HÃ©ctor Sarnago

List of Publications by Year
in descending order

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81	1,518	279798	330143
papers	citations	23 h-index	37 g-index

82	82	82	861
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Heat Management in Power Converters: From State of the Art to Future Ultrahigh Efficiency Systems. IEEE Transactions on Power Electronics, 2016, 31, 7896-7908.	7.9	117
2	Class-D/DE Dual-Mode-Operation Resonant Converter for Improved-Efficiency Domestic Induction Heating System. IEEE Transactions on Power Electronics, 2013, 28, 1274-1285.	7.9	102
3	Design of Home Appliances for a DC-Based Nanogrid System: An Induction Range Study Case. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2013, 1, 315-326.	5.4	76
4	High Efficiency ACâ€“AC Power Electronic Converter Applied to Domestic Induction Heating. IEEE Transactions on Power Electronics, 2012, 27, 3676-3684.	7.9	75
5	Design and Implementation of a High-Efficiency Multiple-Output Resonant Converter for Induction Heating Applications Featuring Wide Bandgap Devices. IEEE Transactions on Power Electronics, 2014, 29, 2539-2549.	7.9	70
6	Modulation Scheme for Improved Operation of an RB-IGBT-Based Resonant Inverter Applied to Domestic Induction Heating. IEEE Transactions on Industrial Electronics, 2013, 60, 2066-2073.	7.9	68
7	Direct ACâ€“AC Resonant Boost Converter for Efficient Domestic Induction Heating Applications. IEEE Transactions on Power Electronics, 2014, 29, 1128-1139.	7.9	67
8	A Class-E Direct ACâ€“AC Converter With Multicycle Modulation for Induction Heating Systems. IEEE Transactions on Industrial Electronics, 2014, 61, 2521-2530.	7.9	63
9	Deep Learning-Based Model Predictive Control for Resonant Power Converters. IEEE Transactions on Industrial Informatics, 2021, 17, 409-420.	11.3	59
10	Analytical Model of the Half-Bridge Series Resonant Inverter for Improved Power Conversion Efficiency and Performance. IEEE Transactions on Power Electronics, 2015, 30, 4128-4143.	7.9	52
11	Dual-Output Boost Resonant Full-Bridge Topology and its Modulation Strategies for High-Performance Induction Heating Applications. IEEE Transactions on Industrial Electronics, 2016, 63, 3554-3561.	7.9	48
12	Efficient and Cost-Effective ZCS Direct ACâ€“AC Resonant Converter for Induction Heating. IEEE Transactions on Industrial Electronics, 2014, 61, 2546-2555.	7.9	45
13	A Comparative Evaluation of SiC Power Devices for High-Performance Domestic Induction Heating. IEEE Transactions on Industrial Electronics, 2015, 62, 4795-4804.	7.9	44
14	A Versatile Resonant Tank Identification Methodology for Induction Heating Systems. IEEE Transactions on Power Electronics, 2018, 33, 1897-1901.	7.9	40
15	Multi-MOSFET-Based Series Resonant Inverter for Improved Efficiency and Power Density Induction Heating Applications. IEEE Transactions on Power Electronics, 2014, 29, 4301-4312.	7.9	36
16	Design and Experimental Analysis of PFC Rectifiers for Domestic Induction Heating Applications. IEEE Transactions on Power Electronics, 2018, 33, 6582-6594.	7.9	33
17	A Versatile Multilevel Converter Platform for Cancer Treatment Using Irreversible Electroporation. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2016, 4, 236-242.	5.4	32
18	Highâ€efficiency parallel quasiâ€resonant current source inverter featuring SiC metalâ€oxide semiconductor fieldâ€effect transistors for induction heating systems with coupled inductors. IET Power Electronics, 2013, 6, 183-191.	2.1	30

