

Johan Driesen

List of Publications by Year in descending order

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313
papers

13,770
citations

50276

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29157

104
g-index

315
all docs

315
docs citations

315
times ranked

10406
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | A stepwise methodology for the design and evaluation of protection strategies in LVDC microgrids. Applied Energy, 2022, 310, 118420. | 10.1 | 12 |
| 2 | Comparison of GaN Enhancement Mode Transistor Performance With Integrated and External Driver. , 2022, 2, 100004. | | 3 |
| 3 | A Family of DC-DC Converters With High Step-Down Voltage Capability Based on the Valley-Fill Switched Capacitor Principle. IEEE Transactions on Industrial Electronics, 2021, 68, 5810-5820. | 7.9 | 13 |
| 4 | Towards data-driven energy communities: A review of open-source datasets, models and tools. Renewable and Sustainable Energy Reviews, 2021, 148, 111290. | 16.4 | 45 |
| 5 | Embedded BIPV module-level DC/DC converters: Classification of optimal ratings. Renewable Energy, 2020, 146, 880-889. | 8.9 | 21 |
| 6 | Economic Study of Battery Profitability in Residential Solar Panel Systems: A Case Study of Belgium. , 2020, , . | | 1 |
| 7 | AC Voltage Profile Analysis of Cables and Bus Bars for BIPV DC Feeders. , 2020, , . | | 1 |
| 8 | An Overview of Power Conversion Techniques and Topologies for DC-DC Voltage Regulation. , 2020, , . | | 1 |
| 9 | Impact of photovoltaic technology and feeder voltage level on the efficiency of building-integrated photovoltaic systems. Applied Energy, 2020, 269, 115039. | 10.1 | 9 |
| 10 | The Sensitivity of an Electro-Thermal Photovoltaic DC-DC Converter Model to the Temperature Dependence of the Electrical Variables for Reliability Analyses. Energies, 2020, 13, 2865. | 3.1 | 6 |
| 11 | Practical Considerations for Designing Reliable DC/DC Converters, Applied to a BIPV Case. Energies, 2020, 13, 834. | 3.1 | 5 |
| 12 | Electrical system architectures for building-integrated photovoltaics: A comparative analysis using a modelling framework in Modelica. Applied Energy, 2020, 261, 114247. | 10.1 | 16 |
| 13 | Conversion Efficiency of the Buck Three-Level DC-DC Converter in Unbalanced Bipolar DC Microgrids. IEEE Transactions on Power Electronics, 2020, 35, 9306-9319. | 7.9 | 24 |
| 14 | Fuse-Based Short-Circuit Protection of Converter Controlled Low-Voltage DC Grids. IEEE Transactions on Power Electronics, 2020, 35, 11694-11706. | 7.9 | 35 |
| 15 | Influence of Driver Integration on GaN Enhancement Mode Transistor Performance. , 2020, , . | | 0 |
| 16 | Design of a Bipolar DC Grid Fault Emulator. , 2020, , . | | 2 |
| 17 | Gallium-Nitride Semiconductor Technology and Its Practical Design Challenges in Power Electronics Applications: An Overview. Energies, 2019, 12, 2663. | 3.1 | 50 |
| 18 | Operation of the full-bridge three-level DC-DC converter in unbalanced bipolar DC microgrids. IET Power Electronics, 2019, 12, 2256-2265. | 2.1 | 17 |

