

# Brian Vad Mathiesen

## List of Publications by Year in descending order

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98  
papers

19,750  
citations

26630

56  
h-index

26613

107  
g-index

114  
all docs

114  
docs citations

114  
times ranked

14041  
citing authors

#	ARTICLE	IF	CITATIONS
1	Energy efficient decarbonisation strategy for the Danish transport sector by 2045. Smart Energy, 2022, 5, 100063.	5.7	35
2	Recent advances in methods, policies and technologies at sustainable energy systems development. Energy, 2022, 245, 123276.	8.8	46
3	The four generations of district cooling - A categorization of the development in district cooling from origin to future prospect. Energy, 2022, 253, 124098.	8.8	35
4	Electrification of the industrial sector in 100% renewable energy scenarios. Energy, 2022, 254, 124339.	8.8	42
5	Heat Roadmap Europe: strategic heating transition typology as a basis for policy recommendations. Energy Efficiency, 2022, 15, .	2.8	9
6	The role of sustainable bioenergy in a fully decarbonised society. Renewable Energy, 2022, 196, 195-203.	8.9	33
7	Smart energy Denmark. A consistent and detailed strategy for a fully decarbonized society. Renewable and Sustainable Energy Reviews, 2022, 168, 112777.	16.4	33
8	Review and validation of EnergyPLAN. Renewable and Sustainable Energy Reviews, 2022, 168, 112724.	16.4	38
9	Perspectives on energy efficiency and smart energy systems from the 5th SESAAU2019 conference. Energy, 2021, 216, 119260.	8.8	9
10	The role of biomass gasification in low-carbon energy and transport systems. Smart Energy, 2021, 1, 100006.	5.7	39
11	EnergyPLAN "Advanced analysis of smart energy systems. Smart Energy, 2021, 1, 100007.	5.7	188
12	Perspectives on fourth and fifth generation district heating. Energy, 2021, 227, 120520.	8.8	149
13	Implementing large-scale heating infrastructures: experiences from successful planning of district heating and natural gas grids in Denmark, the United Kingdom, and the Netherlands. Energy Efficiency, 2021, 14, 1.	2.8	7
14	Quantification of realistic performance expectations from trigeneration CAES-ORC energy storage system in real operating conditions. Energy Conversion and Management, 2021, 249, 114828.	9.2	23
15	Editorial: Sustainable development of energy, Water and Environment Systems. Energy, 2020, 190, 116432.	8.8	17
16	Energy Vision Strategies for the EU Green New Deal: A Case Study of European Cities. Energies, 2020, 13, 2194.	3.1	25
17	The role of electrification and hydrogen in breaking the biomass bottleneck of the renewable energy system "A study on the Danish energy system. Applied Energy, 2020, 275, 115331.	10.1	32
18	The role of biogas and biogas-derived fuels in a 100% renewable energy system in Denmark. Energy, 2020, 199, 117426.	8.8	78

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19	EU-28 Residential Heat Supply and Consumption: Historical Development and Status. <i>Energies</i> , 2020, 13, 1894.	3.1	62
20	From Carbon Calculators to Energy System Analysis in Cities. <i>Energies</i> , 2019, 12, 2307.	3.1	20
21	Sustainable and cost-efficient energy supply and utilisation through innovative concepts and technologies at regional, urban and single-user scales. <i>Energy</i> , 2019, 182, 254-268.	8.8	40
22	Heat Roadmap Europe: Towards EU-Wide, local heat supply strategies. <i>Energy</i> , 2019, 177, 554-564.	8.8	58
23	Full energy system transition towards 100% renewable energy in Germany in 2050. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 102, 1-13.	16.4	307
24	Transitioning to a 100% renewable energy system in Denmark by 2050: assessing the impact from expanding the building stock at the same time. <i>Energy Efficiency</i> , 2019, 12, 37-55.	2.8	23
25	Matching demand with supply at low cost in 139 countries among 20 world regions with 100% intermittent wind, water, and sunlight (WWS) for all purposes. <i>Renewable Energy</i> , 2018, 123, 236-248.	8.9	216
26	Comprehensive assessment of the role and potential for solar thermal in future energy systems. <i>Solar Energy</i> , 2018, 169, 144-152.	6.1	58
27	Beyond sensitivity analysis: A methodology to handle fuel and electricity prices when designing energy scenarios. <i>Energy Research and Social Science</i> , 2018, 39, 108-116.	6.4	32
28	Future district heating systems and technologies: On the role of smart energy systems and 4th generation district heating. <i>Energy</i> , 2018, 165, 614-619.	8.8	147
29	The status of 4th generation district heating: Research and results. <i>Energy</i> , 2018, 164, 147-159.	8.8	395
30	Response to "Burden of proof: A comprehensive review of the feasibility of 100% renewable-electricity systems". <i>Renewable and Sustainable Energy Reviews</i> , 2018, 92, 834-847.	16.4	354
31	The direct interconnection of the UK and Nordic power market "Impact on social welfare and renewable energy integration. <i>Energy</i> , 2018, 162, 1193-1204.	8.8	21
32	Smart energy and smart energy systems. <i>Energy</i> , 2017, 137, 556-565.	8.8	679
33	Simulation versus Optimisation: Theoretical Positions in Energy System Modelling. <i>Energies</i> , 2017, 10, 840.	3.1	168
34	Heat Roadmap Europe: Large-Scale Electric Heat Pumps in District Heating Systems. <i>Energies</i> , 2017, 10, 578.	3.1	163
35	Smart Energy Europe: The technical and economic impact of one potential 100% renewable energy scenario for the European Union. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 60, 1634-1653.	16.4	549
36	Case study of the constraints and potential contributions regarding wind curtailment in Northeast China. <i>Energy</i> , 2016, 110, 55-64.	8.8	47

