

Dezso Sera

List of Publications by Year in descending order

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135
papers

5,230
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186265

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all docs

135
docs citations

135
times ranked

4223
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of Battery Degradation on the Probabilistic Optimal Operation of Renewable-Based Microgrids. Electricity, 2022, 3, 53-74.	2.8	7
2	Stochastic Optimal Strategy for Power Management in Interconnected Multi-Microgrid Systems. Electronics (Switzerland), 2022, 11, 1424.	3.1	10
3	Demand response planning for day-ahead energy management of CHP-equipped consumers. , 2022, , .		1
4	A Cascaded H-Bridge With Integrated Boosting Circuit. IEEE Transactions on Power Electronics, 2021, 36, 18-22.	7.9	13
5	A Reduced Power Switches Count Multilevel Converter-Based Photovoltaic System With Integrated Energy Storage. IEEE Transactions on Industrial Electronics, 2021, 68, 8231-8240.	7.9	14
6	Optimum Sizing of Photovoltaic and Energy Storage Systems for Powering Green Base Stations in Cellular Networks. Energies, 2021, 14, 1895.	3.1	14
7	A Simple Mismatch Mitigating Partial Power Processing Converter for Solar PV Modules. Energies, 2021, 14, 2308.	3.1	3
8	An overview of supercapacitors for integrated PV " energy storage panels. , 2021, , .		8
9	Reconfigurable Distributed Power Electronics Technique for Solar PV Systems. Electronics (Switzerland), 2021, 10, 1121.	3.1	2
10	Medium-Voltage Converter Solution With Modular Multilevel Structure and Decentralized Energy Storage Integration for High-Power Wind Turbines. IEEE Transactions on Power Electronics, 2021, 36, 12954-12967.	7.9	9
11	Design and Implementation of a New Cuk-Based Step-Up DC"DC Converter. Energies, 2021, 14, 6975.	3.1	6
12	In-Situ Measurement of Power Loss for Crystalline Silicon Modules Undergoing Thermal Cycling and Mechanical Loading Stress Testing. Energies, 2021, 14, 72.	3.1	6
13	Sizing Of Hybrid Supercapacitors For Off-Grid PV Applications. , 2021, , .		2
14	Optimum Sizing of Photovoltaic-Battery Power Supply for Drone-Based Cellular Networks. Drones, 2021, 5, 138.	4.9	8
15	Dispatchable High-Power Wind Turbine Based on a Multilevel Converter With Modular Structure and Hybrid Energy Storage Integration. IEEE Access, 2021, 9, 152878-152891.	4.2	4
16	High-Power Medium-Voltage Wind Turbine Driven by Converter Solution with Modular Multilevel Structure and Decentralized Battery Integration Operating in Both Grid-Following and Grid-Forming Modes. , 2021, , .		0
17	Dual-Input Quasi-Z-Source PV Inverter: Dynamic Modeling, Design, and Control. IEEE Transactions on Industrial Electronics, 2020, 67, 6483-6493.	7.9	16
18	Mission Profile-Oriented Control for Reliability and Lifetime of Photovoltaic Inverters. IEEE Transactions on Industry Applications, 2020, 56, 601-610.	4.9	58

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19	Method for Estimation and Correction of Perspective Distortion of Electroluminescence Images of Photovoltaic Panels. IEEE Journal of Photovoltaics, 2020, 10, 1797-1802.	2.5	9
20	Multiple-Power-Sample Based P&O MPPT for Fast-Changing Irradiance Conditions for a Simple Implementation. IEEE Journal of Photovoltaics, 2020, 10, 1481-1488.	2.5	41
21	Solar Cell Cracks and Finger Failure Detection Using Statistical Parameters of Electroluminescence Images and Machine Learning. Applied Sciences (Switzerland), 2020, 10, 8834.	2.5	26
22	Modular Multilevel Converter for Photovoltaic Application with High Energy Yield under Uneven Irradiance. Energies, 2020, 13, 2619.	3.1	4
23	Cascaded Multilevel PV Inverter With Improved Harmonic Performance During Power Imbalance Between Power Cells. IEEE Transactions on Industry Applications, 2020, 56, 2788-2798.	4.9	25
24	Drone-Based Daylight Electroluminescence Imaging of PV Modules. IEEE Journal of Photovoltaics, 2020, 10, 872-877.	2.5	42
25	Condition Monitoring in Photovoltaic Systems by Semi-Supervised Machine Learning. Energies, 2020, 13, 584.	3.1	7
26	Intrinsic-Capacitance-based Differential Power Processing for Photovoltaic Modules. , 2020, , .		0
27	Harmonics Mitigation in Cascaded Multilevel PV Inverters During Power Imbalance Between Cells. , 2019, , .		4
28	Performance Analysis of Medium-Voltage Grid Integration of PV Plant Using Modular Multilevel Converter. IEEE Transactions on Energy Conversion, 2019, 34, 1731-1740.	5.2	53
29	Evaluation of Interconnection Configuration Schemes for PV Modules with Switched-Inductor Converters under Partial Shading Conditions. Energies, 2019, 12, 2802.	3.1	13
30	Large Photovoltaic Power Plants Integration: A Review of Challenges and Solutions. Energies, 2019, 12, 3798.	3.1	41
31	Review of mismatch mitigation techniques for PV modules. IET Renewable Power Generation, 2019, 13, 2035-2050.	3.1	46
32	Arm Power Control of the Modular Multilevel Converter in Photovoltaic Applications. Energies, 2019, 12, 1620.	3.1	17
33	Performance Benchmark of Bypassing Techniques for Photovoltaic Modules. , 2019, , .		2
34	Comparative Study of Ramp-Rate Control Algorithms for PV with Energy Storage Systems. Energies, 2019, 12, 1342.	3.1	78
35	Case Study of Residential PV Power and Battery Storage with the Danish Flexible Pricing Scheme. Energies, 2019, 12, 799.	3.1	4
36	A Photovoltaic Module Diagnostic Setup for Lock-in Electroluminescence Imaging. , 2019, , .		2

