Martin Robinius

List of Publications by Year
in descending order

79 papers	5,875 citations	81839 39 h-index	74108 75 g-index
92 all docs	92 docs citations	92 times ranked	4879 citing authors

#	Article	IF	Citations
1	Power to gas: Technological overview, systems analysis and economic assessment for a case study in Germany. International Journal of Hydrogen Energy, 2015, 40, 4285-4294.	3.8	629
2	Seasonal storage and alternative carriers: A flexible hydrogen supply chain model. Applied Energy, 2017, 200, 290-302.	5.1	423
3	A Review of Post-combustion CO2 Capture Technologies from Coal-fired Power Plants. Energy Procedia, 2017, 114, 650-665.	1.8	342
4	The investment costs of electrolysis â€" A comparison of cost studies from the past 30 years. International Journal of Hydrogen Energy, 2018, 43, 1209-1223.	3.8	305
5	Technical potential of salt caverns for hydrogen storage in Europe. International Journal of Hydrogen Energy, 2020, 45, 6793-6805.	3.8	262
6	Impact of different time series aggregation methods on optimal energy system design. Renewable Energy, 2018, 117, 474-487.	4.3	192
7	A review of current challenges and trends in energy systems modeling. Renewable and Sustainable Energy Reviews, 2018, 96, 156-166.	8.2	181
8	Power-to-Steel: Reducing CO2 through the Integration of Renewable Energy and Hydrogen into the German Steel Industry. Energies, 2017, 10, 451.	1.6	162
9	Spatio-temporal optimization of a future energy system for power-to-hydrogen applications in Germany. Energy, 2018, 158, 1130-1149.	4.5	159
10	A hydrogen supply chain with spatial resolution: Comparative analysis of infrastructure technologies in Germany. Applied Energy, 2019, 247, 438-453.	5.1	148
11	The development of stationary battery storage systems in Germany â€" AÂmarket review. Journal of Energy Storage, 2020, 29, 101153.	3.9	148
12	Linking the Power and Transport Sectorsâ€"Part 1: The Principle of Sector Coupling. Energies, 2017, 10, 956.	1.6	141
13	Time series aggregation for energy system design: Modeling seasonal storage. Applied Energy, 2018, 213, 123-135.	5.1	141
14	Options of natural gas pipeline reassignment for hydrogen: Cost assessment for a Germany case study. International Journal of Hydrogen Energy, 2020, 45, 12095-12107.	3.8	120
15	Techno-economic analysis of a potential energy trading link between Patagonia and Japan based on CO2 free hydrogen. International Journal of Hydrogen Energy, 2019, 44, 12733-12747.	3.8	103
16	A Review on Time Series Aggregation Methods for Energy System Models. Energies, 2020, 13, 641.	1.6	100
17	Linking the Power and Transport Sectorsâ€"Part 2: Modelling a Sector Coupling Scenario for Germany. Energies, 2017, 10, 957.	1.6	98
18	Long-term power-to-gas potential from wind and solar power: A country analysis for Italy. International Journal of Hydrogen Energy, 2017, 42, 13389-13406.	3.8	95

