

Andrii Chub

List of Publications by Year in descending order

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docs citations

134
times ranked

1005
citing authors

#	ARTICLE	IF	CITATIONS
1	A Review of Galvanically Isolated Impedance-Source DC-DC Converters. IEEE Transactions on Power Electronics, 2016, 31, 2808-2828.	5.4	181
2	High-Performance Quasi-Z-Source Series Resonant DC-DC Converter for Photovoltaic Module-Level Power Electronics Applications. IEEE Transactions on Power Electronics, 2017, 32, 3634-3650.	5.4	92
3	Galvanically Isolated Quasi-Z-Source DC-DC Converter With a Novel ZVS and ZCS Technique. IEEE Transactions on Industrial Electronics, 2015, 62, 7547-7556.	5.2	67
4	Wear-Out Failure Analysis of an Impedance-Source PV Microinverter Based on System-Level Electrothermal Modeling. IEEE Transactions on Industrial Electronics, 2019, 66, 3914-3927.	5.2	67
5	Bidirectional DC-DC Converter for Modular Residential Battery Energy Storage Systems. IEEE Transactions on Industrial Electronics, 2020, 67, 1944-1955.	5.2	65
6	Wide Input Voltage Range Photovoltaic Microconverter With Reconfigurable Buck-Boost Switching Stage. IEEE Transactions on Industrial Electronics, 2017, 64, 5974-5983.	5.2	61
7	Solar Optiverter—A Novel Hybrid Approach to the Photovoltaic Module Level Power Electronics. IEEE Transactions on Industrial Electronics, 2019, 66, 3869-3880.	5.2	57
8	Multiphase Quasi-Z-Source DC-DC Converters for Residential Distributed Generation Systems. IEEE Transactions on Industrial Electronics, 2018, 65, 8361-8371.	5.2	52
9	High-Efficiency Single-Stage On-Board Charger for Electrical Vehicles. IEEE Transactions on Vehicular Technology, 2021, 70, 12581-12592.	3.9	50
10	Comparison of Performance of Phase-Shift and Asymmetrical Pulsewidth Modulation Techniques for the Novel Galvanically Isolated Buck-Boost DC-DC Converter for Photovoltaic Applications. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 624-637.	3.7	38
11	Utility-Scale Energy Storage Systems: Converters and Control. IEEE Industrial Electronics Magazine, 2020, 14, 32-52.	2.3	33
12	Novel Isolated Power Conditioning Unit for Micro Wind Turbine Applications. IEEE Transactions on Industrial Electronics, 2017, 64, 5984-5993.	5.2	30
13	Voltage Distortion Approach for Output Filter Design for Off-Grid and Grid-Connected PWM Inverters. Journal of Power Electronics, 2015, 15, 278-287.	0.9	29
14	Review of Isolated Matrix Inverters: Topologies, Modulation Methods and Applications. Energies, 2020, 13, 2394.	1.6	26
15	Bidirectional soft-switching dc-dc converter for battery energy storage systems. IET Power Electronics, 2018, 11, 2000-2009.	1.5	24
16	High Gain DC-AC High-Frequency Link Inverter With Improved Quasi-Resonant Modulation. IEEE Transactions on Industrial Electronics, 2022, 69, 1465-1476.	5.2	24
17	An Overview and Comprehensive Comparative Evaluation of Constant-Frequency Voltage Buck Control Methods for Series Resonant DC-DC Converters. IEEE Open Journal of the Industrial Electronics Society, 2021, 2, 65-79.	4.8	24
18	Full soft-switching high step-up current-fed DC-DC converters with reduced conduction losses. , 2015, , .		23