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| 19 | A mission profile-based reliability analysis framework for photovoltaic DC-DC converters. <i>Microelectronics Reliability</i> , 2019, 100-101, 113383. | 1.7 | 7 |
| 20 | Multi-agent reinforcement learning for modeling and control of thermostatically controlled loads. <i>Applied Energy</i> , 2019, 238, 1022-1035. | 10.1 | 58 |
| 21 | Review on Building-Integrated Photovoltaics Electrical System Requirements and Module-Integrated Converter Recommendations. <i>Energies</i> , 2019, 12, 1532. | 3.1 | 25 |
| 22 | Novel Step-Down DC-DC Converters Based on the Inductor-Diode and Inductor-Capacitor-Diode Structures in a Two-Stage Buck Converter. <i>Energies</i> , 2019, 12, 1131. | 3.1 | 6 |
| 23 | Modeling and validation of a DC/DC power converter for building energy simulations: Application to BIPV systems. <i>Applied Energy</i> , 2019, 240, 646-665. | 10.1 | 19 |
| 24 | Modified step-down series-capacitor buck converter with insertion of a Valley-Fill structure. <i>IET Power Electronics</i> , 2019, 12, 3306-3314. | 2.1 | 5 |
| 25 | Comparative Analysis of Reconfiguration Assisted Management of Battery Storage Systems. , 2019, , . | | 10 |
| 26 | Electricity load-shedding in Pakistan: Unintended consequences, opportunities and policy recommendations. <i>Energy Policy</i> , 2019, 128, 411-417. | 8.8 | 30 |
| 27 | On the Numerical Accuracy of Electromagnetic Transient Simulation With Power Electronics. <i>IEEE Transactions on Power Delivery</i> , 2018, 33, 2492-2501. | 4.3 | 17 |
| 28 | Directional, High-Impedance Fault Detection in Isolated Neutral Distribution Grids. <i>IEEE Transactions on Power Delivery</i> , 2018, 33, 2474-2483. | 4.3 | 29 |
| 29 | Study on a cascaded DC-DC converter for use in building-integrated photovoltaics. , 2018, , . | | 17 |
| 30 | Gigawatt-hour scale savings on a budget of zero: Deep reinforcement learning based optimal control of hot water systems. <i>Energy</i> , 2018, 144, 159-168. | 8.8 | 69 |
| 31 | Design and optimization of a grid connected residential PV-system with Battery Energy Storage System. , 2018, , . | | 1 |
| 32 | Reliability Comparison of a DC-DC Converter Placed in Building-Integrated Photovoltaic Module Frames. , 2018, , . | | 6 |
| 33 | Quasi-Two-Level Converter for overvoltage mitigation in medium voltage drives. , 2018, , . | | 9 |
| 34 | Experimental Comparison of the Efficiency, Power Density and Thermal Performance of Two BIPV Converter Prototypes. , 2018, , . | | 5 |
| 35 | Bayesian inference based MPPT for dynamic irradiance conditions. <i>Solar Energy</i> , 2018, 174, 1153-1162. | 6.1 | 7 |
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| 37 | A critical review of power quality standards and definitions applied to DC microgrids. Applied Energy, 2018, 229, 281-288. | 10.1 | 94 |
| 38 | Spatial and temporal analysis of wind effects on PV modules: Consequences for electrical power evaluation. Solar Energy, 2017, 147, 292-299. | 6.1 | 33 |
| 39 | Reconfigurable emulator for photovoltaic modules under static partial shading conditions. Solar Energy, 2017, 141, 256-265. | 6.1 | 30 |
| 40 | Accurate second-order interpolation for power electronic circuit simulation. , 2017, , . | | 1 |
| 41 | Normalised efficiency of photovoltaic systems: Going beyond the performance ratio. Solar Energy, 2017, 157, 408-418. | 6.1 | 26 |
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| 43 | Predetermined static configurations of a partially shaded photovoltaic module. Progress in Photovoltaics: Research and Applications, 2017, 25, 149-160. | 8.1 | 4 |
| 44 | Analysis of three-level converters with voltage balancing capability in bipolar DC distribution networks. , 2017, , . | | 7 |
| 45 | Application of a 100A normally-on GaN-based device in a 2kW/400V input half-bridge non-isolated DC-DC configuration. , 2017, , . | | 2 |
| 46 | Comparative study of current redistributor's topologies for mitigating unbalanced currents in bipolar DC microgrids. , 2017, , . | | 3 |
| 47 | Optimal Local Reactive Power Control by PV Inverters. IEEE Transactions on Sustainable Energy, 2016, 7, 1624-1633. | 8.8 | 96 |
| 48 | Current controller modeling for an interleaved boost with voltage multiplier cells for PV applications. , 2016, , . | | 4 |
| 49 | Power electronics for potential distribution dc power evolution: A review. , 2016, , . | | 5 |
| 50 | Optimal Placement and Sizing of Active In-Line Voltage Regulators in Flemish LV Distribution Grids. IEEE Transactions on Industry Applications, 2016, 52, 4577-4584. | 4.9 | 13 |
| 51 | Comparing an unbalance compensating converter with and without a neutral connection. , 2016, , . | | 0 |
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| 53 | Utilizing local energy storage for congestion management and investment deferral in distribution networks. , 2016, , . | | 10 |
| 54 | Technical assessment of centralized and localized voltage control strategies in low voltage networks. Sustainable Energy, Grids and Networks, 2016, 8, 85-97. | 3.9 | 29 |