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37	Advancements in Photovoltaic Cell and System Technologies. International Journal of Photoenergy, 2019, 2019, 1-2.	2.5	9
38	PV Module-Level CHB Inverter with Integrated Battery Energy Storage System. Energies, 2019, 12, 4601.	3.1	11
39	Switched-Capacitor-Inductor-based Differential Power Converter for Solar PV Modules. , 2019, , .		3
40	Sub-Module Level Differential Power Processing for Parallel-Connected Architecture in Photovoltaic Systems. , 2019, , .		1
41	Model Predictive Control of Cascaded Multilevel Battery Assisted Quasi Z-Source PV Inverter with Reduced Computational Effort. , 2019, , .		6
42	Test Platform for Rapid Prototyping of Digital Control for Power Electronic Converters. , 2019, , .		4
43	A Dual-Discrete Model Predictive Control-Based MPPT for PV Systems. IEEE Transactions on Power Electronics, 2019, 34, 9686-9697.	7.9	63
44	A Low-Computational High-Performance Model Predictive Control of Single Phase Battery Assisted Quasi Z-Source PV Inverters. , 2019, , .		3
45	Machine learning prediction of defect types for electroluminescence images of photovoltaic panels. , 2019, , .		19
46	Analysis and Modeling of Interharmonics From Grid-Connected Photovoltaic Systems. IEEE Transactions on Power Electronics, 2018, 33, 8353-8364.	7.9	83
47	A Direct Maximum Power Point Tracking Method for Single-Phase Grid-Connected PV Inverters. IEEE Transactions on Power Electronics, 2018, 33, 8961-8971.	7.9	44
48	On the Impacts of PV Array Sizing on the Inverter Reliability and Lifetime. IEEE Transactions on Industry Applications, 2018, 54, 3656-3667.	4.9	95
49	Lifetime Evaluation of Grid-Connected PV Inverters Considering Panel Degradation Rates and Installation Sites. IEEE Transactions on Power Electronics, 2018, 33, 1225-1236.	7.9	152
50	Discrete Model-Predictive-Control-Based Maximum Power Point Tracking for PV Systems: Overview and Evaluation. IEEE Transactions on Power Electronics, 2018, 33, 7273-7287.	7.9	78
51	Flat tie-line power scheduling control of grid-connected hybrid microgrids. Applied Energy, 2018, 210, 786-799.	10.1	25
52	SNR Study of Outdoor Electroluminescence Images under High Sun Irradiation. , 2018, , .		6
53	Improvement of Ventilation Drive System with Solar Power and a Voltage Level Based Control Structure. , 2018, , .		0
54	Model Predictive-Based Direct Battery Control in PV Fed Quasi Z-Source Inverters. , 2018, , .		8