#	ARTICLE	IF	CITATIONS
19	DC Integration of Residential Photovoltaic Systems: A Survey. IEEE Access, 2022, 10, 66974-66991.	2.6	22
20	MPPT performance enhancement of low-cost PV microconverters. Solar Energy, 2019, 187, 156-166.	2.9	21
21	Single-switch galvanically isolated quasi-Z-source DC-DC converter. , 2015, , .		20
22	Full soft-switching bidirectional current-fed DC-DC converter. , 2015, , .		20
23	Experimental study of high step-up quasi-Z-source DC-DC converter with synchronous rectification. , 2015, , .		20
24	An MPPT Algorithm for PV Systems Based on a Simplified Photo-Diode Model. IEEE Access, 2021, 9, 33189-33202.	2.6	20
25	Quasi-Z-source half-bridge DC-DC converter for photovoltaic applications. , 2015, , .		19
26	Shade-tolerant photovoltaic microinverter with time adaptive seamless P-V curve sweep MPPT. , 2017, , .		19
27	Comprehensive Comparative Analysis of Impedance-Source Networks for DC and AC Application. Electronics (Switzerland), 2019, 8, 405.	1.8	19
28	Fault-Tolerant Bidirectional Series Resonant DC-DC Converter with Minimum Number of Components. , 2019, , .		19
29	Input-parallel output-series connection of isolated quasi-Z-source DC-DC converters. , 2014, , .		18
30	Single-Phase String Solar qZS-based Inverter: Example of Multi-Objective Optimization Design. IEEE Transactions on Industry Applications, 2021, 57, 3120-3130.	3.3	18
31	Evaluation of GaN HEMTs for high-voltage stage of isolated DC-DC converters. , 2016, , .		17
32	Switched-capacitor current-fed quasi-Z-source inverter. , 2014, , .		16
33	Multi-mode quasi-Z-source series resonant DC/DC converter for wide input voltage range applications. , 2016, , .		16
34	Topology-Morphing Photovoltaic Microconverter With Wide MPPT Voltage Window and Post-Fault Operation Capability. IEEE Access, 2020, 8, 153941-153955.	2.6	16
35	A Series Partial Power Converter Based on Dual Active Bridge Converter for Residential Battery Energy Storage System. , 2021, , .		16
36	Ultrawide Voltage Gain Range Microconverter for Integration of Silicon and Thin-Film Photovoltaic Modules in DC Microgrids. IEEE Transactions on Power Electronics, 2021, 36, 13763-13778.	5.4	15

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37	Feasibility study of Si and SiC MOSFETs in high-gain DC/DC converter for renewable energy applications. , 2013, , .		14
38	Boost half-bridge DC-DC converter with reconfigurable rectifier for ultra-wide input voltage range applications. , 2018, , .		14
39	Design for Accelerated Testing of DC-Link Capacitors in Photovoltaic Inverters Based on Mission Profiles. IEEE Transactions on Industry Applications, 2021, 57, 741-753.	3.3	14
40	Utility-Scale Energy Storage Systems: A Comprehensive Review of Their Applications, Challenges, and Future Directions. IEEE Industrial Electronics Magazine, 2021, 15, 17-27.	2.3	14
41	Reliability analysis of battery energy storage system for various stationary applications. Journal of Energy Storage, 2022, 50, 104217.	3.9	14
42	Galvanically isolated quasi-Z-source DC-DC converters with combined energy transfer for renewable energy sources integration. , 2015, , .		13
43	Asymmetrical quasi-Z-source half-bridge DC-DC converters. , 2015, , .		12
44	Full-soft-switching high step-up bidirectional isolated current-fed push-pull DC-DC converter for battery energy storage applications. , 2016, , .		12
45	Low-cost photovoltaic microinverter with ultra-wide MPPT voltage range. , 2017, , .		12
46	Snubberless boost full-bridge converters: Analysis of soft switching performance and limitations. International Journal of Circuit Theory and Applications, 2019, 47, 884-908.	1.3	12
47	Reliability Evaluation of Isolated Buck-Boost DC-DC Series Resonant Converter. IEEE Open Journal of Power Electronics, 2022, 3, 131-141.	4.0	12
48	Smart transformer universal operation. , 2018, , .		11
49	Bidirectional Soft Switching Current Source DC-DC Converter for Residential DC Microgrids. , 2018, , .		11
50	Input Voltage Range Extension Methods in the Series-Resonant DC-DC Converters. , 2019, , .		11
51	Sliding Mode Based Control of Dual Boost Inverter for Grid Connection. Energies, 2019, 12, 4241.	1.6	11
52	The DC Transformer Power Electronic Building Block: Powering Next-Generation Converter Design. IEEE Industrial Electronics Magazine, 2023, 17, 21-35.	2.3	11
53	Bidirectional Isolated Hexamode DC-DC Converter. IEEE Transactions on Power Electronics, 2022, 37, 12264-12278.	5.4	11
54	Impedance-source galvanically isolated DC/DC converters: State of the art and future challenges. , 2014, , .		10