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37	Sustainable Development of Energy, Water and Environment Systems. Energy, 2016, 115, 1503.	8.8	7
38	Addressing the main challenges of energy security in the twenty-first century – Contributions of the conferences on Sustainable Development of Energy, Water and Environment Systems. Energy, 2016, 115, 1504-1512.	8.8	47
39	Terminology used for renewable liquid and gaseous fuels based on the conversion of electricity: a review. Journal of Cleaner Production, 2016, 112, 3709-3720.	9.3	62
40	Large combined heat and power plants in sustainable energy systems. Applied Energy, 2015, 142, 389-395.	10.1	85
41	Smart Energy Systems for coherent 100% renewable energy and transport solutions. Applied Energy, 2015, 145, 139-154.	10.1	873
42	Heat roadmap China: New heat strategy to reduce energy consumption towards 2030. Energy, 2015, 81, 274-285.	8.8	130
43	Integration of renewables and reverse osmosis desalination – Case study for the Jordanian energy system with a high share of wind and photovoltaics. Energy, 2015, 92, 270-278.	8.8	72
44	Comparative analysis of the district heating systems of two towns in Croatia and Denmark. Energy, 2015, 92, 435-443.	8.8	44
45	Performance Analysis of a Hybrid District Heating System: a Case Study of a Small Town in Croatia. Journal of Sustainable Development of Energy, Water and Environment Systems, 2015, 3, 282-302.	1.9	27
46	Synthetic fuel production costs by means of solid oxide electrolysis cells. Energy, 2014, 76, 104-113.	8.8	52
47	4th Generation District Heating (4GDH). Energy, 2014, 68, 1-11.	8.8	1,548
48	Heat Roadmap Europe: Combining district heating with heat savings to decarbonise the EU energy system. Energy Policy, 2014, 65, 475-489.	8.8	607
49	Assessing the impact of energy saving measures on the future energy demand and related GHG (greenhouse gas) emission reduction of Croatia. Energy, 2014, 76, 198-209.	8.8	36
50	A comparison between renewable transport fuels that can supplement or replace biofuels in a 100% renewable energy system. Energy, 2014, 73, 110-125.	8.8	140
51	Modelling energy demand of Croatian industry sector. International Journal of Environment and Sustainable Development, 2014, 13, 74.	0.3	6
52	System and market integration of wind power in Denmark. Energy Strategy Reviews, 2013, 1, 143-156.	7.3	49
53	Forecasting long-term energy demand of Croatian transport sector. Energy, 2013, 57, 169-176.	8.8	32
54	Modelling the transport system in China and evaluating the current strategies towards the sustainable transport development. Energy Policy, 2013, 58, 347-357.	8.8	55

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55	The feasibility of synthetic fuels in renewable energy systems. Energy, 2013, 57, 76-84.	8.8	105
56	2050 pathway to an active renewable energy scenario for Jiangsu province. Energy Policy, 2013, 53, 267-278.	8.8	41
57	Potentials for energy savings and long term energy demand of Croatian households sector. Applied Energy, 2013, 101, 15-25.	10.1	26
58	The role of Carbon Capture and Storage in a future sustainable energy system. Energy, 2012, 44, 469-476.	8.8	106
59	Limiting biomass consumption for heating in 100% renewable energy systems. Energy, 2012, 48, 160-168.	8.8	114
60	Wind power integration using individual heat pumps – Analysis of different heat storage options. Energy, 2012, 47, 284-293.	8.8	197
61	From electricity smart grids to smart energy systems – A market operation based approach and understanding. Energy, 2012, 42, 96-102.	8.8	520
62	The technical and economic implications of integrating fluctuating renewable energy using energy storage. Renewable Energy, 2012, 43, 47-60.	8.9	182
63	A roadmap for the introduction of gaseous transport fuel: A case study for renewable natural gas in Ireland. Renewable and Sustainable Energy Reviews, 2011, 15, 4642-4651.	16.4	45
64	Large-scale integration of wind power into the existing Chinese energy system. Energy, 2011, 36, 4753-4760.	8.8	156
65	Centralisation and decentralisation in strategic municipal energy planning in Denmark. Energy Policy, 2011, 39, 1338-1351.	8.8	156
66	CO <sub>2</sub> -based methanol and DME – Efficient technologies for industrial scale production. Catalysis Today, 2011, 171, 242-250.	4.4	286
67	100% Renewable energy systems, climate mitigation and economic growth. Applied Energy, 2011, 88, 488-501.	10.1	583
68	The first step towards a 100% renewable energy-system for Ireland. Applied Energy, 2011, 88, 502-507.	10.1	377
69	Potential of renewable energy systems in China. Applied Energy, 2011, 88, 518-525.	10.1	259
70	Practical operation strategies for pumped hydroelectric energy storage (PHES) utilising electricity price arbitrage. Energy Policy, 2011, 39, 4189-4196.	8.8	210
71	Improvement of fuel economy of a direct-injection spark-ignition methanol engine under light loads. Fuel, 2011, 90, 1826-1832.	6.4	55
72	Planning for a 100% independent energy system based on smart energy storage for integration of renewables and CO <sub>2</sub> emissions reduction. Applied Thermal Engineering, 2011, 31, 2073-2083.	6.0	155

