Ajay Gambhir

List of Publications by Year
in descending order

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54 papers	3,731 citations	147801 31 h-index	161849 54 g-index
58 all docs	58 docs citations	58 times ranked	4323 citing authors

#	Article	IF	Citations
1	Future cost and performance of water electrolysis: An expert elicitation study. International Journal of Hydrogen Energy, 2017, 42, 30470-30492.	7.1	1,240
2	An inter-model assessment of the role of direct air capture in deep mitigation pathways. Nature Communications, 2019, 10, 3277.	12.8	267
3	A review of the technologies, economics and policy instruments for decarbonising energy-intensive manufacturing industries. Renewable and Sustainable Energy Reviews, 2014, 30, 616-640.	16.4	185
4	Reducing Chinaâ€™s road transport sector CO2 emissions to 2050: Technologies, costs and decomposition analysis. Applied Energy, 2015, 157, 905-917.	10.1	132
5	A Review of Criticisms of Integrated Assessment Models and Proposed Approaches to Address These, through the Lens of BECCS. Energies, 2019, 12, 1747.	3.1	119
6	Direct Air Carbon Capture and Sequestration: How It Works and How It Could Contribute to Climate-Change Mitigation. One Earth, 2019, 1, 405-409.	6.8	90
7	Modelling net-zero emissions energy systems requires a change in approach. Climate Policy, 2021, 21, 222-231.	5.1	85
8	Transitional assistance policies for just, equitable and smooth low-carbon transitions: who, what and how?. Climate Policy, 2020, 20, 902-921.	5.1	80
9	Energy modellers should explore extremes more systematically in scenarios. Nature Energy, 2020, 5, 104-107.	39.5	71
10	Indiaâ€™s CO 2 emission pathways to 2050: What role can renewables play?. Applied Energy, 2014, 131, 79-86.	10.1	70
11	Prospective improvements in cost and cycle life of off-grid lithium-ion battery packs: An analysis informed by expert elicitations. Energy Policy, 2018, 114, 578-590.	8.8	70
12	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
13	The future costs of OPV â€“ A bottom-up model of material and manufacturing costs with uncertainty analysis. Solar Energy Materials and Solar Cells, 2016, 156, 49-58.	6.2	66
14	Off-grid solar photovoltaic systems for rural electrification and emissions mitigation in India. Solar Energy Materials and Solar Cells, 2016, 156, 147-156.	6.2	63
15	How long does innovation and commercialisation in the energy sectors take? Historical case studies of the timescale from invention to widespread commercialisation in energy supply and end use technology. Energy Policy, 2018, 123, 682-699.	8.8	62
16	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
17	Perspective of comprehensive and comprehensible multi-model energy and climate science in Europe. Energy, 2021, 215, 119153.	8.8	57
18	India's CO2 emissions pathways to 2050: Energy system, economic and fossil fuel impacts with and without carbon permit trading. Energy, 2014, 77, 791-801.	8.8	55

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19	Assessing the feasibility of carbon dioxide mitigation options in terms of energy usage. Nature Energy, 2020, 5, 720-728.	39.5	54
20	Comparative life cycle assessment of lithium-ion battery chemistries for residential storage. Journal of Energy Storage, 2020, 28, 101230.	8.1	53
21	Assessing the Feasibility of Global Long-Term Mitigation Scenarios. Energies, 2017, 10, 89.	3.1	51
22	The appropriate use of reference scenarios in mitigation analysis. Nature Climate Change, 2020, 10, 605-610.	18.8	45
23	Limiting global warming to 2ÂÂ°C: What do the latest mitigation studies tell us about costs, technologies and other impacts?. Energy Strategy Reviews, 2016, 13-14, 67-76.	7.3	44
24	The desirability of transitions in demand: Incorporating behavioural and societal transformations into energy modelling. Energy Research and Social Science, 2020, 70, 101780.	6.4	41
25	The role of advanced demand-sector technologies and energy demand reduction in achieving ambitious carbon budgets. Applied Energy, 2019, 238, 351-367.	10.1	40
26	A hybrid modelling approach to develop scenarios for China's carbon dioxide emissions to 2050. Energy Policy, 2013, 59, 614-632.	8.8	39
27	Planning a Low-Carbon Energy Transition: What Can and Canâ€™t the Models Tell Us?. Joule, 2019, 3, 1795-1798.	24.0	37
28	The policy implications of an uncertain carbon dioxide removal potential. Joule, 2021, 5, 2593-2605.	24.0	37
29	Exploring the Feasibility of Low-Carbon Scenarios Using Historical Energy Transitions Analysis. Energies, 2017, 10, 116.	3.1	35
30	The cost of mitigation revisited. Nature Climate Change, 2021, 11, 1035-1045.	18.8	34
31	Challenges in the harmonisation of global integrated assessment models: A comprehensive methodology to reduce model response heterogeneity. Science of the Total Environment, 2021, 783, 146861.	8.0	32
32	Grid versus off-grid electricity access options: A review on the economic and environmental impacts. Renewable and Sustainable Energy Reviews, 2021, 143, 110864.	16.4	31
33	Confronting mitigation deterrence in low-carbon scenarios. Environmental Research Letters, 2021, 16, 064099.	5.2	29
34	A deep dive into the modelling assumptions for biomass with carbon capture and storage (BECCS): a transparency exercise. Environmental Research Letters, 2020, 15, 084008.	5.2	27
35	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
36	Cost reductions in renewables can substantially erode the value of carbon capture and storage in mitigation pathways. One Earth, 2021, 4, 1588-1601.	6.8	26

