 2015, 40, 363-394.	5.6	83
27	Policy trade-offs between climate mitigation and clean cook-stove access in South Asia. Nature Energy, 2016, 1, .	19.8	81
28	Deep greenhouse gas reduction scenarios for California â€“ Strategic implications from the CA-TIMES energy-economic systems model. Energy Strategy Reviews, 2012, 1, 19-32.	3.3	80
29	CO2 emission mitigation and fossil fuel markets: Dynamic and international aspects of climate policies. Technological Forecasting and Social Change, 2015, 90, 243-256.	6.2	74
30	Detailed assessment of global transport-energy modelsâ€™ structures and projections. Transportation Research, Part D: Transport and Environment, 2017, 55, 294-309.	3.2	73
31	Energy modellers should explore extremes more systematically in scenarios. Nature Energy, 2020, 5, 104-107.	19.8	71
32	ENERGY INVESTMENTS UNDER CLIMATE POLICY: A COMPARISON OF GLOBAL MODELS. Climate Change Economics, 2013, 04, 1340010.	2.9	61
33	THE DISTRIBUTION OF THE MAJOR ECONOMIES' EFFORT IN THE DURBAN PLATFORM SCENARIOS. Climate Change Economics, 2013, 04, 1340009.	2.9	59
34	Comparison and interactions between the long-term pursuit of energy independence and climate policies. Nature Energy, 2016, 1, .	19.8	58
35	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.	8.1	57
36	Synergies in the Asian energy system: Climate change, energy security, energy access and air pollution. Energy Economics, 2012, 34, S470-S480.	5.6	54

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37	Air-pollution emission ranges consistent with the representative concentration pathways. Nature Climate Change, 2014, 4, 446-450.	8.1	52
38	Assessing the Feasibility of Global Long-Term Mitigation Scenarios. Energies, 2017, 10, 89.	1.6	51
39	Balancing clean water-climate change mitigation trade-offs. Environmental Research Letters, 2019, 14, 014009.	2.2	48
40	Comparing future patterns of energy system change in 2 Â°C scenarios with historically observed rates of change. Global Environmental Change, 2015, 35, 436-449.	3.6	42
41	Quantifying uncertainties influencing the long-term impacts of oil prices on energy marketsÂand carbon emissions. Nature Energy, 2016, 1, .	19.8	41
42	ENERGY SECURITY OF CHINA, INDIA, THE E.U. AND THE U.S. UNDER LONG-TERM SCENARIOS: RESULTS FROM SIX IAMs. Climate Change Economics, 2013, 04, 1340011.	2.9	33
43	Future energy system challenges for Africa: Insights from Integrated Assessment Models. Energy Policy, 2015, 86, 705-717.	4.2	31
44	Energy Pathways for Sustainable Development. , 0, , 1205-1306.		29
45	Mitigation choices impact carbon budget size compatible with low temperature goals. Environmental Research Letters, 2015, 10, 075003.	2.2	29
46	Interactions between social learning and technological learning in electric vehicle futures. Environmental Research Letters, 2018, 13, 124004.	2.2	27
47	Mitigation scenarios must cater to new users. Nature Climate Change, 2018, 8, 845-848.	8.1	27
48	Why have multiple climate policies for light-duty vehicles? Policy mix rationales, interactions and research gaps. Transportation Research, Part A: Policy and Practice, 2020, 135, 309-326.	2.0	21
49	A comparison of low carbon investment needs between China and Europe in stringent climate policy scenarios. Environmental Research Letters, 2019, 14, 054017.	2.2	18
50	Decarbonization pathways and energy investment needs for developing Asia in line with â€˜well belowâ€™ 2Â°C. Climate Policy, 2020, 20, 234-245.	2.6	18
51	Intergovernmental Panel on Climate Change: Transparency and integrated assessment modeling. Wiley Interdisciplinary Reviews: Climate Change, 2021, 12, e727.	3.6	18
52	Multi-criteria analysis of nuclear power in the global energy system: Assessing trade-offs between simultaneously attainable economic, environmental and social goals. Energy Strategy Reviews, 2015, 8, 45-55.	3.3	17
53	A MULTI-MODEL ANALYSIS OF THE REGIONAL AND SECTORAL ROLES OF BIOENERGY IN NEAR- AND LONG-TERM CO₂ EMISSIONS REDUCTION. Climate Change Economics, 2013, 04, 1340014.	2.9	16
54	Deep decarbonization impacts on electric load shapes and peak demand. Environmental Research Letters, 2021, 16, 094054.	2.2	13

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55	A short note on integrated assessment modeling approaches: Rejoinder to the review of â€œMaking or breaking climate targets â€” The AMPERE study on staged accession scenarios for climate policyâ€. Technological Forecasting and Social Change, 2015, 99, 273-276.	6.2	11
56	Simulating automakersâ€™ response to zero emissions vehicle regulation. Transportation Research, Part D: Transport and Environment, 2021, 94, 102789.	3.2	9
57	Machine learning for energy projections. Nature Energy, 2021, 6, 121-122.	19.8	9
58	Beyond Rio: Sustainable energy scenarios for the 21st century. Natural Resources Forum, 2012, 36, 215-230.	1.8	6
59	Which â€œsecond-bestâ€•climate policies are best? Simulating cost-effective policy mixes for passenger vehicles. Resources and Energy Economics, 2022, 70, 101319.	1.1	5
60	Future impacts of coal distribution constraints on coal costs. Transportation Research, Part E: Logistics and Transportation Review, 2009, 45, 460-471.	3.7	3
61	Reply to: Why fossil fuel producer subsidies matter. Nature, 2020, 578, E5-E7.	13.7	3
62	Technology Portfolios: Modelling Technological Uncertainty and Innovation Risks. , 0, , 89-102.		1
63	Demand Side Management: A Case for Disruptive Behaviour. Advances in Intelligent Systems and Computing, 2018, , 47-59.	0.5	0
64	Application of experience curves and learning to other fields. , 2020, , 49-62.		0