David Moser

List of Publications by Year in descending order

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85 papers	2,447 citations	257450 24 h-index	223800 46 g-index
87 all docs	87 docs citations	87 times ranked	2299 citing authors

#	Article	IF	Citations
1	Impact of weighted average cost of capital, capital expenditure, and other parameters on future utilityâ€scale PV levelised cost of electricity. Progress in Photovoltaics: Research and Applications, 2020, 28, 439-453.	8.1	247
2	Wind Effect on PV Module Temperature: Analysis of Different Techniques for an Accurate Estimation. Energy Procedia, 2013, 40, 77-86.	1.8	205
3	Classification and challenges of bottom-up energy system models - A review. Renewable and Sustainable Energy Reviews, 2020, 129, 109917.	16.4	167
4	Transition pathways optimization methodology through EnergyPLAN software for long-term energy planning. Applied Energy, 2019, 235, 356-368.	10.1	94
5	Data-driven upscaling methods for regional photovoltaic power estimation and forecast using satellite and numerical weather prediction data. Solar Energy, 2017, 158, 1026-1038.	6.1	90
6	Multi-objective optimization algorithm coupled to EnergyPLAN software: The EPLANopt model. Energy, 2018, 149, 213-221.	8.8	89
7	Multi-Model Ensemble for day ahead prediction of photovoltaic power generation. Solar Energy, 2016, 134, 132-146.	6.1	86
8	Structure and stability of high pressure synthesized Mgâ€“TM hydrides (TM = Ti, Zr, Hf, V, Nb and Ta) as possible new hydrogen rich hydrides for hydrogen storage. Journal of Materials Chemistry, 2009, 19, 8150.	6.7	77
9	Review of Statistical and Analytical Degradation Models for Photovoltaic Modules and Systems as Well as Related Improvements. IEEE Journal of Photovoltaics, 2018, 8, 1773-1786.	2.5	77
10	True Cost of Solar Hydrogen. Solar Rrl, 2022, 6, 2100487.	5.8	62
11	BiPV System Performance and Efficiency Drops: Overview on PV Module Temperature Conditions of Different Module Types. Energy Procedia, 2014, 48, 1311-1319.	1.8	60
12	Hardness determination of bio-ceramics using Laser-Induced Breakdown Spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2011, 66, 290-294.	2.9	53
13	Novel method for the improvement in the evaluation of outdoor performance loss rate in different PV technologies and comparison with two other methods. Solar Energy, 2015, 117, 139-152.	6.1	48
14	A Round Robin Test exercise on hydrogen absorption/desorption properties of a magnesium hydride based material. International Journal of Hydrogen Energy, 2013, 38, 6704-6717.	7.1	41
15	Using machine learning in photovoltaics to create smarter and cleaner energy generation systems: A comprehensive review. Journal of Cleaner Production, 2022, 364, 132701.	9.3	41
16	Identification of technical risks in the photovoltaic value chain and quantification of the economic impact. Progress in Photovoltaics: Research and Applications, 2017, 25, 592-604.	8.1	39
17	Deterministic and Stochastic Approaches for Day-Ahead Solar Power Forecasting. Journal of Solar Energy Engineering, Transactions of the ASME, 2017, 139, .	1.8	38
18	New method for the early design of BIPV with electric storage: A case study in northern Italy. Sustainable Cities and Society, 2019, 48, 101400.	10.4	38

