

Xiaoming Zha

List of Publications by Year in descending order

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145
papers

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1197
citing authors

#	ARTICLE	IF	CITATIONS
1	Large-Signal Stability of Grid-Forming and Grid-Following Controls in Voltage Source Converter: A Comparative Study. IEEE Transactions on Power Electronics, 2021, 36, 7832-7840.	5.4	117
2	Bifurcation and Large-Signal Stability Analysis of Three-Phase Voltage Source Converter Under Grid Voltage Dips. IEEE Transactions on Power Electronics, 2017, 32, 8868-8879.	5.4	108
3	Nonlinear and Transient Stability Analysis of Phase-Locked Loops in Grid-Connected Converters. IEEE Transactions on Power Electronics, 2021, 36, 1018-1029.	5.4	85
4	Solid-State Circuit Breaker Snubber Design for Transient Overvoltage Suppression at Bus Fault Interruption in Low-Voltage DC Microgrid. IEEE Transactions on Power Electronics, 2017, 32, 3007-3021.	5.4	84
5	Power Decoupling Control for Capacitance Reduction in Cascaded-H-Bridge-Converter-Based Regenerative Motor Drive Systems. IEEE Transactions on Power Electronics, 2019, 34, 538-549.	5.4	42
6	Bifurcation-Based Stability Analysis of Photovoltaic-Battery Hybrid Power System. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 1055-1067.	3.7	40
7	A Multiport Circuit Breaker-Based Multiterminal DC System Fault Protection. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 118-128.	3.7	40
8	Reliability-Oriented Optimization of the LC Filter in a Buck DC-DC Converter. IEEE Transactions on Power Electronics, 2017, 32, 6323-6337.	5.4	35
9	Dynamic Aggregation Modeling of Grid-Connected Inverters Using Hamilton's-Action-Based Coherent Equivalence. IEEE Transactions on Industrial Electronics, 2019, 66, 6437-6448.	5.2	35
10	Design and research on parameter of LCL filter in three-phase grid-connected inverter. , 2009, , .		34
11	Nonlinear Analysis of PLL Damping Characteristics in Weak-Grid-Tied Inverters. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 2752-2756.	2.2	31
12	Cascaded multilevel converter for medium-voltage motor drive capable of regenerating with part of cells. IET Power Electronics, 2014, 7, 1313-1320.	1.5	30
13	An Adaptive Carrier Frequency Optimization Method for Harmonic Energy Unbalance Minimization in a Cascaded H-Bridge-Based Active Power Filter. IEEE Transactions on Power Electronics, 2018, 33, 1024-1037.	5.4	29
14	Large-Signal Stability Criterion for Parallel-Connected DC-DC Converters With Current Source Equivalence. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 2037-2041.	2.2	26
15	An Improved Equal Area Criterion for Transient Stability Analysis of Converter-Based Microgrid Considering Nonlinear Damping Effect. IEEE Transactions on Power Electronics, 2022, 37, 11272-11284.	5.4	26
16	Research on wind power ramp events prediction based on strongly convective weather classification. IET Renewable Power Generation, 2017, 11, 1278-1285.	1.7	24
17	An Improved SSCB Combining Fault Interruption and Fault Location Functions for DC Line Short-Circuit Fault Protection. IEEE Transactions on Power Delivery, 2019, 34, 858-868.	2.9	24
18	A Multiport Modular DC-DC Converter With Low-Loss Series LC Power Balancing Unit for MVDC Interface of Distributed Photovoltaics. IEEE Transactions on Power Electronics, 2021, 36, 7736-7749.	5.4	23