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19	Life Cycle Assessment of hydrogen transport and distribution options. Journal of Cleaner Production, 2018, 199, 431-443.	4.6	94
20	Direct or indirect electrification? A review of heat generation and road transport decarbonisation scenarios for Germany 2050. Energy, 2019, 166, 989-999.	4.5	91
21	High-resolution large-scale onshore wind energy assessments: A review of potential definitions, methodologies and future research needs. Renewable Energy, 2022, 182, 659-684.	4.3	82
22	Comparison of light-duty transportation fuels produced from renewable hydrogen and green carbon dioxide. Applied Energy, 2018, 231, 757-767.	5.1	79
23	Power-to-Gas: Electrolyzers as an alternative to network expansion â€“ An example from a distribution system operator. Applied Energy, 2018, 210, 182-197.	5.1	77
24	CO2 emission reduction in the cement industry by using a solar calciner. Renewable Energy, 2020, 145, 1578-1596.	4.3	77
25	The curious case of the conflicting roles of hydrogen in global energy scenarios. Sustainable Energy and Fuels, 2020, 4, 80-95.	2.5	77
26	The future of European onshore wind energy potential: Detailed distribution and simulation of advanced turbine designs. Energy, 2019, 182, 1222-1238.	4.5	69
27	Carsharing with fuel cell vehicles: Sizing hydrogen refueling stations based on refueling behavior. Applied Energy, 2018, 228, 1540-1549.	5.1	68
28	A modeler's guide to handle complexity in energy systems optimization. Advances in Applied Energy, 2021, 4, 100063.	6.6	63
29	Robust design of a future 100% renewable european energy supply system with hydrogen infrastructure. International Journal of Hydrogen Energy, 2021, 46, 29376-29390.	3.8	62
30	Flexible sector coupling with hydrogen: A climate-friendly fuel supply for road transport. International Journal of Hydrogen Energy, 2019, 44, 12918-12930.	3.8	60
31	Incentives and legal barriers for power-to-hydrogen pathways: An internationalÂsnapshot. International Journal of Hydrogen Energy, 2019, 44, 11394-11401.	3.8	58
32	Early power to gas applications: Reducing wind farm forecast errors and providing secondary control reserve. Applied Energy, 2017, 192, 551-562.	5.1	55
33	PEM water electrolysis: Innovative approaches towards catalyst separation, recovery and recycling. International Journal of Hydrogen Energy, 2019, 44, 3450-3455.	3.8	54
34	Ecological assessment of fuel cell electric vehicles with special focus on type IV carbon fiber hydrogen tank. Journal of Cleaner Production, 2021, 278, 123277.	4.6	53
35	The techno-economic potential of offshore wind energy with optimized future turbine designs in Europe. Applied Energy, 2019, 255, 113794.	5.1	51
36	Evaluating Land Eligibility Constraints of Renewable Energy Sources in Europe. Energies, 2018, 11, 1246.	1.6	50

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37	Optimized electrolyzer operation: Employing forecasts of wind energy availability, hydrogen demand, and electricity prices. International Journal of Hydrogen Energy, 2019, 44, 4387-4397.	3.8	49
38	The development of stationary battery storage systems in Germany â€" status 2020. Journal of Energy Storage, 2021, 33, 101982.	3.9	49
39	Geospatial modelling of the hydrogen infrastructure in France in order to identify the most suited supply chains. International Journal of Hydrogen Energy, 2020, 45, 3053-3072.	3.8	44
40	Design and evaluation of hydrogen electricity reconversion pathways in national energy systems using spatially and temporally resolved energy system optimization. International Journal of Hydrogen Energy, 2019, 44, 9594-9607.	3.8	43
41	Effect of cascade storage system topology on the cooling energy consumption in fueling stations for hydrogen vehicles. International Journal of Hydrogen Energy, 2018, 43, 6256-6265.	3.8	40
42	Potential of green ammonia production in India. International Journal of Hydrogen Energy, 2021, 46, 27247-27267.	3.8	40
43	Solar hydrogen production: a bottom-up analysis of different photovoltaicâ€"electrolysis pathways. Sustainable Energy and Fuels, 2019, 3, 801-813.	2.5	39
44	Power-to-Ships: Future electricity and hydrogen demands for shipping on the Atlantic coast of Europe in 2050. Energy, 2021, 228, 120660.	4.5	35
45	Hybrid Hydrogen Home Storage for Decentralized Energy Autonomy. International Journal of Hydrogen Energy, 2021, 46, 21748-21763.	3.8	34
46	Future Hydrogen Markets for Transportation and Industry: The Impact of CO2 Taxes. Energies, 2019, 12, 4707.	1.6	32
47	Hydrogen Road Transport Analysis in the Energy System: A Case Study for Germany through 2050. Energies, 2021, 14, 3166.	1.6	31
48	Role of electricity interconnections and impact of the geographical scale on the French potential of producing hydrogen via electricity surplus by 2035. Energy, 2019, 172, 977-990.	4.5	29
49	Introducing the Open Energy Ontology: Enhancing data interpretation and interfacing in energy systems analysis. Energy and AI, 2021, 5, 100074.	5.8	29
50	Uniformly constrained land eligibility for onshore European wind power. Renewable Energy, 2020, 146, 921-931.	4.3	28
51	An option for stranded renewables: electrolytic-hydrogen in future energy systems. Sustainable Energy and Fuels, 2018, 2, 1500-1515.	2.5	27
52	A techno-economic perspective on solar-to-hydrogen concepts through 2025. Sustainable Energy and Fuels, 2020, 4, 5818-5834.	2.5	27
53	Bottom-up energy supply optimization of a national building stock. Energy and Buildings, 2020, 209, 109667.	3.1	24
54	Extreme events in time series aggregation: A case study for optimal residential energy supply systems. Applied Energy, 2020, 275, 115223.	5.1	23