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55	Novel family of quasi-Z-source DC/DC converters derived from current-fed push-pull converters. , 2014, , .		10
56	Hysteresis current control with distributed shoot-through states for impedance source inverters. International Journal of Circuit Theory and Applications, 2016, 44, 783-797.	1.3	10
57	Photovoltaic Energy Yield Improvement in Two-Stage Solar Microinverters. Energies, 2019, 12, 3774.	1.6	10
58	Study on power losses of the full soft-switching current-fed DC/DC converter with Si and GaN devices. , 2015, , .		9
59	Comparative Analysis of Semiconductor Power Losses of Galvanically Isolated Quasi-Z-Source and Full-Bridge Boost DC-DC Converters. Electrical, Control and Communication Engineering, 2015, 8, 5-12.	0.4	9
60	Improved switched-inductor quasi-switched-boost inverter with low input current ripple. , 2015, , .		9
61	Current sensorless control for half-bridge based AC/DC PFC converter with consideration of conduction losses. International Journal of Circuit Theory and Applications, 2016, 44, 2072-2084.	1.3	9
62	Analysis of Fault-Tolerant Operation Capabilities of an Isolated Bidirectional Current-Source DC-DC Converter. Energies, 2019, 12, 3203.	1.6	9
63	Step-Up Series Resonant DC-DC Converter with Bidirectional-Switch-Based Boost Rectifier for Wide Input Voltage Range Photovoltaic Applications. Energies, 2020, 13, 3747.	1.6	9
64	Full soft-switching bidirectional isolated current-fed dual inductor push-pull DC-DC converter for battery energy storage applications. , 2016, , .		8
65	Single-switch galvanically isolated step-up DC-DC converter for residential photovoltaic applications. , 2016, , .		8
66	Wide Input Voltage Range Operation of the Series Resonant DC-DC Converter with Bridgeless Boost Rectifier. Energies, 2020, 13, 4220.	1.6	8
67	DC Voltage Sensorless Predictive Control of a High-Efficiency PFC Single-Phase Rectifier Based on the Versatile Buck-Boost Converter. Sensors, 2021, 21, 5107.	2.1	8
68	Comparative Study of Rectifier Topologies for Quasi-Z-Source Derived Push-Pull Converter. Elektronika Ir Elektrotechnika, 2014, 20, .	0.4	8
69	Implementation of Global Maximum Power Point Tracking in Photovoltaic Microconverters: A Survey of Challenges and Opportunities. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2023, 11, 2259-2280.	3.7	8
70	An Efficient Non-Inverting Buck-Boost Converter with Improved Step Up/Down Ability. Energies, 2022, 15, 4550.	1.6	8
71	Zero-voltage switching galvanically isolated current-fed full-bridge DC-DC converter. , 2016, , .		7
72	Impact of Transformer Turns Ratio on the Power Losses and Efficiency of the Wide Range Isolated Buck-Boost Converter for Photovoltaic Applications. Energies, 2020, 13, 5645.	1.6	7