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19	Hamilton-Based Stability Criterion and Attraction Region Estimation for Grid-Tied Inverters Under Large-Signal Disturbances. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 413-423.	3.7	21
20	Analysis and design of repetitive controller based on regeneration spectrum and sensitivity function in active power filter system. IET Power Electronics, 2014, 7, 2133-2140.	1.5	20
21	A Voltage-Balancer-Based Cascaded DC-DC Converter With a Novel Power Feedforward Control for the Medium-Voltage DC Grid Interface of Photovoltaic Systems. IEEE Access, 2019, 7, 178094-178107.	2.6	20
22	An Integrated Dual Voltage Loop Control for Capacitance Reduction in CHB-Based Regenerative Motor Drive Systems. IEEE Transactions on Industrial Electronics, 2019, 66, 3369-3379.	5.2	19
23	Robust Bad Data Detection Method for Microgrid Using Improved ELM and DBSCAN Algorithm. Journal of Energy Engineering - ASCE, 2018, 144, 04018026.	1.0	17
24	Short-Circuit Current Estimation of Modular Multilevel Converter Using Discrete-Time Modeling. IEEE Transactions on Power Electronics, 2019, 34, 40-45.	5.4	17
25	A Novel Node Flexibility Evaluation Method of Active Distribution Network for SNOP Integration. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2021, 11, 188-198.	2.7	17
26	A Leakage Current Eliminated and Power Oscillation Suppressed Single-Phase Single-Stage Nonisolated Photovoltaic Grid-Tied Inverter and Its Improved Control Strategy. IEEE Transactions on Power Electronics, 2021, 36, 6738-6749.	5.4	17
27	Cascading Synchronization Instability in Multi-VSC Grid-Connected System. IEEE Transactions on Power Electronics, 2022, 37, 7572-7576.	5.4	17
28	An Improved Impedance Measurement Method for Grid-Connected Inverter Systems Considering the Background Harmonics and Frequency Deviation. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 4236-4247.	3.7	16
29	Short-Circuit Fault-Tolerant Topology for Multiport Cascaded DC/DC Converter in Photovoltaic Power Generation System. IEEE Transactions on Power Electronics, 2021, 36, 549-561.	5.4	16
30	A short-circuit current calculation method for low-voltage DC microgrid. , 2014, , .		14
31	A Novel Dynamic Aggregation Modeling Method of Grid-Connected Inverters: Application in Small-Signal Analysis. IEEE Transactions on Sustainable Energy, 2019, 10, 1554-1564.	5.9	14
32	Hybrid Control Strategy for an Integrated DAB-LLC-DCX DC-DC Converter to Achieve Full-Power-Range Zero-Voltage Switching. IEEE Transactions on Power Electronics, 2021, 36, 14383-14397.	5.4	14
33	IGBT Remaining Useful Life Prediction Based on Particle Filter With Fusing Precursor. IEEE Access, 2020, 8, 154281-154289.	2.6	13
34	A Current-Sharing Method for Interleaved High-Frequency LLC Converter With Partial Energy Phase Shift Regulation. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 760-772.	3.7	12
35	Aggregating wind farm with DFIG in power system online analysis. , 2009, , .		11
36	Performance analysis of RCD and MOV snubber circuits in low-voltage DC microgrid system. , 2017, , .		11

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37	A New Efficient Bidirectional T-Source Circuit Breaker for Flexible DC Distribution Networks. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 7056-7065.	3.7	11
38	A Synchronous Auxiliary Resonant Commutated Pole Soft-Switching Inverter With Improved Load Adaptability. IEEE Transactions on Power Electronics, 2022, 37, 3073-3084.	5.4	11
39	A Multi-port DC Solid-state Transformer for MVDC Integration Interface of Multiple Distributed Energy Sources and DC Loads in Distribution Network. IEEE Transactions on Power Electronics, 2021, , 1-1.	5.4	11
40	Asymmetrical phase-shifting carrier pulse-width modulation for harmonics suppression in cascaded multilevel converter under unbalanced DC-link voltages. , 2015, , .		10
41	Transient Stability Analysis of Grid-Connected VSIs via PLL Interaction. , 2018, , .		10
42	A Transformerless Three-Port Nonagonal MMC for the Grid Connection and Local Consumption of Distributed Generation. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 108-117.	3.7	10
43	Suppression strategy for short-circuit current in loop-type DC microgrid. , 2014, , .		9
44	Research on control strategy combining pole-assignment and pr control in three-phase grid-connected inverter. , 2009, , .		8
45	A Regenerative Hexagonal-Cascaded Multilevel Converter for Two-Motor Asynchronous Drive. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 1687-1699.	3.7	8
46	Asymmetrical carrier phase-shifted pulse-width modulation for partly regenerative converter. IET Power Electronics, 2017, 10, 442-450.	1.5	8
47	Performance Analysis of Quantum Key Distribution Technology for Power Business. Applied Sciences (Switzerland), 2020, 10, 2906.	1.3	8
48	An Improved Negative-Sequence Current Compensation Method for Star-Connected CHB STATCOM. IEEE Transactions on Power Delivery, 2022, 37, 4786-4795.	2.9	8
49	Segmented power distribution control system based on hybrid cascaded multilevel converter with parts of energy storage. IET Power Electronics, 2017, 10, 2076-2084.	1.5	7
50	Emulation of Multi-Inverter Integrated Weak Grid via Interaction-Preserved Aggregation. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 4153-4164.	3.7	7
51	A Novel Low-Loss Bidirectional T-Source Circuit Breaker With Physical Isolation for Low-Voltage DC Distribution Network. IEEE Transactions on Industrial Electronics, 2022, 69, 6892-6902.	5.2	7
52	Stability and Multiconstraint Operating Region of Grid-Connected Modular Multilevel Converter Under Grid Phase Disturbance. IEEE Transactions on Power Electronics, 2021, 36, 12551-12564.	5.4	7
53	Probabilistic analysis of small signal stability of microgrid using point estimate method. , 2009, , .		6
54	Improving the Stability and Accuracy of Power Hardware-in-the-Loop Simulation Using Virtual Impedance Method. Energies, 2016, 9, 974.	1.6	6