#	Article	IF	Citations
19	Improved Operation of SiCâ€“BJT-Based Series Resonant Inverter With Optimized Base Drive. IEEE Transactions on Power Electronics, 2014, 29, 5097-5101.	7.9	30
20	Interleaved Resonant Boost Inverter Featuring SiC Module for High-Performance Induction Heating. IEEE Transactions on Power Electronics, 2017, 32, 1018-1029.	7.9	28
21	Deep Learning-Based Magnetic Coupling Detection for Advanced Induction Heating Appliances. IEEE Access, 2019, 7, 181668-181677.	4.2	28
22	Multiple-Output ZVS Resonant Inverter Architecture for Flexible Induction Heating Appliances. IEEE Access, 2019, 7, 157046-157056.	4.2	27
23	FPGA-Based Resonant Load Identification Technique for Flexible Induction Heating Appliances. IEEE Transactions on Industrial Electronics, 2018, 65, 9421-9428.	7.9	25
24	Industrial Electronics for Biomedicine: A New Cancer Treatment Using Electroporation. IEEE Industrial Electronics Magazine, 2019, 13, 6-18.	2.6	23
25	High-Performance and Cost-Effective ZCS Matrix Resonant Inverter for Total Active Surface Induction Heating Appliances. IEEE Transactions on Power Electronics, 2019, 34, 117-125.	7.9	22
26	Successful Tumor Electrochemotherapy Using Sine Waves. IEEE Transactions on Biomedical Engineering, 2020, 67, 1040-1049.	4.2	19
27	GaN-Based Versatile Waveform Generator for Biomedical Applications of Electroporation. IEEE Access, 2020, 8, 97196-97203.	4.2	16
28	Soft-Stop Optimal Trajectory Control for Improved Performance of the Series-Resonant Multiinverter for Domestic Induction Heating Applications. IEEE Transactions on Industrial Electronics, 2015, 62, 6251-6259.	7.9	15
29	Multiresonant Power Converter for Improved Dual-Frequency Induction Heating. IEEE Transactions on Power Electronics, 2019, 34, 2097-2103.	7.9	15
30	Analytical Formulation of Copper Loss of Litz Wire With Multiple Levels of Twisting Using Measurable Parameters. IEEE Transactions on Industry Applications, 2021, 57, 2407-2420.	4.9	15
31	Real-Time Impedance Monitoring During Electroporation Processes in Vegetal Tissue Using a High-Performance Generator. Sensors, 2020, 20, 3158.	3.8	12
32	A Versatile Large-Signal High-Frequency Arbitrary Waveform Generator Using GaN Devices. , 2019, , .		11
33	Multiphase PFC Rectifier and Modulation Strategies for Domestic Induction Heating Applications. IEEE Transactions on Industrial Electronics, 2021, 68, 6424-6433.	7.9	11
34	Design of power converters for induction heating applications taking advantage of wide-bandgap semiconductors. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2017, 36, 483-488.	0.9	10
35	High-Frequency GaN-Based Induction Heating Versatile Module for Flexible Cooking Surfaces. , 2019, , .		9
36	Operating Conditions Monitoring for High Power Density and Cost-Effective Resonant Power Converters. IEEE Transactions on Power Electronics, 2016, 31, 488-496.	7.9	8

#	Article	IF	Citations
37	Simple Fully Analytical Copper Loss Model of Litz Wire Made of Strands Twisted in Multiple Levels. , 2019, , .		8
38	Multiple-output boost resonant inverter for high efficiency and cost-effective induction heating applications. , 2016, , .		7
39	Multiple-output ZCS resonant inverter for multi-coil induction heating appliances. , 2017, , .		7
40	High performance boost inverter featuring GaN-based devices for electro surgical units. , 2017, , .		7
41	Advanced induction heating appliances using high-voltage GaN gate injection transistors. , 2015, , .		6
42	Soft-transient modulation strategy for improved efficiency and EMC performance of PFC converters applied to flexible induction heating appliances. , 2018, , .		6
43	Mains-Synchronized Pulse Density Modulation Strategy Applied to a ZVS Resonant Matrix Inverter. IEEE Transactions on Industrial Electronics, 2021, 68, 10835-10844.	7.9	6
44	Hybrid full/half wave inverter designed for low cost induction heating appliances. , 2011, , .		5
45	Full-bridge series resonant multi-inverter featuring new 900-V SiC devices for improved induction heating appliances. , 2016, , .		5
46	Induction Heating. , 2018, , 265-287.		5
47	Asymmetrical Noncomplementary Modulation Strategies for Independent Power Control in Multioutput Resonant Inverters. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 629-637.	5.4	5
48	Constant-Current Gate Driver for GaN HEMTs Applied to Resonant Power Conversion. Energies, 2021, 14, 2377.	3.1	5
49	Design and Implementation of a Class-E Self-Oscillating Inverter for Cost-Effective Induction Heating Systems. EPE Journal (European Power Electronics and Drives Journal), 2012, 22, 11-16.	0.7	4
50	Active power factor corrector for high power domestic induction heating appliances. , 2017, , .		4
51	High performance full-bridge multi-inverter featuring 900-V SiC devices for domestic induction heating applications. EPE Journal (European Power Electronics and Drives Journal), 2017, 27, 143-152.	0.7	4
52	Multi-Electrode Architecture Modeling and Optimization for Homogeneous Electroporation of Large Volumes of Tissue. Energies, 2021, 14, 1892.	3.1	4
53	Full-bridge quasi-resonant class-DE inverter for optimized high frequency operation with GaN HEMT devices. , 2014, , .		3
54	Electro-thermal modeling of irreversible electroporation and validation method of electric field distribution. International Journal of Applied Electromagnetics and Mechanics, 2020, 63, S41-S50.	0.6	3

