

Ching-Ming Lai

List of Publications by Year in descending order

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107
papers

2,291
citations

218381

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h-index

233125

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107
all docs

107
docs citations

107
times ranked

1604
citing authors

#	ARTICLE	IF	CITATIONS
1	High-Efficiency Modular High Step-Up Interleaved Boost Converter for DC-Microgrid Applications. IEEE Transactions on Industry Applications, 2012, 48, 161-171.	3.3	173
2	A High-Efficiency High Step-Up Converter With Low Switch Voltage Stress for Fuel-Cell System Applications. IEEE Transactions on Industrial Electronics, 2010, 57, 1998-2006.	5.2	163
3	Newly-Constructed Simplified Single-Phase Multistring Multilevel Inverter Topology for Distributed Energy Resources. IEEE Transactions on Power Electronics, 2011, 26, 2386-2392.	5.4	139
4	Optimum allocation of battery energy storage systems for power grid enhanced with solar energy. Energy, 2021, 223, 120105.	4.5	114
5	Development of Energy Storage Systems for Power Network Reliability: A Review. Energies, 2018, 11, 2278.	1.6	112
6	Development of a Bidirectional DC/DC Converter With Dual-Battery Energy Storage for Hybrid Electric Vehicle System. IEEE Transactions on Vehicular Technology, 2018, 67, 1036-1052.	3.9	106
7	Network topology optimisation based on dynamic thermal rating and battery storage systems for improved wind penetration and reliability. Applied Energy, 2022, 305, 117837.	5.1	99
8	Impact of the Real-Time Thermal Loading on the Bulk Electric System Reliability. IEEE Transactions on Reliability, 2017, 66, 1110-1119.	3.5	90
9	Prospects of Using the Dynamic Thermal Rating System for Reliable Electrical Networks: A Review. IEEE Access, 2018, 6, 26765-26778.	2.6	87
10	Reliability impacts of the dynamic thermal rating and battery energy storage systems on wind-integrated power networks. Sustainable Energy, Grids and Networks, 2019, 20, 100268.	2.3	77
11	A single-stage AC/DC converter based on zero voltage switching LLC resonant topology. IET Electric Power Applications, 2007, 1, 743.	1.1	75
12	Comprehensive review of the dynamic thermal rating system for sustainable electrical power systems. Energy Reports, 2022, 8, 3263-3288.	2.5	66
13	Reliability Impacts of the Dynamic Thermal Rating System on Smart Grids Considering Wireless Communications. IEEE Access, 2019, 7, 41625-41635.	2.6	64
14	Study and Implementation of a Two-Phase Interleaved Bidirectional DC/DC Converter for Vehicle and DC-Microgrid Systems. Energies, 2015, 8, 9969-9991.	1.6	54
15	Current-Ripple-Free Module Integrated Converter With More Precise Maximum Power Tracking Control for PV Energy Harvesting. IEEE Transactions on Industry Applications, 2015, 51, 271-278.	3.3	52
16	Risk-Based Management of Transmission Lines Enhanced With the Dynamic Thermal Rating System. IEEE Access, 2019, 7, 76562-76572.	2.6	49
17	A Systematic Review of Reliability Studies on Composite Power Systems: A Coherent Taxonomy Motivations, Open Challenges, Recommendations, and New Research Directions. Energies, 2018, 11, 2417.	1.6	37
18	A Magnetic Integrated LCL-EMI Filter for a Single-Phase SiC-MOSFET Grid-Connected Inverter. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 601-617.	3.7	36

