

Khurram Afridi

List of Publications by Year in descending order

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docs citations

117
times ranked

1104
citing authors

#	ARTICLE	IF	CITATIONS
1	Stacked Switched Capacitor Energy Buffer Architecture. IEEE Transactions on Power Electronics, 2013, 28, 5183-5195.	5.4	89
2	A Systematic Approach to Modeling Impedances and Current Distribution in Planar Magnetics. IEEE Transactions on Power Electronics, 2016, 31, 560-580.	5.4	83
3	Investigation of power transfer density enhancement in large air-gap capacitive wireless power transfer systems. , 2015, , .		79
4	A New Design Approach to Mitigating the Effect of Parasitics in Capacitive Wireless Power Transfer Systems for Electric Vehicle Charging. IEEE Transactions on Transportation Electrification, 2019, 5, 1040-1059.	5.3	79
5	Variable Frequency Multiplier Technique for High-Efficiency Conversion Over a Wide Operating Range. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2016, 4, 335-343.	3.7	71
6	Design of Class E Resonant Rectifiers and Diode Evaluation for VHF Power Conversion. IEEE Transactions on Power Electronics, 2015, 30, 4960-4972.	5.4	55
7	High Efficiency Resonant DC/DC Converter Utilizing a Resistance Compression Network. IEEE Transactions on Power Electronics, 2014, 29, 4126-4135.	5.4	54
8	Multitrack Power Conversion Architecture. IEEE Transactions on Power Electronics, 2017, 32, 325-340.	5.4	54
9	High-performance large air-gap capacitive wireless power transfer system for electric vehicle charging. , 2017, , .		53
10	High-power-transfer-density capacitive wireless power transfer system for electric vehicle charging. , 2017, , .		52
11	High-Performance Multi-MHz Capacitive Wireless Power Transfer System for EV Charging Utilizing Interleaved-Foil Coupled Inductors. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 35-51.	3.7	48
12	Optimal Design of Grid-Connected PEV Charging Systems With Integrated Distributed Resources. IEEE Transactions on Smart Grid, 2013, 4, 956-967.	6.2	47
13	Impedance Control Network Resonant dc-dc Converter for Wide-Range High-Efficiency Operation. IEEE Transactions on Power Electronics, 2015, , 1-1.	5.4	46
14	E-Mobility " Advances and Challenges. IEEE Access, 2019, 7, 165226-165240.	2.6	45
15	Design of efficient matching networks for capacitive wireless power transfer systems. , 2016, , .		44
16	High-Performance 13.56-MHz Large Air-Gap Capacitive Wireless Power Transfer System for Electric Vehicle Charging. , 2018, , .		43
17	Improved Design Optimization for High-Efficiency Matching Networks. IEEE Transactions on Power Electronics, 2018, 33, 37-50.	5.4	42
18	Kilowatt-scale large air-gap multi-modular capacitive wireless power transfer system for electric vehicle charging. , 2018, , .		41