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55	Power factor correction stage and matrix zero voltage switching resonant inverter for domestic induction heating appliances. IET Power Electronics, 2022, 15, 1134-1143.	2.1	3
56	High-Performance Class-E Quasi-Resonant Inverter for Domestic Induction Heating Applications. , 2022, , .		3
57	Deep Learning Implementation of Model Predictive Control for Multioutput Resonant Converters. IEEE Access, 2022, 10, 65228-65237.	4.2	3
58	Optimal trajectory control for series resonant converters applied to domestic induction heating. , 2013, , .		2
59	SiC BJT-based full-ZCS quasi-resonant converter with improved efficiency for induction heating applications. , 2014, , .		2
60	FPGA-Based Hardware in the Loop Test-Bench for Robust Software Development of Induction Heating Appliances. , 2018, , .		2
61	An Inter-Disciplinary Approach to Teaching Biomedical Electronics with an Electroporation-Applied Example. , 2018, , .		2
62	WBG Semiconductor and Capacitor Technology Evaluation for Pulsed Electroporation Applications. , 2019, , .		2
63	Improved Multi-Load Resonant Power Conversion Using Model Predictive Control. , 2019, , .		2
64	A front-end PFC stage for improved performance of flexible induction heating appliances. International Journal of Applied Electromagnetics and Mechanics, 2020, 63, S115-S121.	0.6	2
65	Power Factor Correction using Asymmetrical Modulation for Flexible Induction Heating Appliances. , 2021, , .		2
66	Matrix ZVS Resonant Inverter for Domestic Induction Heating Applications Featuring a Front-End PFC Stage. , 2021, , .		2
67	Multi-Output Resonant Power Converters for Domestic Induction Heating. , 2020, , .		2
68	Series-Resonant Matrix Inverter With Asymmetrical Modulation for Improved Power Factor Correction in Flexible Induction Heating Appliances. IEEE Transactions on Industrial Electronics, 2023, 70, 1421-1430.	7.9	2
69	Design and Optimization of a SiC-Based Versatile Bidirectional High-Voltage Waveform Generator. , 2022, , .		2
70	Multi-platform simulator for resonant power converter courses. , 2013, , .		1
71	Soft-stop optimal trajectory control for improved operation of the series resonant multi-inverter. , 2014, , .		1
72	Thermal design optimization of a high-efficiency resonant converter based on multi-MOSFET cells using the Pareto analysis. , 2014, , .		1

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73	Series resonant multi-inverter prototype for domestic induction heating. , 2015, , .		1
74	A Versatile Hardware Platform for Teaching Resonant Power Conversion Courses. , 2018, , .		1
75	High frequency electroporation for biomedical applications using GaN gate injection transistors. , 2018, , .		1
76	Multi-Electrode Architecture Analysis and Modeling for Cancer Treatment using Electroporation. , 2020, , .		1
77	Multiple-Output Generator for Omnidirectional Electroporation and Real-Time Process Monitoring. , 2021, , .		1
78	Induction Heating Cookers: A Path Towards Decarbonization Using Energy Saving Cookers. , 2022, , .		1
79	Efficiency improvement of switched-mode power converters under light-load conditions. , 2014, , .		0
80	Ultra high efficiency adaptable class-DE inverter for resonant power conversion. , 2015, , .		0
81	Asymmetrical Modulation Strategies for Partially Covered Inductors in Flexible Induction Heating Appliances. , 2019, , .		0