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55	Modeling method of sequence admittance for three-phase voltage source converter under unbalanced grid condition. <i>Journal of Modern Power Systems and Clean Energy</i> , 2018, 6, 595-606.	3.3	6
56	Circulating Current Analysis and Power Mismatch Elimination Strategy for an MMC-Based Photovoltaic System. , 2020, , .		6
57	Modified Phase-Shifted PWM for Cascaded Half-Bridges of Photovoltaic Application. <i>IEEE Access</i> , 2020, 8, 41719-41732.	2.6	6
58	Speed-Sensorless and Motor Parameters-Free Starting Method for Large-Capacity Synchronous Machines Based on Virtual Synchronous Generator Technology. <i>IEEE Transactions on Industrial Electronics</i> , 2021, 68, 6607-6618.	5.2	6
59	Bidirectional Buck-Boost and Series LC-Based Power Balancing Units for Photovoltaic DC Collection System. <i>IEEE Journal of Emerging and Selected Topics in Power Electronics</i> , 2021, 9, 6726-6738.	3.7	6
60	Clustering-Based Modeling and Interaction Analysis of Multiple Differently Parameterized Grid-Side Inverters in PMSG Wind Turbines. <i>IEEE Transactions on Energy Conversion</i> , 2021, 36, 3031-3043.	3.7	6
61	Resilient Power Converter: A Grid-Connected Converter With Disturbance/Attack Resiliency via Multi-Timescale Current Limiting Scheme. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2021, 11, 59-68.	2.7	6
62	CDSC-Based Adaptive Impedance Measurement Method for Grid-Tied Inverter System Under Adverse Grid Voltage Conditions. <i>IEEE Transactions on Industrial Electronics</i> , 2022, 69, 11210-11220.	5.2	6
63	Robust Stability Assessment of Single-Phase Inverter With Multiparameter Distributions. <i>IEEE Transactions on Power Electronics</i> , 2022, 37, 6062-6073.	5.4	6
64	The iterative learning control strategy for hybrid active filter to dampen harmonic resonance in industrial power system. , 0, , .		5
65	A composite compensation method of a grid-connected AC/DC converter to improve robustness under weak grid conditions. , 2015, , .		5
66	Power recovery and cost reduction oriented optimization of regenerative cells embedded in cascaded multilevel converter. , 2015, , .		5
67	Reliability-oriented design of LC filter in buck DC-DC converter with multi-objective optimization. , 2016, , .		5
68	Adaptability of weighted average current control to the weak grid considering the effect of grid-voltage feedforward. , 2017, , .		5
69	Reliability evaluation of MMC system considering working conditions. <i>Journal of Engineering</i> , 2019, 2019, 1877-1881.	0.6	5
70	Simplified Power Loss Model for Aluminum Electrolytic Capacitors in Single-Phase Inverters. <i>IEEE Transactions on Power Electronics</i> , 2020, 35, 4452-4456.	5.4	5
71	Transient Voltage and Current Stresses Estimation of MMC-MTDC System via Discrete-Time Analysis. <i>IEEE Transactions on Power Delivery</i> , 2020, 35, 2821-2830.	2.9	5
72	Overview of recent progress in condition monitoring for insulated gate bipolar transistor modules: Detection, estimation, and prediction. <i>High Voltage</i> , 2021, 6, 967-977.	2.7	5