#	ARTICLE	IF	CITATIONS
19	Design of High-Efficiency Matching Networks for Capacitive Wireless Power Transfer Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 104-127.	3.7	37
20	GaN-Based High-Power-Density AC-DC AC Converter for Single-Phase Transformerless Online Uninterruptible Power Supply. IEEE Transactions on Power Electronics, 2021, 36, 13968-13984.	5.4	36
21	A Multilevel Energy Buffer and Voltage Modulator for Grid-Interfaced Microinverters. IEEE Transactions on Power Electronics, 2015, 30, 1203-1219.	5.4	33
22	An empirical analysis of the hydropower portfolio in Pakistan. Energy Policy, 2012, 50, 228-241.	4.2	32
23	High-Performance Capacitive Wireless Power Transfer System for Electric Vehicle Charging with Enhanced Coupling Plate Design. , 2018, , .		32
24	Design tradeoffs in a multi-modular capacitive wireless power transfer system. , 2016, , .		31
25	Near-field capacitive wireless power transfer array with external field cancellation. , 2016, , .		31
26	Enhanced Bipolar Stacked Switched Capacitor Energy Buffers. IEEE Transactions on Industry Applications, 2014, 50, 1141-1149.	3.3	28
27	Active Variable Reactance Rectifier—A New Approach to Compensating for Coupling Variations in Wireless Power Transfer Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 2022-2040.	3.7	28
28	Step-Down Impedance Control Network Resonant DC-DC Converter Utilizing an Enhanced Phase-Shift Control for Wide-Input-Range Operation. IEEE Transactions on Industry Applications, 2018, 54, 4523-4536.	3.3	26
29	Energy Density Enhancement of Stacked Switched Capacitor Energy Buffers Through Capacitance Ratio Optimization. IEEE Transactions on Power Electronics, 2017, 32, 6363-6380.	5.4	25
30	High-Performance Megahertz-Frequency Resonant DC-DC Converter for Automotive LED Driver Applications. IEEE Transactions on Power Electronics, 2020, 35, 10396-10412.	5.4	24
31	A high-frequency inverter architecture for providing variable compensation in wireless power transfer systems. , 2018, , .		23
32	High-Efficiency High-Power-Transfer-Density Capacitive Wireless Power Transfer System for Electric Vehicle Charging Utilizing Semi-Toroidal Interleaved-Foil Coupled Inductors. , 2019, , .		23
33	Multi-objective optimization of capacitive wireless power transfer systems for electric vehicle charging. , 2017, , .		21
34	A very-high-power-transfer-density GaN-based capacitive wireless power transfer system. , 2017, , .		21
35	Active variable reactance rectifier — A new approach to compensating for coupling variations in wireless power transfer systems. , 2017, , .		20
36	A Compact Electrolytic-Free Two-Stage Universal Input Offline LED Driver With Volume-Optimized SSC Energy Buffer. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2018, 6, 1116-1130.	3.7	20

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37	An electrolytic-free offline LED driver with a ceramic-capacitor-based compact SSC energy buffer. , 2014, , .		19
38	Impedance control network resonant step-down DC-DC converter architecture. , 2015, , .		19
39	High power transfer density and high efficiency 100 MHz capacitive wireless power transfer system. , 2015, , .		19
40	GaN-Based High-Power-Density Electrolytic-Free Universal Input LED Driver. IEEE Transactions on Industry Applications, 2018, 54, 3890-3901.	3.3	19
41	Design and Evaluation of a Reconfigurable Stacked Active Bridge DC-DC Converter for Efficient Wide Load Range Operation. IEEE Transactions on Power Electronics, 2018, 33, 10428-10448.	5.4	18
42	A Single-Stage Isolated AC-DC Converter Based on the Impedance Control Network Architecture. IEEE Transactions on Power Electronics, 2021, 36, 10366-10382.	5.4	18
43	Single-stage isolated 48V-to-1.8V point-of-load converter utilizing an impedance control network and integrated magnetic structures. , 2017, , .		16
44	Improved design optimization of efficient matching networks for capacitive wireless power transfer systems. , 2018, , .		15
45	Megahertz-frequency isolated resonant dc-dc converter using impedance control network for high-efficiency wide-range operation. , 2015, , .		13
46	High power density impedance control network DC-DC converter utilizing an integrated magnetic structure. , 2016, , .		13
47	A high power density single-phase inverter using stacked switched capacitor energy buffer. , 2016, , .		13
48	High-Efficiency Impedance Control Network Resonant DC-DC Converter With Optimized Startup Control. IEEE Transactions on Industry Applications, 2017, 53, 3880-3889.	3.3	13
49	A 3.75-kW High-Power-Transfer-Density Capacitive Wireless Charging System for EVs Utilizing Toroidal-Interleaved-Foil Coupled Inductors. , 2020, , .		13
50	Impedance control network resonant dc-dc converter for wide-range high-efficiency operation. , 2015, , .		12
51	Enhanced-accuracy augmented state-space approach to steady-state modeling of resonant converters. , 2015, , .		12
52	Power Density and Efficiency Enhancement in ICN DC-DC Converters Using Topology Morphing Control. IEEE Transactions on Power Electronics, 2019, 34, 1881-1900.	5.4	12
53	Design of resistive-input class E resonant rectifiers for variable-power operation. , 2013, , .		11
54	A multilevel energy buffer and voltage modulator for grid-interfaced micro-inverters. , 2013, , .		11