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73	Topology Morphing Control with Soft Transients for Multimode Series Resonant DC-DC Converter. , 2021, , .		7
74	Grid integration issues of PMSG-based residential wind turbines. , 2014, , .		6
75	Analysis of buck mode realization possibilities in quasi-Z-source DC-DC converters with voltage doubler rectifier. , 2015, , .		6
76	Quadratic boost A-source impedance network. , 2016, , .		6
77	Mission Profile-based Accelerated Testing of DC-link Capacitors in Photovoltaic Inverters. , 2019, , .		6
78	Performance Improvement of PWM Control Methods for Voltage Step-Down in Series Resonant DC-DC Converters. Energies, 2020, 13, 4569.	1.6	6
79	Dual-mode magnetically integrated photovoltaic microconverter with adaptive mode change and global maximum power point tracking. IET Renewable Power Generation, 2021, 15, 86-98.	1.7	6
80	Accelerated Global MPPT for Multimode Series Resonant DC-DC Converter. , 2021, , .		6
81	New High-Gain Non-Inverting Buck-Boost Converter. , 2021, , .		6
82	Efficiency Improvement of Step-Up Series Resonant DC-DC Converter in Buck Operating Mode. , 2020, , .		6
83	Buck-Boost Resonant Z-Source Parital Power Converter. , 2022, , .		6
84	Steady-state analysis of qZS-derived push-pull DC/DC converter with wide input voltage regulation range. , 2013, , .		5
85	Efficiency improvement from topology modification of the single-switch isolated quasi-Z-source DC-DC converter. , 2016, , .		5
86	Input-parallel output-series cascading possibilities of single-switch galvanically isolated quasi-Z-source DC-DC converters. , 2016, , .		5
87	Magnetically integrated high step-up resonant DC-DC converter for distributed photovoltaic systems. , 2017, , .		5
88	Analysis and design of asymmetric quad-active-bridge converter. , 2017, , .		5
89	Maximizing energy harvest of the impedance source PV microconverter under partial shading conditions. , 2018, , .		5
90	Asymmetric snubberless current-fed full-bridge isolated DC-DC converters. Electrical, Control and Communication Engineering, 2018, 14, 5-11.	0.4	5

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91	Comparison and verification of boost control methods for full soft-switching bidirectional current-fed isolated full-bridge DC-DC converter. , 2016, , .		4
92	Asymmetrical PWM control of galvanically isolated impedance-source series resonant DC-DC converters. , 2016, , .		4
93	Multiphase galvanically isolated impedance-source DC-DC converter for residential renewable energy applications. , 2017, , .		4
94	Evaluation of low-and high-voltage GaN transistors in soft-switching DC-DC converter. , 2017, , .		4
95	Single-Switch Impedance-Source Galvanically Isolated DC-DC Converter with Combined Energy Transfer. , 2018, , .		4
96	Three-Mode Reconfigurable Rectifier for DC-DC Converters with Wide Input Voltage Range. , 2019, , .		4
97	Reliability Study of Input Side Capacitors in Impedance-Source PV Microconverters. , 2019, , .		4
98	Voltage Gain Extension Techniques for High Step-Up Galvanically Isolated DC-DC Converters. , 2020, , .		4
99	Reverse power flow control possibilities of galvanically isolated impedance-source DC-DC converters. , 2017, , .		3
100	Sheppard-Taylor isolated high boost DC-DC converter. , 2017, , .		3
101	Reliability evaluation of an impedance-source PV microconverter. , 2018, , .		3
102	Wear-Out Failure Analysis of Solar Optiverter Operating with 60- and 72-Cell Si Crystalline PV Modules. , 2018, , .		3
103	Wide Input Voltage Range High Step-Up DC-DC Converter with Fault-Tolerant Operation Capability. , 2019, , .		3
104	Improved Modulation Method for Full-Bridge AC-DC HF-Link Converter. , 2020, , .		3
105	Three-Port Flyback Converter for Photovoltaic Module Integration in Bipolar DC Microgrids. , 2020, , .		3
106	Wide-Range Operation of High Step-Up DC-DC Converters with Multimode Rectifiers. Electronics (Switzerland), 2021, 10, 914.	1.8	3
107	Effect of Mission Profile Resolution on Photovoltaic Energy Yield Prediction in Python and MATLAB. , 2021, , .		3
108	Photovoltaic Microconverter with Integrated Sub-Modular Power Optimizer. , 2021, , .		3