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73	Decoupling Capacitor Minimization of an MMC-Based Photovoltaic System With Three-Winding Power Channel. IEEE Transactions on Power Electronics, 2022, 37, 1012-1026.	5.4	5
74	A novel Active Power Filter topology based on coordinate transformation. , 2009, , .		4
75	Reliability Analysis of Smart Distribution Grid Communication System Based on EPON. , 2012, , .		4
76	A regenerative cascaded multilevel converter with reduced active front ends. , 2013, , .		4
77	A topology of the multi-port DC circuit breaker for multi-terminal DC system fault protection. , 2017, , .		4
78	A New Single-Phase Single-Stage Photovoltaic Grid-Tied Inverter with Leakage Current Eliminating and Power Decoupling. , 2019, , .		4
79	An Integral Fault Location Algorithm Based on a Modified T-Source Circuit Breaker for Flexible DC Distribution Networks. IEEE Transactions on Power Delivery, 2021, 36, 2861-2871.	2.9	4
80	High-Efficiency High-Power Bridgeless Integrated AC-DC Converter for On-Board Vehicle Battery Charger. , 2020, , .		4
81	Frequency-Dependent Network Analysis and Stability Enhanced Design for Voltage-Source Converters Under Weak Grid Conditions. IEEE Transactions on Power Delivery, 2022, 37, 4593-4602.	2.9	4
82	A Novel Fault Ride-Through Topology With High Efficiency and Fast Fault Clearing Capability for MVdc PV System. IEEE Transactions on Industrial Electronics, 2023, 70, 1501-1511.	5.2	4
83	A Peak Current Reducing Method for Input-Independent and Output-Series Modular Converters With LC-Branch-Based Power Balancing Unit. IEEE Transactions on Industrial Electronics, 2023, 70, 418-429.	5.2	4
84	An Online Monitoring Method for Single Aluminum Electrolytic Capacitor in the DC Bank of Single-Phase Inverter Based on the Rogowski Coil. IEEE Transactions on Power Electronics, 2022, 37, 12647-12658.	5.4	4
85	A Novel Voltage Balance Topology With High Efficiency and Low Current Stress for MVdc Interface of Distributed PV. IEEE Transactions on Industrial Electronics, 2023, 70, 3867-3877.	5.2	4
86	Nonlinear modeling of inverter using the Hammerstein's approach. , 2009, , .		3
87	Study on Hardware-in-the-Loop of Active Power Filer Based on RTDS. , 2010, , .		3
88	Realization and improvement of repetitive control in rotating frame for active power filter system. , 2010, , .		3
89	Discrete-time one cycle control of VIENNA rectifiers considering the dc-link neutral-point voltage balance. , 2013, , .		3
90	Reliability-oriented design of LC filter in buck DC-DC converter. , 2015, , .		3