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55	High efficiency resonant dc/dc converter utilizing a resistance compression network. , 2013, , .		11
56	Energy density enhancement of unipolar SSC energy buffers through capacitance ratio optimization. , 2014, , .		11
57	Improved capacitance ratio optimization methodology for stacked switched capacitor energy buffers. , 2015, , .		10
58	High efficiency impedance control network resonant DC-DC converter with optimized startup control. , 2015, , .		10
59	A Large Air-Gap Multi-MHz Capacitive Wireless Power Transfer System Using Compact Charging Pads. , 2021, , .		10
60	New design methodology for megahertz-frequency resonant dc-dc converters using impedance control network architecture. , 2016, , .		9
61	High-frequency ZVS Āuk converter for automotive LED driver applications using planar integrated magnetics. , 2017, , .		9
62	Impact of Foreign Objects on the Performance of Capacitive Wireless Charging Systems for Electric Vehicles. , 2018, , .		9
63	Reduced-Fringing-Field Multi-MHz Capacitive Wireless Power Transfer System Utilizing a Metasurface-based Coupler. , 2020, , .		9
64	A 50-MHz Multi-kV Power Amplifier for Ion-Beam Accelerator Utilizing an Optimized Toroidal Inductor. , 2020, , .		9
65	A compact electrolytic-free two-stage universal input offline LED driver. , 2016, , .		8
66	GaN-based high-power-density electrolytic-free universal input LED driver. , 2017, , .		8
67	A High-Power-Density Electrolytic-Free Offline LED Driver Utilizing a Merged Energy Buffer Architecture. , 2019, , .		8
68	Challenges and Solutions to Passive Rectification in Multi-MHz Frequency Capacitive Wireless Power Transfer Systems for Electric Vehicle Charging. , 2020, , .		8
69	Optimal design of grid-interfaced EV chargers with integrated generation. , 2012, , .		7
70	Power density and efficiency enhancement in impedance control network resonant DC-DC converters using topology morphing control. , 2016, , .		7
71	Capacitive wireless powering for electric vehicles with near-field phased arrays. , 2017, , .		7
72	Single-stage isolated 48V-to-1.8V point-of-load converter utilizing an impedance control network for wide input range operation. , 2017, , .		7

#	ARTICLE	IF	CITATIONS
73	High-Performance Single-Stage Isolated 48V-to-1.8V Point-of-Load Converter Utilizing Impedance Control Network and Distributed Transformer. , 2018, , .		7
74	High-Performance Single-Stage Universal-Input Isolated AC-DC Converter Utilizing an Impedance Control Network. , 2020, , .		7
75	Comparison of Large Air-Gap Inductive and Capacitive Wireless Power Transfer Systems. , 2021, , .		7
76	Beam power scale-up in micro-electromechanical systems based multi-beam ion accelerators. Review of Scientific Instruments, 2021, 92, 103301.	0.6	7
77	Theoretical Limits of Power Transfer in Capacitive Wireless Charging Systems. , 2020, , .		7
78	Broadly-Applicable Accurate Analytical Steady-State Model for Class-E Inverters. , 2021, , .		7
79	A step-superposition based analysis approach to modeling resonant converters. , 2015, , .		6
80	Step-down impedance control network resonant DC-DC converter utilizing an enhanced phase-shift control for wide-input-range operation. , 2016, , .		6
81	A control architecture for low current distortion in bridgeless boost power factor correction rectifiers. , 2017, , .		6
82	A Step-Superposition-Based Analysis Approach to Modeling Resonant Converters. IEEE Transactions on Power Electronics, 2018, 33, 7148-7165.	5.4	6
83	A High-Power-Density High-Efficiency Three-Level Buck Converter for Cellphone Battery Charging Applications. , 2018, , .		6
84	A High-Frequency LCLC Network Based Resonant DC-DC Converter for Automotive LED Driver Applications. , 2018, , .		6
85	Control of a Merged-Energy-Buffer based Two-Stage Electrolytic-Free Offline LED Driver. , 2019, , .		6
86	Control of a GaN-Based High-Power-Density Single-Phase Online Uninterruptible Power Supply. , 2019, , .		6
87	An Impedance Control Network based Single-Stage Universal-Input Isolated AC-DC Converter Utilizing Reconfigurable Inverters. , 2021, , .		6
88	Enhanced bipolar Stacked Switched Capacitor energy buffers. , 2012, , .		5
89	Design of Class E resonant rectifiers and diode evaluation for VHF power conversion. , 2014, , .		5
90	Improved design optimization approach for high efficiency matching networks. , 2016, , .		5