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73	A renewable energy scenario for Aalborg Municipality based on low-temperature geothermal heat, wind power and biomass. <i>Energy</i> , 2010, 35, 4892-4901.	8.8	201
74	A review of computer tools for analysing the integration of renewable energy into various energy systems. <i>Applied Energy</i> , 2010, 87, 1059-1082.	10.1	1,244
75	Energy system analysis of marginal electricity supply in consequential LCA. <i>International Journal of Life Cycle Assessment</i> , 2010, 15, 260-271.	4.7	142
76	The role of district heating in future renewable energy systems. <i>Energy</i> , 2010, 35, 1381-1390.	8.8	644
77	Modelling the existing Irish energy-system to identify future energy costs and the maximum wind penetration feasible. <i>Energy</i> , 2010, 35, 2164-2173.	8.8	90
78	Evaluation of wind power planning in Denmark – Towards an integrated perspective. <i>Energy</i> , 2010, 35, 5443-5454.	8.8	62
79	Increasing RES Penetration and Security of Energy Supply by Use of Energy Storages and Heat Pumps in Croatian Energy System. <i>NATO Science for Peace and Security Series C: Environmental Security</i> , 2010, , 159-171.	0.2	0
80	Main routes for the thermo-conversion of biomass into fuels and chemicals. Part 2: Gasification systems. <i>Energy Conversion and Management</i> , 2009, 50, 3158-3168.	9.2	248
81	Comparative analyses of seven technologies to facilitate the integration of fluctuating renewable energy sources. <i>IET Renewable Power Generation</i> , 2009, 3, 190.	3.1	231
82	Energy system analysis of 100% renewable energy systems – The case of Denmark in years 2030 and 2050. <i>Energy</i> , 2009, 34, 524-531.	8.8	865
83	Uncertainties related to the identification of the marginal energy technology in consequential life cycle assessments. <i>Journal of Cleaner Production</i> , 2009, 17, 1331-1338.	9.3	154
84	Gas-to-Liquid technology: Prospect for natural gas utilization in Nigeria. <i>Journal of Natural Gas Science and Engineering</i> , 2009, 1, 190-194.	4.4	30
85	Techno-economic performance of energy-from-waste fluidized bed combustion and gasification processes in the UK context. <i>Chemical Engineering Journal</i> , 2009, 146, 315-327.	12.7	104
86	Battery energy storage technology for power systems – An overview. <i>Electric Power Systems Research</i> , 2009, 79, 511-520.	3.6	1,379
87	Capture of carbon dioxide from ambient air. <i>European Physical Journal: Special Topics</i> , 2009, 176, 93-106.	2.6	333
88	Properties, Characteristics, and Combustion Performance of Sasol Fully Synthetic Jet Fuel. <i>Journal of Engineering for Gas Turbines and Power</i> , 2009, 131, .	1.1	42
89	Integrated transport and renewable energy systems. <i>Utilities Policy</i> , 2008, 16, 107-116.	4.0	102
90	E85 and fuel efficiency: An empirical analysis of 2007 EPA test data. <i>Energy Policy</i> , 2008, 36, 1233-1235.	8.8	18

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91	Testing a complete-diet model for estimating the land resource requirements of food consumption and agricultural carrying capacity: The New York State example. Renewable Agriculture and Food Systems, 2007, 22, 145-153.	1.8	126
92	Exergy analysis of hydrogen production via steam methane reforming. International Journal of Hydrogen Energy, 2007, 32, 4811-4820.	7.1	411
93	Energy savings in Danish residential building stock. Energy and Buildings, 2006, 38, 618-626.	6.7	237
94	Dimethyl ether (DME) as an alternative fuel. Journal of Power Sources, 2006, 156, 497-511.	7.8	1,014
95	The optimal production of biogas for use as a transport fuel in Ireland. Renewable Energy, 2005, 30, 2111-2127.	8.9	87
96	Fuel-efficiency of hydrogen and heat storage technologies for integration of fluctuating renewable energy sources., 2005,, .		2
97	Direct conversion from methane to methanol for high efficiency energy system with exergy regeneration. Energy Conversion and Management, 2002, 43, 1459-1468.	9.2	52
98	RDF production plants: I Design and costs. Applied Thermal Engineering, 2002, 22, 423-437.	6.0	103