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| 55 | Optimization control scheme utilizing small-scale distributed generators and OLTC distribution transformers. Sustainable Energy, Grids and Networks, 2016, 8, 74-84. | 3.9 | 23 |
| 56 | Opportunities and Restrictions in Digitizing VAD Care. Journal of Heart and Lung Transplantation, 2016, 35, S348. | 0.6 | 0 |
| 57 | Dynamic Thermal Modeling of Voltage Divider Capacitive Coupling. IEEE Transactions on Power Delivery, 2016, 31, 1015-1025. | 4.3 | 2 |
| 58 | Analytical Switching Loss Model for Superjunction MOSFET With Capacitive Nonlinearities and Displacement Currents for DC-DC Power Converters. IEEE Transactions on Power Electronics, 2016, 31, 2485-2495. | 7.9 | 65 |
| 59 | LV distribution network voltage control mechanism: Analysis of large-scale field-test. Sustainable Energy, Grids and Networks, 2016, 6, 7-13. | 3.9 | 9 |
| 60 | An overview of large-scale stationary electricity storage plants in Europe: Current status and new developments. Renewable and Sustainable Energy Reviews, 2015, 52, 1212-1227. | 16.4 | 75 |
| 61 | Dynamic behavior of DC microgrids under load types and controlled-distributed energy resources. , 2015, , . | | 4 |
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| 70 | Locational Pricing to Mitigate Voltage Problems Caused by High PV Penetration. Energies, 2015, 8, 4607-4628. | 3.1 | 12 |
| 71 | Anticoagulation for VAD Patients: Can We Implement an Algorithm for Home Management Safely?. Journal of Heart and Lung Transplantation, 2015, 34, S235. | 0.6 | 0 |
| 72 | Evolution of Depressive Symptomatology and Caregiver Burden in Partners of LVAD Patients. Journal of Heart and Lung Transplantation, 2015, 34, S23-S24. | 0.6 | 1 |