#	ARTICLE	IF	CITATIONS
19	Composite Reliability Evaluation of Load Demand Side Management and Dynamic Thermal Rating Systems. <i>Energies</i> , 2018, 11, 466.	1.6	34
20	Demand Response and Dynamic Line Ratings for Optimum Power Network Reliability and Ageing. <i>IEEE Access</i> , 2020, 8, 175319-175328.	2.6	34
21	Development of a Novel Bidirectional DC/DC Converter Topology with High Voltage Conversion Ratio for Electric Vehicles and DC-Microgrids. <i>Energies</i> , 2016, 9, 410.	1.6	32
22	Control Strategy Optimization for Parallel Hybrid Electric Vehicles Using a Memetic Algorithm. <i>Energies</i> , 2017, 10, 305.	1.6	32
23	A Novel Integrated DC/AC Converter With High Voltage Gain Capability for Distributed Energy Resource Systems. <i>IEEE Transactions on Power Electronics</i> , 2012, 27, 2385-2395.	5.4	30
24	Integration of Wind and Demand Response for Optimum Generation Reliability, Cost and Carbon Emission. <i>IEEE Access</i> , 2020, 8, 183606-183618.	2.6	30
25	A Novel Integrated Single-Phase Inverter With Auxiliary Step-Up Circuit for Low-Voltage Alternative Energy Source Applications. <i>IEEE Transactions on Power Electronics</i> , 2010, 25, 2234-2241.	5.4	29
26	Improving the Penetration of Wind Power with Dynamic Thermal Rating System, Static VAR Compensator and Multi-Objective Genetic Algorithm. <i>Energies</i> , 2018, 11, 815.	1.6	29
27	A High-Gain Three-Port Power Converter with Fuel Cell, Battery Sources and Stacked Output for Hybrid Electric Vehicles and DC-Microgrids. <i>Energies</i> , 2016, 9, 180.	1.6	25
28	Design and Implementation of a Single-Stage LLC Resonant Converter with High Power Factor. , 2007, , .		21
29	An Active Damping Control Method for the κ -LLCL Filter-Based SiC MOSFET Grid-Connected Inverter in Vehicle-to-Grid Application. <i>IEEE Transactions on Vehicular Technology</i> , 2019, 68, 3411-3423.	3.9	19
30	Photovoltaic Integrated Shunt Active Power Filter with Simpler ADALINE Algorithm for Current Harmonic Extraction. <i>Energies</i> , 2018, 11, 1152.	1.6	17
31	LCL Filter Design with EMI Noise Consideration for Grid-Connected Inverter. <i>Energies</i> , 2018, 11, 1646.	1.6	17
32	Predictive Adaptive Filter for Reducing Total Harmonics Distortion in PV Systems. <i>Energies</i> , 2020, 13, 3286.	1.6	17
33	Genetic algorithm with small population size for search feasible control parameters for parallel hybrid electric vehicles. <i>AIMS Energy</i> , 2017, 5, 930-943.	1.1	16
34	Output Current Ripple-Free PWM Inverters. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2010, 57, 823-827.	2.2	14
35	Effective Natural PCR-RFLP Primer Design for SNP Genotyping Using Teaching-Learning-Based Optimization With Elite Strategy. <i>IEEE Transactions on Nanobioscience</i> , 2016, 15, 657-665.	2.2	14
36	A High-Gain Reflex-Based Bidirectional DC Charger with Efficient Energy Recycling for Low-Voltage Battery Charging-Discharging Power Control. <i>Energies</i> , 2018, 11, 623.	1.6	14