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55	Modeling hydrogen networks for future energy systems: A comparison of linear and nonlinear approaches. International Journal of Hydrogen Energy, 2019, 44, 32136-32150.	3.8	22
56	Combining the worlds of energy systems and material flow analysis: a review. Energy, Sustainability and Society, 2021, 11, .	1.7	20
57	A Top-Down Spatially Resolved Electrical Load Model. Energies, 2017, 10, 361.	1.6	19
58	Robust optimal discrete arc sizing for tree-shaped potential networks. Computational Optimization and Applications, 2019, 73, 791-819.	0.9	17
59	Control techniques and the modeling of electrical power flow across transmission networks. Renewable and Sustainable Energy Reviews, 2018, 82, 3452-3467.	8.2	16
60	The Future of Fossil Fired Power Plants in Germanyâ€"A Lifetime Analysis. Energies, 2018, 11, 1616.	1.6	15
61	Impact of different weather years on the design of hydrogen supply pathways for transport needs. International Journal of Hydrogen Energy, 2019, 44, 25442-25456.	3.8	15
62	Clean mobility infrastructure and sector integration in long-term energy scenarios: The case of Italy. Renewable and Sustainable Energy Reviews, 2020, 133, 110086.	8.2	15
63	Reducing Computational Load for Mixed Integer Linear Programming: An Example for a District and an Island Energy System. Energies, 2019, 12, 2825.	1.6	14
64	Cost Uncertainties in Energy System Optimization Models: A Quadratic Programming Approach for Avoiding Penny Switching Effects. Energies, 2019, 12, 4006.	1.6	14
65	Future Power Train Solutions for Long-Haul Trucks. Sustainability, 2021, 13, 2225.	1.6	14
66	Integration of Large-Scale Variable Renewable Energy Sources into the Future European Power System: On the Curtailment Challenge. Energies, 2020, 13, 5490.	1.6	12
67	On the socio-technical potential for onshore wind in Europe: A response to Enevoldsen et al. (2019), Energy Policy, 132, 1092-1100. Energy Policy, 2020, 145, 111693.	4.2	11
68	Emergency power supply from photovoltaic battery systems in private households in case of a blackout â€" A scenario analysis. Energy Procedia, 2018, 155, 165-178.	1.8	8
69	Generating Transparency in the Worldwide Use of the Terminology Industry 4.0. Applied Sciences (Switzerland), 2019, 9, 4659.	1.3	7
70	Locating experts and carving out the state of the art: A systematic review on Industry 4.0 and energy system analysis. International Journal of Energy Research, 2019, 43, 3981-4002.	2.2	6
71	The Potential of Variable Renewable Energy Sources in Mexico: A Temporally Evaluated and Geospatially Constrained Techno-Economical Assessment. Energies, 2021, 14, 5779.	1.6	6
72	Power-to-hydrogen and hydrogen-to-X: Which markets? Which economic potential? Answers from the literature. , 2017, , .		5

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73	Architectural Concept and Evaluation of a Framework for the Efficient Automation of Computational Scientific Workflows: An Energy Systems Analysis Example. Applied Sciences (Switzerland), 2019, 9, 728.	1.3	5
74	Flexible Demand for Higher Integration of Renewables into the European Power System. , 2018, , .		4
75	The potential of deep learning to reduce complexity in energy system modeling. International Journal of Energy Research, 2022, 46, 4550-4571.	2.2	4
76	A Generic and Highly Scalable Framework for the Automation and Execution of Scientific Data Processing and Simulation Workflows. , 2018, , .		3
77	Investigation of the Cooling System of a Membrane-based Post-combustion Process. Energy Procedia, 2017, 114, 666-685.	1.8	2
78	Downscaling of future national capacity scenarios of the French electricity system to the regional level. Energy Systems, 2022, 13, 137-165.	1.8	1
79	On the Curtailments of Variable Renewable Energy Sources in Europe and the Role of Load Shifting. , 2020, , .		1