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19	Multi-objective investment optimization for energy system models in high temporal and spatial resolution. Applied Energy, 2020, 264, 114728.	10.1	38
20	Predictive Energy Control Strategy for Peak Shaving and Shifting Using BESS and PV Generation Applied to the Retail Sector. Electronics (Switzerland), 2019, 8, 526.	3.1	30
21	From investment optimization to fair benefit distribution in renewable energy community modelling. Applied Energy, 2022, 310, 118447.	10.1	30
22	Progress in regional PV power forecasting: A sensitivity analysis on the Italian case study. Renewable Energy, 2022, 189, 983-996.	8.9	29
23	Experimental investigation of a low cost passive strategy to improve the performance of Building Integrated Photovoltaic systems. Solar Energy, 2015, 111, 288-296.	6.1	28
24	Outdoor PV System Monitoringâ€"Input Data Quality, Data Imputation and Filtering Approaches. Energies, 2020, 13, 5099.	3.1	28
25	Photovoltaic lifetime forecast model based on degradation patterns. Progress in Photovoltaics: Research and Applications, 2020, 28, 979-992.	8.1	26
26	Multi-objective battery sizing optimisation for renewable energy communities with distribution-level constraints: A prosumer-driven perspective. Applied Energy, 2021, 297, 117171.	10.1	26
27	Review of photovoltaic module degradation, field inspection techniques and techno-economic assessment. Renewable and Sustainable Energy Reviews, 2022, 165, 112616.	16.4	26
28	Italian protocol for massive solar integration: Imbalance mitigation strategies. Renewable Energy, 2020, 153, 725-739.	8.9	25
29	International collaboration framework for the calculation of performance loss rates: Data quality, benchmarks, and trends (towards a uniform methodology). Progress in Photovoltaics: Research and Applications, 2021, 29, 573-602.	8.1	25
30	Crystal structure, electronic structure, and vibrational properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>M</mml:mi><mml:mtext>AlSiH</mml:mtext></mml:mrow></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mi>M</mml:mi><mml:mo>=</mml:mo><mml:mtext>Ca</mml: Physical Review B, 2008, 78, .	3.2	24
31	A Small-Scale Prototype for the Optimization of PV Generation and Battery Storage through the Use of a Building Energy Management System. , 2018, , .		23
32	Photovoltaic generation forecast for power transmission scheduling: A real case study. Solar Energy, 2018, 174, 976-990.	6.1	23
33	Incorporating combined cycle gas turbine flexibility constraints and additional costs into the EPLANopt model: The Italian case study. Energy, 2018, 160, 33-43.	8.8	23
34	Multi-Objective Optimization Model EPLANopt for Energy Transition Analysis and Comparison with Climate-Change Scenarios. Energies, 2020, 13, 3255.	3.1	23
35	Italian protocol for massive solar integration: From solar imbalance regulation to firm 24/365 solar generation. Renewable Energy, 2021, 169, 425-436.	8.9	23
36	Optimisation method to obtain marginal abatement cost-curve through EnergyPLAN software. Smart Energy, 2021, 1, 100002.	5.7	22

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37	Low frequency sound propagation in activated carbon. Journal of the Acoustical Society of America, 2012, 132, 239-248.	1.1	21
38	A Comprehensive Analysis of Public and Private Funding for Photovoltaics Research and Development in the European Union, Norway, and Turkey. Energies, 2020, 13, 2743.	3.1	21
39	Vibrational Properties of Polyanionic Hydrides SrAl₂H₂ and SrAlSiH:â€‰ New Insights into Alâ^'H Bonding Interactions. Inorganic Chemistry, 2007, 46, 6987-6991.	4.0	20
40	Comparison of Statistical and Deterministic Smoothing Methods to Reduce the Uncertainty of Performance Loss Rate Estimates. IEEE Journal of Photovoltaics, 2018, 8, 224-232.	2.5	20
41	Filtering Procedures for Reliable Outdoor Temperature Coefficients in Different Photovoltaic Technologies. Journal of Solar Energy Engineering, Transactions of the ASME, 2014, 136, .	1.8	19
42	Performance Analysis and Degradation of a Large Fleet of PV Systems. IEEE Journal of Photovoltaics, 2021, 11, 1312-1318.	2.5	18
43	Best practices for photovoltaic performance loss rate calculations. Progress in Energy, 2022, 4, 022003.	10.9	17
44	The pressureâ€“temperature phase diagram of MgH₂and isotopic substitution. Journal of Physics Condensed Matter, 2011, 23, 305403.	1.8	16
45	Performance Loss Rate Consistency and Uncertainty Across Multiple Methods and Filtering Criteria. , 2019, , .		15
46	Residual load probabilistic forecast for reserve assessment: A real case study. Renewable Energy, 2020, 149, 508-522.	8.9	15
47	Imbalance mitigation strategy via flexible PV ancillary services: The Italian case study. Renewable Energy, 2021, 179, 1694-1705.	8.9	15
48	A series of BaAl2â^'xSixH2â^'x (0.4<x<1.6) hydrides with compositions and structures in between BaSi2 and BaAl2H2. Journal of Alloys and Compounds, 2010, 505, 1-5.	5.5	13
49	Estimating Hourly Beam and Diffuse Solar Radiation in an Alpine Valley: A Critical Assessment of Decomposition Models. Atmosphere, 2018, 9, 117.	2.3	13
50	The Value of PV Power Forecast and the Paradox of the â€œSingle Pricingâ€•Scheme: The Italian Case Study. Energies, 2020, 13, 3945.	3.1	13
51	In situ powder neutron diffraction study of non-stoichiometric phase formation during the hydrogenation of Li3N. Faraday Discussions, 2011, 151, 263.	3.2	12
52	The PV Potential of South Tyrol: An Intelligent Use of Space. Energy Procedia, 2014, 57, 1392-1400.	1.8	12
53	Design of a residential photovoltaic system: the impact of the demand profile and the normative framework. Renewable Energy, 2020, 160, 1458-1467.	8.9	11
54	Improving the traditional levelized cost of electricity approach by including the integration costs in the <scp>techno‐economic</scp> evaluation of future photovoltaic plants. International Journal of Energy Research, 2021, 45, 9252-9269.	4.5	11