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37	A low switch voltage stress interleaved boost converter for power factor correction. , 2009, , .		13
38	A zero input current ripple boost converter for fuel cell applications by using a mirror ripple circuit. , 2009, , .		12
39	A newly-designed multiport bidirectional power converter with battery/supercapacitor for hybrid electric/fuel-cell vehicle system. , 2016, , .		12
40	Memetic algorithm for fuel economy and low emissions parallel hybrid electric vehicles. , 2017, , .		12
41	Modeling of circulating currents for grid-connected parallel three-phase inverters. , 2008, , .		11
42	Newly-constructed single-phase multistring multilevel inverter for fuel-cell microgrid. , 2011, , .		11
43	A Single-Stage AC/DC LLC Resonant Converter. , 2006, , .		10
44	Parallel-operated single-stage flyback-type single-phase solar micro-inverter. , 2014, , .		10
45	Modeling, Analysis, and Design of an Interleaved Four-Phase Current-Fed Converter With New Voltage Multiplier Topology. IEEE Transactions on Industry Applications, 2013, 49, 208-222.	3.3	9
46	A reflex-charging based bidirectional DC charger for light electric vehicle and DC-microgrids. , 2017, , .		9
47	A New Combined Boost Converter with Improved Voltage Gain as a Battery-Powered Front-End Interface for Automotive Audio Amplifiers. Energies, 2017, 10, 1128.	1.6	9
48	Development of a modular single-phase grid-tie inverter system for fuel-cell power generation. Journal of the Chinese Institute of Engineers, Transactions of the Chinese Institute of Engineers, Series A/Chung-kuo Kung Ch'eng Hsueh K'an, 2018, 41, 112-123.	0.6	8
49	Study of a Bidirectional Power Converter Integrated with Battery/Ultracapacitor Dual-Energy Storage. Energies, 2020, 13, 1234.	1.6	8
50	Load-Adaptive Resonant Frequency-Tuned $\Delta\sigma$ Pulse Density Modulation for Class-D ZVS High-Frequency Inverter-Based Inductive Wireless Power Transfer. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2022, 3, 411-420.	3.0	8
51	A Novel High Step-Up Ratio Inverter for Distributed Energy Resources (DERs). , 2010, , .		7
52	A Single-Stage Grid-Connected PV Micro-inverter Based on Interleaved Flyback Converter Topology. , 2014, , .		7
53	Development of a DC-Side Direct Current Controlled Active Ripple Filter for Eliminating the Double-Line-Frequency Current Ripple in a Single-Phase DC/AC Conversion System. Energies, 2020, 13, 4772.	1.6	7
54	Available Capacity Computation Model Based on Long Short-Term Memory Recurrent Neural Network for Gelled-Electrolyte Batteries in Golf Carts. IEEE Access, 2022, 10, 54433-54444.	2.6	7

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55	Solar power battery charger with a parallel-load resonant converter. , 2011, , .		6
56	A novel control strategy of circulating currents in parallel single-phase boost rectifiers. , 2012, , .		6
57	A Zero Input Current Ripple ZVS/ZCS Boost Converter with Boundary-Mode Control. Energies, 2014, 7, 6765-6782.	1.6	6
58	Coupled Inductor-assisted Current-Fed Snubber-less Zero-Current-Soft Switching High Step-Up DC-DC Converter for Fuel Cell Power Interface. , 2020, , .		6
59	Design fuzzy SOC estimation for sealed lead-acid batteries of electric vehicles in Reflex &sup>TM&sup>. , 2007, , .		5
60	A battery-powered single-stage three-phase high step-up converter topology for micro DC-UPS. IEICE Electronics Express, 2014, 11, 20140852-20140852.	0.3	5
61	Study and Analysis of a Battery-Powered High Step-Up Front-End Converter for Automotive Audio Amplifier. , 2016, , .		5
62	Optimization of Control Strategy for Hybrid Electric Vehicles Based on Improved Genetic Algorithm. , 2017, , .		5
63	Implementation of a PLL-based high frequency resonant ac power supply. , 2008, , .		4
64	Current ripple-free module integrated converter (MIC) with more precise maximum power tracking control for PV energy harvesting. , 2013, , .		4
65	Newly-constructed bidirectional DC/DC converter topology with high voltage conversion ratio for vehicle to DC-microgrid (V2DCG) system. , 2015, , .		4
66	MHz-Driving Current-Fed Snubberless Soft Switching DC-DC Converter. IEEJ Transactions on Industry Applications, 2022, 142, 9-17.	0.1	4
67	Study and realization of a non-contact power supply system with fast information transmission capability. , 2011, , .		3
68	Passive ripple mirror circuit and its application in pulse-width modulated DC-DC converters. , 2015, , .		3
69	An isolated AC module for photovoltaic energy conversion. International Journal of Green Energy, 2016, 13, 1460-1466.	2.1	3
70	A novel multiport converter with an auxiliary voltage pumping circuit for fuel-cell/battery hybrid energy sources. , 2017, , .		3
71	An efficient active ripple filter for use in single-phase DC-AC conversion system. , 2017, , .		3
72	Composite reliability evaluation for transmission network planning. AIMS Energy, 2018, 6, 170-186.	1.1	3