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109	Application of Cycle Skipping Modulation in Buck-Boost Photovoltaic Microconverters. IEEE Transactions on Industry Applications, 2022, 58, 4804-4815.	3.3	3
110	High-Frequency Split-Bobbin Transformer Design with Adjustable Leakage Inductance. , 2021, , .		3
111	Passive modular structure of a SEPIC based DC/DC converter. , 2014, , .		2
112	Design of Multiphase Single-Switch Impedance-Source Converters. , 2018, , .		2
113	Versatile Power Electronic Building Block for Residential DC Microgrids. , 2018, , .		2
114	Wide Range Series Resonant DC-DC Converter with a Reduced Component Count and Capacitor Voltage Stress for Distributed Generation. Energies, 2021, 14, 2051.	1.6	2
115	An Embedded Half-Bridge Z-Source Inverter with Reduced Voltage Stress on Capacitors. Energies, 2021, 14, 6433.	1.6	2
116	Reliability of DC-link Capacitors in Two-Stage Micro-Inverters Under Different PV Module Sizes. , 2019, , .		2
117	Hybrid DC-DC Converters with Topology Morphing Control and Post-fault Operation Capability. Lecture Notes in Electrical Engineering, 2020, , 433-445.	0.3	2
118	Mitigation of pulsed power load effect on power system using FLC-SMES. Energy Reports, 2022, 8, 463-471.	2.5	2
119	Series Resonant DC-DC Converter with Single-Switch Full-Bridge Boost Rectifier Operating at Fixed Switching Frequency. , 2020, , .		2
120	Short-Circuit Fault Detection and Remedial in Full-Bridge Rectifier of Series Resonant DC-DC Converter Based on Inductor Voltage Signature. , 2020, , .		2
121	Single-Stage Series-Connected Isolated Converters for MVAC to DC Applications. , 2022, , .		2
122	Feasibility study of cascading of full soft-switching current-fed naturally clamped DC-DC converters. , 2016, , .		1
123	A three-phase full soft-switching current-fed naturally clamped DC-DC converter for high-power fuel cell applications. , 2016, , .		1
124	Energy Yield Assessment Methodology for Photovoltaic Microinverters. , 2019, , .		1
125	Light-Load Efficiency Improvement of Galvanically Isolated Quasi-Z-Source DC-DC Converter for Photovoltaic Applications. , 2020, , .		1
126	Topology Morphing Control of Low-Cost PV Microconverters. , 2021, , .		1

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127	Series Resonant DC-DC Converter with an AC-Switch-Based Full-Bridge Boost Rectifier. , 2021, , .		1
128	Step-Up Series-Resonant DC-DC Converter with Switched Mode Rectifier Operating at Fixed Switching Frequency. , 2020, , .		1
129	Simulation Study of Nonlinear PI-Controller with Quasi-Z-Source Derived Push-Pull Converter. Electrical, Control and Communication Engineering, 2013, 4, 26-31.	0.4	0
130	A three-phase full soft-switching current-fed naturally clamped DC-DC converter for high-power energy storage applications. , 2016, , .		0
131	Modified High Voltage Gain Soft-Switched Quasi-Switched Boost Inverter. , 2019, , .		0
132	Zero-Current Switching Impedance-Source DC-DC Converter. , 2019, , .		0
133	Fault-Tolerant Approach for Photovoltaic Module-Level Power Electronic Applications. , 2020, , .		0
134	Application of Boundary Conduction Mode Control in Galvanically Isolated Buck-Boost Converter. , 2022, , .		0