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55	Correcting for Perspective Distortion in Electroluminescence Images of Photovoltaic Panels. , 2018, , .		6
56	Multilevel DC-Link Converter-Based Photovoltaic System with Integrated Energy Storage. , 2018, , .		9
57	Test Platform for Photovoltaic Systems with Integrated Battery Energy Storage Applications. , 2018, , .		2
58	A Shadow Tolerant Configuration for PV Integration to Grid using Modular Multilevel Converter. , 2018, , .		2
59	Comparison of the reactive control strategies in low voltage network with photovoltaic generation and storage. Thermal Science, 2018, 22, 887-896.	1.1	6
60	Enhancement of Electroluminescence images for fault detection in photovoltaic panels. , 2018, , .		3
61	Reliability Assessment of PV Inverters with Battery Systems Considering PV Self-Consumption and Battery Sizing. , 2018, , .		5
62	Mission Profile-Oriented Control for Reliability and Lifetime of Photovoltaic Inverters. , 2018, , .		3
63	Outdoor electroluminescence acquisition using a movable testbed. , 2018, , .		4
64	Frequency Adaptive Digital Filter Implementation of Proportional-Resonant Controller for Inverter Applications. , 2018, , .		3
65	Solar Cell Capacitance Determination Based on an RLC Resonant Circuit. Energies, 2018, 11, 672.	3.1	18
66	Enhancing PV Inverter Reliability With Battery System Control Strategy. CPSS Transactions on Power Electronics and Applications, 2018, 3, 93-101.	4.4	36
67	Delta Power Control Strategy for Multistring Grid-Connected PV Inverters. IEEE Transactions on Industry Applications, 2017, 53, 3862-3870.	4.9	117
68	Lifetime evaluation of PV inverters considering panel degradation rates and installation sites. , 2017, , .		6
69	Resonance Reduction for AC Drives With Small Capacitance in the DC Link. IEEE Transactions on Industry Applications, 2017, 53, 3814-3820.	4.9	36
70	Interharmonics from grid-connected PV systems: Mechanism and mitigation. , 2017, , .		23
71	Comparative Assessment of PV Plant Performance Models Considering Climate Effects. Electric Power Components and Systems, 2017, 45, 1381-1392.	1.8	7
72	Power Ramp Limitation Capabilities of Large PV Power Plants With Active Power Reserves. IEEE Transactions on Sustainable Energy, 2017, 8, 573-581.	8.8	39

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73	Impacts of PV array sizing on PV inverter lifetime and reliability. , 2017, , .		14
74	Automatic Detection of Inactive Solar Cell Cracks in Electroluminescence Images. , 2017, , .		1
75	Development of outdoor luminescence imaging for drone-based PV array inspection. , 2017, , .		11
76	Coupled thermal model of photovoltaic-thermoelectric hybrid panel for sample cities in Europe. Renewable Energy, 2016, 99, 127-135.	8.9	62
77	Delta power control strategy for multi-string grid-connected PV inverters. , 2016, , .		10
78	Development and implementation of a PV performance monitoring system based on inverter measurements. , 2016, , .		2
79	Automatic detection and evaluation of solar cell micro-cracks in electroluminescence images using matched filters. , 2016, , .		20
80	Detection of potential induced degradation in c-Si PV panels using electrical impedance spectroscopy. , 2016, , .		16
81	Novel field test design for acquisition of DC and AC parameters during service. , 2016, , .		0
82	Dynamic Performance of Maximum Power Point Trackers in TEG Systems Under Rapidly Changing Temperature Conditions. Journal of Electronic Materials, 2016, 45, 1309-1315.	2.2	12
83	Resonance reduction for AC drives with small capacitance in the DC link. , 2016, , .		9
84	Fault identification in crystalline silicon PV modules by complementary analysis of the light and dark currentâ€“voltage characteristics. Progress in Photovoltaics: Research and Applications, 2016, 24, 517-532.	8.1	28
85	Investigation of wind speed cooling effect on PV panels in windy locations. Renewable Energy, 2016, 90, 283-290.	8.9	110
86	Efficiency improvement of pumped storage system for MW scale off-grid PV plants. , 2015, , .		3
87	Thermoelectric generator emulator for MPPT testing. , 2015, , .		0
88	Quantifying solar cell cracks in photovoltaic modules by electroluminescence imaging. , 2015, , .		24
89	Temperatureâ€“dependency analysis and correction methods of <i>in situ</i> powerâ€“loss estimation for crystalline silicon modules undergoing potentialâ€“induced degradation stress testing. Progress in Photovoltaics: Research and Applications, 2015, 23, 1536-1549.	8.1	38
90	Firefighter Safety for PV Systems: A Solution for the Protection of Emergency Responders from Hazardous dc Voltage. IEEE Industry Applications Magazine, 2015, 21, 75-84.	0.4	2