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73	Fuzzy Dynamic Thermal Rating System-Based Thermal Aging Model for Transmission Lines. <i>Energies</i> , 2022, 15, 4395.	1.6	3
74	Using Automatic Frequency Shifting Techniques for LLC-SRC Output Voltage Regulation. , 2006, , .		2
75	High efficiency high step-up converter module for DC microgrid systems. , 2010, , .		2
76	Development of an instantaneous real power tracking control scheme for a single-phase grid-tied photovoltaic inverter with minimum DC-Link capacitance. , 2012, , .		2
77	Application of Particle Swarm Optimization to Design Control Strategy Parameters of Parallel Hybrid Electric Vehicle with Fuel Economy and Low Emission. , 2018, , .		2
78	Novel Offline Software-in-the-Loop Simulation Technique for Modular Single-Phase Flyback Current Source Grid-Tie Inverter System. <i>IEEE Access</i> , 2021, 9, 100814-100826.	2.6	2
79	A novel high step-up ratio interleaved dc converter with low switch voltage stress. , 2010, , .		1
80	Three-phase boost converter with integrated auxiliary step-up circuit for electric vehicle applications. , 2011, , .		1
81	Modeling and design of an improved current-fed converter with new voltage multiplier circuit combination. , 2011, , .		1
82	Study and development of a negative ion driving circuit with 8kV/4kV dual-output for air purifier. , 2013, , .		1
83	Study of a high-gain two-port power converter with fuel cell/battery sources and stacked output for hybrid electric vehicle and dc-microgrid. , 2016, , .		1
84	Development of a modular single-stage grid-connected fuel-cell inverter system with power management and remote monitoring interface. , 2017, , .		1
85	Maximization of wind energy utilization through a multi-objective optimization framework. , 2017, , .		1
86	Comparison of the adaptive inertia weight PSOs based on chaotic logistic map and tent map. , 2017, , .		1
87	Impact of Demand Side Management and Dynamic Thermal Rating System on the Reliability of Power Systems. , 2018, , .		1
88	Evolutionary Computation-Based Memetic Algorithm Against Genetic Algorithm to Improve PCR-RFLP Assay Primers of SNP Genotyping. <i>IEEE Access</i> , 2018, 6, 77807-77815.	2.6	1
89	Fuzzy Evaluation of Transmission Line End-of-Life Reliability Model. , 2019, , .		1
90	On the Stability of Virtual Inertia Control Implemented by Grid-Connected Power Converters with Delay Effects. , 2019, , .		1

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91	A Compensated Peak Current Mode Control PWM for Primary-Side Controlled Flyback Converters. <i>Energies</i> , 2021, 14, 7458.	1.6	1
92	Using on-line estimation techniques for output feedback VSC design. , 0, , .		0
93	Analysis of double line frequency for PWM rectifier using instantaneous power method. , 2008, , .		0
94	Integrated Single-Phase Inverter with an Auxiliary Step-Up Circuit for Low-Voltage Alternative Energy Source Applications. , 2010, , .		0
95	A family of single-stage single-switch PV MICs with steep conversion gain. , 2011, , .		0
96	Study and implementation of a high power factor single-stage contactless power supply with load/gap detection mechanisms. , 2011, , .		0
97	Design, analysis and experimental verification of a modularized output current ripple-free microgrid inverter. , 2013, , .		0
98	A Novel Approach to Implement a Single-Stage Step Up/Down Inverter by Using Auxiliary Pumping Circuit. , 2014, , .		0
99	A Novel Bidirectional Switched-Capacitor Converter with Selectable Output Voltages. , 2014, , .		0
100	An integrated two-input three-output DC/DC boost converter with fuel-cell/battery energy resources for HEV and DC-distribution system. , 2016, , .		0
101	A framework for transmission network planning. , 2017, , .		0
102	A Bidirectional Converter with Hybrid Energy Sources for Light Electric Vehicle (LEV). , 2018, , .		0
103	Development of a Novel Battery-Powered DC-AC System. , 2019, , .		0
104	Using Automatic Frequency Shifting Techniques for LLC-SRC Output Voltage Regulation. , 2006, , .		0
105	Simulation-Assisted Design Process of a 22 kW Wireless Power Transfer System Using Three-Phase Coil Coupling for EVs. <i>Sustainability</i> , 2021, 13, 12257.	1.6	0
106	The Role of International Journal of Energy and Power Systems (IJEPS). , 2021, , .		0
107	GaN-HEMT MHz-Driving Current-Fed Snubberless ZCS High Step-Up DC-DC Converter for Fuel Cell Vehicles. , 2021, , .		0