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| 74 | Active participation of wind power in operating reserves. IET Renewable Power Generation, 2015, 9, 566-575. | 3.1 | 18 |
| 75 | Reactive power support in residential LV distribution grids through electric vehicle charging. Sustainable Energy, Grids and Networks, 2015, 3, 24-35. | 3.9 | 64 |
| 76 | MatLVDC: A new open source Matlab toolbox to simulate DC networks including power electronic converters and distributed energy resources. , 2015, , . | | 2 |
| 77 | Voltage regulation strategies for flemish LV distribution grids utilizing single-phase PV inverters. , 2015, , . | | 3 |
| 78 | Wide input range high step-up converter for PV application. , 2015, , . | | 0 |
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| 83 | PMSM Drive Current and Voltage Limiting as a Constraint Optimal Control Problem. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2015, 3, 326-338. | 5.4 | 90 |
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| 92 | Design of an intra-module DC-DC converter for PV application: Design considerations and prototype. , 2014, , . | | 4 |
| 93 | Dynamic operating reserve strategies for wind power integration. IET Renewable Power Generation, 2014, 8, 598-610. | 3.1 | 26 |
| 94 | Modeling the dynamics of a DC distribution grid integrated of renewable energy sources. , 2014, , . | | 7 |
| 95 | Variable speed genset with full rated power converter using readily available industrial products. , 2014, , . | | 4 |
| 96 | Multiagent Charging of Electric Vehicles Respecting Distribution Transformer Loading and Voltage Limits. IEEE Transactions on Smart Grid, 2014, 5, 2857-2867. | 9.0 | 67 |
| 97 | Impact of Electric Vehicle On-Board Single-Phase Charging Strategies on a Flemish Residential Grid. IEEE Transactions on Smart Grid, 2014, 5, 1815-1822. | 9.0 | 115 |
| 98 | Electric Vehicle Charging in an Office Building Microgrid With Distributed Energy Resources. IEEE Transactions on Sustainable Energy, 2014, 5, 1389-1396. | 8.8 | 143 |
| 99 | Design Criteria for Electric Vehicle Fast Charge Infrastructure Based on Flemish Mobility Behavior. IEEE Transactions on Smart Grid, 2014, 5, 320-327. | 9.0 | 57 |
| 100 | Optimal ZVS Modulation of Single-Phase Single-Stage Bidirectional DAB AC-DC Converters. IEEE Transactions on Power Electronics, 2014, 29, 3954-3970. | 7.9 | 340 |
| 101 | Optimal Control of Traction Motor Drives Under Electrothermal Constraints. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 249-263. | 5.4 | 112 |
| 102 | Generic circuit partitioning method for efficient simulation of modular multilevel converter topologies. , 2014, , . | | 0 |
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| 104 | Combined Central and Local Active and Reactive Power Control of PV Inverters. IEEE Transactions on Sustainable Energy, 2014, 5, 776-784. | 8.8 | 212 |
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| 110 | LS-SVM-based on-load tap changer control for distribution networks with rooftop PV's. , 2013, , . | | 7 |
| 111 | Dynamic DC-link voltage adaptation for thermal management of traction drives. , 2013, , . | | 35 |
| 112 | Impact of current ripple on Li-ion battery ageing. , 2013, , . | | 20 |
| 113 | Developing engineering-oriented educational workshops within a student branch. , 2013, , . | | 0 |
| 114 | A Profile-Based Identification of Standby and Useless Electricity Consumption in Buildings. , 2013, , . | | 0 |
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| 117 | Revision of reserve requirements following wind power integration in island power systems. Renewable Energy, 2013, 50, 268-279. | 8.9 | 30 |
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| 124 | Multiobjective battery storage to improve PV integration in residential distribution grids. , 2013, , . | | 140 |
| 125 | Multi-objective design of a close-coupled inductor for a three-phase interleaved 140kW DC-DC converter. , 2013, , . | | 3 |
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| 132 | Development of an open-source smart energy house for K-12 education. , 2013, , . | | 3 |
| 133 | Implementation of a digital directional Fault Passage Indicator. , 2013, , . | | 2 |
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| 136 | Grid impact of voltage control and reactive power support by wind turbines equipped with direct-drive synchronous machines. , 2013, , . | | 0 |
| 137 | Electric and magnetic fields of two infinitely long parallel cylindrical conductors carrying a DC current. EPJ Applied Physics, 2013, 64, 24515. | 0.7 | 5 |
| 138 | Introducing smart grids in Flanders: The Linear project. , 2012, , . | | 0 |
| 139 | Damping controller design of TCSC based on wide-area monitoring and supplement torque components. , 2012, , . | | 1 |
| 140 | Basic sensitivity analysis of conversion losses in a DC microgrid. , 2012, , . | | 16 |
| 141 | Frequency support by wind power plants in isolated grids with varying generation mix. , 2012, , . | | 17 |
| 142 | Voltage droop charging of electric vehicles in a residential distribution feeder. , 2012, , . | | 30 |
| 143 | Synchronization and efficiency analysis of a direct-drive multi-motor application. , 2012, , . | | 11 |
| 144 | Accurately modelling of parasitics in power electronics circuits using an easy RLC-extraction method. , 2012, , . | | 1 |