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91	Three-phase Photovoltaic Systems: Structures, Topologies, and Control. Electric Power Components and Systems, 2015, 43, 1364-1375.	1.8	17
92	Diagnostic method for photovoltaic systems based on light $\text{l\^a}^{\text{e}}\text{V}$ measurements. Solar Energy, 2015, 119, 29-44.	6.1	90
93	Frequency Support Functions in Large PV Power Plants With Active Power Reserves. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 849-858.	5.4	145
94	Influence of resolution of the input data on distributed generation integration studies. , 2014, , .		3
95	Remote and centralized monitoring of PV power plants. , 2014, , .		5
96	Implementation of PLL and FLL trackers for signals with high harmonic content and low sampling frequency. , 2014, , .		9
97	Distributed control of PV strings with module integrated converters in presence of a central MPPT. , 2014, , .		1
98	Optimal Design of Photovoltaic Systems Using High Time-Resolution Meteorological Data. IEEE Transactions on Industrial Informatics, 2014, 10, 2270-2279.	11.3	40
99	Investigation of extra power loss sharing among photovoltaic inverters caused by reactive power management in distribution networks. , 2014, , .		5
100	Photovoltaic System in Progress: A Survey of Recent Development. Communications in Computer and Information Science, 2014, , 239-250.	0.5	1
101	An Optimization Method for Designing Large PV Plants. IEEE Journal of Photovoltaics, 2013, 3, 814-822.	2.5	101
102	Photovoltaic array condition monitoring based on online regression of performance model. , 2013, , .		22
103	Grid integration of PV power based on PHIL testing using different interface algorithms. , 2013, , .		11
104	Benchmark networks for grid integration impact studies of large PV plants. , 2013, , .		8
105	On the Perturb-and-Observe and Incremental Conductance MPPT Methods for PV Systems. IEEE Journal of Photovoltaics, 2013, 3, 1070-1078.	2.5	629
106	Power ramp limitation and frequency support in large scale PVPPs without storage. , 2013, , .		5
107	Firefighter safety for PV systems: Overview of future requirements and protection systems. , 2013, , .		3
108	Development of an intelligent maximum power point tracker using an advanced PV system test platform. , 2013, , .		2

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109	Spread Spectrum Modulation by Using Asymmetric-Carrier Random PWM. IEEE Transactions on Industrial Electronics, 2012, 59, 3710-3718.	7.9	65
110	Leakage current measurement in transformerless PV inverters. , 2012, , .		6
111	Detection of increased series losses in PV arrays using Fuzzy Inference Systems. , 2012, , .		26
112	Overview of recent Grid Codes for PV power integration. , 2012, , .		96
113	Improved voltage regulation strategies by PV inverters in LV rural networks. , 2012, , .		36
114	High flexibility and low cost digital implementation for modern PWM strategies. , 2011, , .		2
115	A reactive power control strategy for distributed solar inverters in low voltage rural distribution grids without communication infrastructure. , 2011, , .		1
116	Enhanced local grid voltage support method for high penetration of distributed generators. , 2011, , .		24
117	Local Reactive Power Control Methods for Overvoltage Prevention of Distributed Solar Inverters in Low-Voltage Grids. IEEE Journal of Photovoltaics, 2011, 1, 174-182.	2.5	421
118	Unified analytical equation for theoretical determination of the harmonic components of modern PWM strategies. , 2011, , .		3
119	A practical optimization method for designing large PV plants. , 2011, , .		11
120	A low-disturbance diagnostic function integrated in the PV arrays' MPPT algorithm. , 2011, , .		7
121	Evaluation of the voltage support strategies for the low voltage grid connected PV generators. , 2010, , .		81
122	Low-cost, high flexibility I–V curve tracer for photovoltaic modules. , 2010, , .		8
123	Clustered PV inverters in LV networks: An overview of impacts and comparison of voltage control strategies. , 2009, , .		94
124	Partial shadowing detection based on equivalent thermal voltage monitoring for PV module diagnostics. , 2009, , .		15
125	Robust series resistance estimation for diagnostics of photovoltaic modules. , 2009, , .		18
126	PV inverter test setup for European efficiency, static and dynamic MPPT efficiency evaluation. , 2008, , .		56

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127	Optimized Maximum Power Point Tracker for fast changing environmental conditions. , 2008, , .		39
128	Photovoltaic module diagnostics by series resistance monitoring and temperature and rated power estimation. , 2008, , .		42
129	Optimized Maximum Power Point Tracker for Fast-Changing Environmental Conditions. IEEE Transactions on Industrial Electronics, 2008, 55, 2629-2637.	7.9	352
130	Power Electronics and Control of Renewable Energy Systems. , 2007, , .		40
131	PV panel model based on datasheet values. , 2007, , .		543
132	Improved MPPT method for rapidly changing environmental conditions. , 2006, , .		104
133	Improved MPPT Algorithms for Rapidly Changing Environmental Conditions. , 2006, , .		100
134	Improved MPPT Algorithms for Rapidly Changing Environmental Conditions. , 2006, , .		18
135	Low-cost digital implementation of proportional-resonant current controllers for PV inverter applications using delta operator. , 2005, , .		33