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91	Closed-Loop Control of LCL-T Resonant DC-DC Converter Operating as Automotive LED Driver. , 2019, , .		5
92	A New Approach to Steady-State Modeling, Analysis, and Design of Power Converters. IEEE Transactions on Power Electronics, 2021, 36, 12746-12768.	5.4	5
93	The future of electric vehicle charging infrastructure. Nature Electronics, 2022, 5, 62-64.	13.1	5
94	A High-Power-Density High-Efficiency Soft-Switched Single-Phase Universal Input to 28-V Isolated AC-DC Converter Module Designed for Paralleled Operation. IEEE Transactions on Power Electronics, 2022, 37, 8262-8280.	5.4	5
95	Applicability and limitations of an M2Spice-assisted "coplanar-magnetics-in-the-circuit" simulation approach. , 2016, , .		4
96	Closed-loop Control of a Dynamic Capacitive Wireless Power Transfer System. , 2019, , .		4
97	Control Strategies for Complete Soft-Switching of ICN Converters. , 2021, , .		4
98	Power Factor Enhancement of a Soft-Switched Common-Neutral Single-DC-Bus Power Converter. , 2020, , .		4
99	Stacked switched capacitor energy buffer architecture. , 2012, , .		3
100	A Multi-MHz Large Air-gap Capacitive Wireless Power Transfer System Utilizing an Active Variable Reactance Rectifier Suitable for Dynamic Electric Vehicle Charging. , 2019, , .		3
101	A 27.12-MHz 10-kV Power Amplifier for Compact Particle Accelerators Utilizing an Optimized. , 2020, , .		3
102	Composite Hybrid Energy Storage System utilizing Capacitive Coupling for Hybrid and Electric Vehicles. , 2021, , .		3
103	Optimized Design of High-Efficiency Immittance Matching Networks for Capacitive Wireless Power Transfer Systems. , 2021, , .		3
104	Performance Enhancement of ICN-Based Single-Stage AC-DC Converters Using Reconfigurable Inverters. IEEE Transactions on Power Electronics, 2022, 37, 8217-8231.	5.4	3
105	Feedforward-Enhanced Feedback Control of Output Voltage of a GaN-Based High-Power-Density Single-Phase Transformer-Less Online UPS. , 2022, , .		3
106	High-Power-Density GaN-Based Single-Phase Online Uninterruptible Power Supply. , 2019, , .		2
107	Energy Density Enhancement of a Merged-Energy-Buffer-based Two-Stage AC-DC Converter. , 2020, , .		2
108	Multi-MHz Multi-kV Power Amplifier for Compact Particle Accelerators. , 2020, , .		2

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109	Methodology for the optimal design of PEV charging systems with multiple chargers and distributed resources. , 2013, , .		1
110	Closed-loop control of impedance control network resonant DC-DC converter. , 2017, , .		1
111	Control Strategy and Energy Density Enhancement Methodology for Merged Energy Buffer-based AC-DC Converters. , 2020, , .		1
112	Roadway Embeddable Multi-MHz Capacitive Wireless Charging System with Matching Network Realized using Wiring Parasitics. , 2021, , .		1
113	Multimode Topology Morphing Control of Impedance Control Network Resonant DC-DC Converters. , 2018, , .		0
114	A Variable Compensation Inverter Rectifier (VCIR) based Approach to Compensate for Coupling Variations in Wireless Power Transfer Systems. , 2021, , .		0
115	Control Techniques for a Current-Mode-Controlled Merged-Energy-Buffer-based Two-Stage Electrolytic-Free Offline LED Driver. , 2021, , .		0
116	An Active Voltage Balancing Strategy for Stacked-Inverter ICN Converters. , 2021, , .		0