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| 145 | Fault-tolerant topology of a grid-connected PV inverter coupled by a Scott transformer. , 2012, , . | | 8 |
| 146 | Grid Impact of Voltage Control and Reactive Power Support by Wind Turbines Equipped With Direct-Drive Synchronous Machines. IEEE Transactions on Sustainable Energy, 2012, 3, 890-898. | 8.8 | 33 |
| 147 | Direct Power Control of Series Converter of Unified Power-Flow Controller With Three-Level Neutral Point Clamped Converter. IEEE Transactions on Power Delivery, 2012, 27, 1772-1782. | 4.3 | 35 |
| 148 | The effect of dust deposition on photovoltaic modules. , 2012, , . | | 40 |
| 149 | Parameter identification of unknown radial grids for theft detection. , 2012, , . | | 23 |
| 150 | A case study of coordinated electric vehicle charging for peak shaving on a low voltage grid. , 2012, , . | | 30 |
| 151 | LV distribution network feeders in Belgium and power quality issues due to increasing PV penetration levels. , 2012, , . | | 39 |
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| 157 | Fault-tolerant operation of power converters in PHEVs coupled by a Scott transformer. , 2012, , . | | 1 |
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| 159 | Thermal effects due to environmental variables in photovoltaic cells. , 2012, , . | | 0 |
| 160 | Comparative evaluation of soft-switching, bidirectional, isolated AC/DC converter topologies. , 2012, , . | | 34 |
| 161 | Switching control strategy for full ZVS soft-switching operation of a Dual Active Bridge AC/DC converter. , 2012, , . | | 53 |
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| 163 | Electric vehicle impact assessment study based on data-logged vehicle and driver behavior. , 2011, , . | | 3 |
| 164 | Effectiveness of TCSC controllers using remote input signals for transient stability enhancement. , 2011, , . | | 6 |
| 165 | Switching control strategy to extend the ZVS operating range of a Dual Active Bridge AC/DC converter. , 2011, , . | | 29 |
| 166 | Grid impact indicators for active building simulation. , 2011, , . | | 18 |
| 167 | Analysis of the optimal battery sizing for plug-in hybrid and battery electric vehicles on the power consumption and V2G availability. , 2011, , . | | 5 |
| 168 | A 96% Efficient High-Frequency DC-DC Converter Using E-Mode GaN DHFETs on Si. IEEE Electron Device Letters, 2011, 32, 1370-1372. | 3.9 | 49 |
| 169 | Linking nanotechnology to gigawatts: Creating building blocks for smart PV modules. Progress in Photovoltaics: Research and Applications, 2011, 19, 772-780. | 8.1 | 9 |
| 170 | Assessment of imbalance settlement exemptions for offshore wind power generation in Belgium. Energy Policy, 2011, 39, 1486-1494. | 8.8 | 12 |
| 171 | The impact of vehicle-to-grid on the distribution grid. Electric Power Systems Research, 2011, 81, 185-192. | 3.6 | 348 |
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| 174 | Electricity supply, irregularities, and the prospect for solar energy and energy sustainability in Sub-Saharan Africa. Journal of Renewable and Sustainable Energy, 2010, 2, . | 2.0 | 15 |
| 175 | Iso efficiency contours as a concept to characterize variable speed drive efficiency. , 2010, , . | | 18 |
| 176 | Influence of power control strategies on the voltage profile in an islanded microgrid. , 2010, , . | | 1 |
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| 178 | Impact of wind turbines equipped with doubly-fed induction generators on distance relaying. , 2010, , . | | 19 |
| 179 | Direct power control for Universal Power Flow Controller series converter. , 2010, , . | | 3 |
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| 183 | Impact-analysis of the charging of plug-in hybrid vehicles on the production park in Belgium. , 2010, , . | | 40 |
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| 185 | Predictive Direct Torque Control for Flux and Torque Ripple Reduction. IEEE Transactions on Industrial Electronics, 2010, 57, 404-412. | 7.9 | 190 |
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| 187 | Numerical observability analysis of distribution systems. , 2010, , . | | 10 |
| 188 | Transient stability enhancement by TCSC controllers using remote input signals. , 2010, , . | | 3 |
| 189 | A high-efficiency, high-frequency boost converter using enhancement mode GaN DHFETs on silicon. , 2010, , . | | 27 |
| 190 | Asymmetric reserve power delivered by large wind power plants. , 2010, , . | | 5 |
| 191 | Balancing management mechanisms for intermittent power sources — A case study for wind power in Belgium. , 2009, , . | | 6 |
| 192 | Stochastic analysis of the impact of plug-in hybrid electric vehicles on the distribution grid. , 2009, , . | | 44 |
| 193 | Spatial hyperspectral image classification by prior segmentation. , 2009, , . | | 3 |
| 194 | Multi-objective planning framework for stochastic and controllable distributed energy resources. IET Renewable Power Generation, 2009, 3, 227. | 3.1 | 83 |
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| 196 | A Probabilistic Formulation of Load Margins in Power Systems With Stochastic Generation. IEEE Transactions on Power Systems, 2009, 24, 951-958. | 6.5 | 89 |
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| 201 | Applying Markov chains for the determination of the capacity credit of wind power. , 2009, , . | | 8 |
| 202 | Modelling earthing systems and cables with moment methods. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2009, 28, 989-1004. | 0.9 | 2 |
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