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55	Structure and stability of high pressure synthesized MgTM2H6 (TM = Zr, Nb) hydrides. Acta Materialia, 2015, 96, 237-248.	7.9	10
56	Operational Performance and Degradation of PV Systems Consisting of Six Technologies in Three Climates. Applied Sciences (Switzerland), 2020, 10, 5412.	2.5	10
57	Impact of PMUs on state estimation accuracy in active distribution grids with large PV penetration. , 2015, , .		9
58	Analysis of Photovoltaic Performance Loss Rates of Six Module Types in Five Geographical Locations. IEEE Journal of Photovoltaics, 2019, 9, 1091-1096.	2.5	9
59	Anin situneutron diffraction measurement of the pressureâ€“temperature evolution of a MgD2:TiD2mixture. High Pressure Research, 2010, 30, 643-652.	1.2	8
60	Investigation of Counterion Influence on an Octahedral IrH6-Complex in the Solid State Hydrides AAeIrH6(A = Na, K and Ae = Ca, Sr, Ba, and Eu) with a New Structure Type. Inorganic Chemistry, 2011, 50, 11890-11895.	4.0	8
61	New PV Performance Loss Methodology Applying a Self-Regulated Multistep Algorithm. IEEE Journal of Photovoltaics, 2021, 11, 1087-1096.	2.5	8
62	Economic and environmental impact of photovoltaic and wind energy high penetration towards the achievement of the Italian 20-20-20 targets. , 2015, , .		7
63	Optimal Allocation Method for a Fair Distribution of the Benefits in an Energy Community. Solar Rrl, 2022, 6, 2100473.	5.8	7
64	Sun Tracker Performance Analysis for Different Solar Module Technologies in an Alpine Environment. Journal of Solar Energy Engineering, Transactions of the ASME, 2014, 136, .	1.8	6
65	Vehicle-integrated Photovoltaic (ViPV) systems: Energy production, Diesel Equivalent, Payback Time; an assessment screening for trucks and busses. , 2014, , .		6
66	Uncertainty analysis of a radiative transfer model using Monte Carlo method within 280â€“2500 nm region. Solar Energy, 2016, 132, 558-569.	6.1	6
67	Managing technical risks in <scp>PV</scp> investments: How to quantify the impact of risk mitigation measures for different <scp>PV</scp> project phases?. Progress in Photovoltaics: Research and Applications, 2018, 26, 597-607.	8.1	6
68	The Role of Flexibility in Photovoltaic and Battery Optimal Sizing towards a Decarbonized Residential Sector. Energies, 2021, 14, 2326.	3.1	6
69	Costs of utilityâ€scale photovoltaic systems integration in the future Italian energy scenarios. Progress in Photovoltaics: Research and Applications, 2021, 29, 786-801.	8.1	6
70	Long term measurement accuracy analysis of a commercial monitoring system for photovoltaic plants. , 2015, , .		4
71	Stabilization of 3d Transition Metal Hydrido Complexes in SrH₂Mg₂[Co(I)H₅], BaH₂Mg₅[Co(â”I)H₄]₂, and RbH₂Mg₅[Co(â”I)H₄ Ni(0)H₄] via Easily Polarizable Hydride Ligands. Inorganic Chemistry, 2016, 55, 3576-3582.	4.0	4
72	Introducing â€˜PEARL-PVâ€™: Performance and Reliability of Photovoltaic Systems: Evaluations of Large-Scale Monitoring Data. , 2018, , .		3

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73	Performance Loss Rates of PV systems of Task 13 database. , 2019, , .		3
74	Building integrated photovoltaic facades: challenges, opportunities and innovations. , 2022, , 201-229.		3
75	Inferring the Performance Ratio of PV systems distributed in an region: a real-case study in South Tyrol. , 2017, , .		2
76	Development of a big data bank for PV monitoring data, analysis and simulation in COST Action â€˜PEARL PVâ€™. , 2019, , .		2
77	Machine learning-based PV power forecasting methods for electrical grid management and energy trading. , 2021, , 165-194.		2
78	Application of Dynamic Multi-Step Performance Loss Algorithm. , 2020, , .		2
79	Service Lifetime Prediction of PV Modules and Systems: Progress of the SOLAR-TRAIN Project. , 2019, , .		1
80	Renewable Energy Communities: Business Models of Multi-family Housing Buildings. Green Energy and Technology, 2021, , 261-276.	0.6	1
81	PVplr: R Package Implementation of Multiple Filters and Algorithms for Time-series Performance Loss Rate Analysis. , 2020, , .		1
82	PV Systems with Storage. , 2021, , 1-28.		0
83	Design and Components of Photovoltaic Systems. , 2021, , .		0
84	The impact of photovoltaic power estimation modeling on distribution grid voltages. , 2021, , .		0
85	Introduction: focus on characterisation and reliability of photovoltaic modules in utility-scale plants. Progress in Energy, 2022, 4, 030201.	10.9	0