Stefan Pfenninger

List of Publications by Year
in descending order

42 papers	5,456 citations	201658 27 h-index	289230 40 g-index
47 all docs	47 docs citations	47 times ranked	4396 citing authors

#	Article	IF	Citations
1	High-resolution large-scale onshore wind energy assessments: A review of potential definitions, methodologies and future research needs. Renewable Energy, 2022, 182, 659-684.	8.9	82
2	Diversity of options to eliminate fossil fuels and reach carbon neutrality across the entire European energy system. Joule, 2022, 6, 1253-1276.	24.0	51
3	Meteorologicallyâ€Informed Spatial Planning of European PV Deployment to Reduce Multiday Generation Variability. Earth's Future, 2022, 10, .	6.3	3
4	The near- to mid-term outlook for concentrating solar power: mostly cloudy, chance of sun. Energy Sources, Part B: Economics, Planning and Policy, 2021, 16, 23-41.	3.4	21
5	Mitigating a century of European renewable variability with transmission and informed siting. Environmental Research Letters, 2021, 16, 064026.	5.2	7
6	Trends in tools and approaches for modelling the energy transition. Applied Energy, 2021, 290, 116731.	10.1	173
7	Trade-Offs between Geographic Scale, Cost, and Infrastructure Requirements for Fully Renewable Electricity in Europe. Joule, 2020, 4, 1929-1948.	24.0	107
8	Policy Decision Support for Renewables Deployment through Spatially Explicit Practically Optimal Alternatives. Joule, 2020, 4, 2185-2207.	24.0	57
9	The NExus Solutions Tool (NEST) v1.0: an open platform for optimizing multi-scale energyâ€“waterâ€“land system transformations. Geoscientific Model Development, 2020, 13, 1095-1121.	3.6	31
10	Energy self-sufficient households with photovoltaics and electric vehicles are feasible in temperate climate. PLoS ONE, 2020, 15, e0227368.	2.5	9
11	On the potential of â€œPhotovoltaics + Electric vehiclesâ€•for deep decarbonization of Kyotoâ€™s power systems: Techno-economic-social considerations. Applied Energy, 2020, 275, 115419.	10.1	68
12	Sub-national variability of wind power generation in complex terrain and its correlation with large-scale meteorology. Environmental Research Letters, 2020, 15, 044025.	5.2	15
13	Will policies to promote energy efficiency help or hinder achieving a 1.5ÂÂ°C climate target?. Energy Efficiency, 2019, 12, 551-565.	2.8	23
14	Estimation of losses in solar energy production from air pollution in China since 1960 using surface radiation data. Nature Energy, 2019, 4, 657-663.	39.5	88
15	The dragon awakens: Will China save or conquer concentrating solar power?. AIP Conference Proceedings, 2019, , .	0.4	3
16	Home-made or imported: On the possibility for renewable electricity autarky on all scales in Europe. Energy Strategy Reviews, 2019, 26, 100388.	7.3	60
17	CMIP-5 models project photovoltaics are a no-regrets investment in Europe irrespective of climate change. Energy, 2019, 171, 135-148.	8.8	34
18	Opening the black box of energy modelling: Strategies and lessons learned. Energy Strategy Reviews, 2018, 19, 63-71.	7.3	168

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19	The increasing impact of weather on electricity supply and demand. Energy, 2018, 145, 65-78.	8.8	202
20	Impacts of Inter-annual Wind and Solar Variations on the European Power System. Joule, 2018, 2, 2076-2090.	24.0	137
21	Calliope: a multi-scale energy systems modelling framework. Journal of Open Source Software, 2018, 3, 825.	4.6	129
22	Empirically observed learning rates for concentrating solar power and their responses to regime change. Nature Energy, 2017, 2, .	39.5	136
23	Dealing with multiple decades of hourly wind and PV time series in energy models: A comparison of methods to reduce time resolution and the planning implications of inter-annual variability. Applied Energy, 2017, 197, 1-13.	10.1	236
24	The importance of open data and software: Is energy research lagging behind?. Energy Policy, 2017, 101, 211-215.	8.8	245
25	Balancing Europeâ€™s wind-power output through spatial deployment informed by weather regimes. Nature Climate Change, 2017, 7, 557-562.	18.8	236
26	High solar photovoltaic penetration in the absence of substantial wind capacity: Storage requirements and effects on capacity adequacy. Energy, 2017, 137, 193-208.	8.8	16
27	Energy scientists must show their workings. Nature, 2017, 542, 393-393.	27.8	91
28	Long-term patterns of European PV output using 30 years of validated hourly reanalysis and satellite data. Energy, 2016, 114, 1251-1265.	8.8	873
29	Using bias-corrected reanalysis to simulate current and future wind power output. Energy, 2016, 114, 1224-1239.	8.8	771
30	Controlling the self-organizing dynamics in a sandpile model on complex networks by failure tolerance. Europhysics Letters, 2015, 111, 38006.	2.0	13
31	Turning points in climate change adapatation. Ecology and Society, 2015, 20, .	2.3	15
32	Comparing concentrating solar and nuclear power as baseload providers using the example of South Africa. Energy, 2015, 87, 303-314.	8.8	29
33	Renewables, nuclear, or fossil fuels? Scenarios for Great Britainâ€™s power system considering costs, emissions and energy security. Applied Energy, 2015, 152, 83-93.	10.1	173
34	Potential for concentrating solar power to provide baseload and dispatchable power. Nature Climate Change, 2014, 4, 689-692.	18.8	146
35	On the limits to solar thermal power: A reply to Trainer. Energy Policy, 2014, 75, 424-425.	8.8	3
36	Energy systems modeling for twenty-first century energy challenges. Renewable and Sustainable Energy Reviews, 2014, 33, 74-86.	16.4	735

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37	Governance Barriers to Renewable Energy in North Africa. International Spectator, 2014, 49, 50-65.	1.5	16
38	Vulnerability of solar energy infrastructure and output to climate change. Climatic Change, 2013, 121, 93-102.	3.6	88
39	Thresholds, tipping and turning points for sustainability under climate change. Current Opinion in Environmental Sustainability, 2013, 5, 334-340.	6.3	85
40	Knowledge and information needs of adaptation policy-makers: a European study. Regional Environmental Change, 2013, 13, 91-101.	2.9	67
41	Introduction to Systems Analysis. , 2013, , .		6
42	Open energy system modelling to support the European Green Deal. F1000Research, 0, 11, 531.	1.6	2