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37	Near-term transition and longer-term physical climate risks of greenhouse gas emissions pathways. Nature Climate Change, 2022, 12, 88-96.	18.8	26
38	The Economics of 1.5Â°C Climate Change. Annual Review of Environment and Resources, 2018, 43, 455-480.	13.4	23
39	Energy access through electricity storage: Insights from technology providers and market enablers. Energy for Sustainable Development, 2019, 48, 1-10.	4.5	22
40	The Contribution of Non-CO2 Greenhouse Gas Mitigation to Achieving Long-Term Temperature Goals. Energies, 2017, 10, 602.	3.1	21
41	The AVOID programmeâ€™s new simulations of the global benefits of stringent climate change mitigation. Climatic Change, 2013, 120, 55-70.	3.6	19
42	The UK and German Low-Carbon Industry Transitions from a Sectoral Innovation and System Failures Perspective. Energies, 2020, 13, 4994.	3.1	17
43	Reply to â€œHigh energy and materials requirement for direct air capture calls for further analysis and R&Dâ€. Nature Communications, 2020, 11, 3286.	12.8	13
44	The Impact of Shale Gas on the Cost and Feasibility of Meeting Climate Targetsâ€”A Global Energy System Model Analysis and an Exploration of Uncertainties. Energies, 2017, 10, 158.	3.1	11
45	Coupling circularity performance and climate action: From disciplinary silos to transdisciplinary modelling science. Sustainable Production and Consumption, 2022, 30, 269-277.	11.0	11
46	Financial impacts of UK's energy and climate change policies on commercial and industrial businesses. Energy Policy, 2016, 91, 273-286.	8.8	8
47	Policy incentives for Greenhouse Gas Removal Techniques: the risks of premature inclusion in carbon markets and the need for a multi-pronged policy framework. Energy and Climate Change, 2022, 3, 100074.	4.4	8
48	How Are Future Energy Technology Costs Estimated? Can We Do Better?. International Review of Environmental and Resource Economics, 2021, 15, 271-318.	1.3	7
49	Climate and sustainability co-governance in Kenya: A multi-criteria analysis of stakeholders' perceptions and consensus. Energy for Sustainable Development, 2022, 68, 457-471.	4.5	7
50	Collective foresight and intelligence for sustainability. Global Sustainability, 2021, 4, .	3.3	6
51	A hybrid approach to identifying and assessing interactions between climate action (SDG13) policies and a range of SDGs in a UK context. Discover Sustainability, 2021, 2, 43.	2.8	5
52	nThe cost and emissions advantages of incorporating anchor loads into solar mini-grids in India. Renewable and Sustainable Energy Transition, 2021, , 100003.	2.9	3
53	The Impact of U.S. Reâ€engagement in Climate on the Paris Targets. Earth's Future, 2021, 9, e2021EF002077.	6.3	3
54	Avoiding dangerous climate: results from the AVOID2 programme. Weather, 2017, 72, 340-345.	0.7	2