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91	Bifurcation analysis of photovoltaic-battery hybrid power system with constant power load. , 2016, , .		3
92	Modular Multilevel Converter DC Bipolar Short-Circuit Current Calculation on Discrete-Time Model. , 2018, , .		3
93	A Reduced-order Model of PMSC for the Low Frequency Oscillation Analysis of Power Systems. , 2019, , .		3
94	Back-to-back Starting of Large-capacity Condenser with Virtual Synchronous Generator. , 2019, , .		3
95	Topology Simplification and Parameter Design of Z/T \hat{i}^c -Source Circuit Breakers. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 7066-7077.	3.7	3
96	Transient Modeling of Phase-Locked Loop and its Applications in a Multi-VSCs Grid-connected System. , 2021, , .		3
97	Optimal Virtual Inertia Design for VSG-based Motor Starting Systems to Improve Motor Loading Capacity. IEEE Transactions on Energy Conversion, 2022, , 1-1.	3.7	3
98	Parallel inverter control in the Distributed Power System. , 2009, , .		2
99	Small Signal Stability Fuzzy Analysis of Microgrid Based on Credibility Theory. , 2010, , .		2
100	The study on the application of repetitive control in STATCOM. , 2010, , .		2
101	Coordinate control system for photovoltaic-based DC microgrid. , 2013, , .		2
102	Active power decoupling method for isolated micro-inverters. , 2014, , .		2
103	Gradient-reference-current control for tri-state buck converter to improve dynamic response over wide load range. , 2016, , .		2
104	Individual DC voltage balancing method at zero current mode for cascaded H-bridge based static synchronous compensator. , 2017, , .		2
105	Reliability-oriented optimization of DC bank in single phase inverter. , 2017, , .		2
106	A Stable and Fast-Transient Performance Switched-Mode Power Amplifier for a Power Hardware in the Loop (PHIL) System. Energies, 2017, 10, 1569.	1.6	2
107	A Partial Energy Input Based Three-Port Cascade Multi-level Hexverter and Its Loop Current Control. , 2018, , .		2
108	Large Signal Modeling and Stability Analysis of Photovoltaic-Battery Hybrid Power System. , 2018, , .		2

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109	Impedance Measurement of Grid-Tied Inverter With Deviate-Frequency Harmonic Current Injection. , 2019, , .		2
110	Impact Analysis of Fast Dynamics on Stability of Grid-Tied Inverter Based on Oscillator Model and Damping Torque Analysis. IEEE Transactions on Power Systems, 2022, 37, 1881-1892.	4.6	2
111	A Digital Adaptive Voltage Positioning Technique for 48-1V ISOP-LLC Converter based on Bang-Bang Charge Control. , 2021, , .		2
112	Design of a Damper Winding Currents Observer of Twelve-phase Synchronous Generator for Parameters Identification. , 2010, , .		1
113	High frequency harmonic analysis and suppression of converters paralleled by multiwinding transformer. , 2014, , .		1
114	A source-type harmonic energy unbalance suppression method based on carrier frequency optimization for cascaded multilevel APF. , 2016, , .		1
115	A segmented power distribution control system based on hybrid regenerative cascaded multilevel converter. , 2017, , .		1
116	Research on a multi-port converter with nine-switch cells. , 2018, , .		1
117	Influence of DC Link Capacitance on Power Efficiency of Single-Phase Inverter. , 2018, , .		1
118	A Parallel Control Strategy for Power Mismatch Elimination of Photovoltaic Grid-Connected Cascaded H-Bridge Multilevel Inverter. , 2020, , .		1
119	Energy-based large-signal stability analysis of DC microgrid considering dynamic interactions between multiple converters. , 2021, , .		1
120	A Weighted Efficiency Enhancement Method for Coupled Inductor Filter-Based H-Bridge Inverters. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 4456-4468.	3.7	1
121	Multiple Time-scales Node Flexibility Evaluation and Partitioning Method of the Distribution Network Oriented to SNOP Integration. , 2020, , .		1
122	An integrated learning control method for PWM-VSI based hybrid filter to dampen harmonic resonance in industrial power system. , 0, , .		0
123	Real-time algorithm research and realization of Optimal Unsymmetrical PWM method. , 2009, , .		0
124	Time Domain Aggregation of Generating Units for Shipboard Power Systems. , 2009, , .		0
125	Parallel operation of active power filters based on Boost Converter Control. , 2010, , .		0
126	A Boost Converter Control Based Three-phase Four-leg Active Power Filter. , 2010, , .		0

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127	Notice of Retraction Research on wave energy generation instructive device. , 2011, , .		0
128	Research on wave energy generation device based on artificial heart pump. , 2011, , .		0
129	Current control for single-phase grid-connected inverters by splitting the elements of LLCL filter. , 2013, , .		0
130	Stability analysis of harmonic compensation system under weak grid conditions. , 2015, , .		0
131	Study on SVG plus FC allocation optimization by considering reactive load fluctuation coefficients and probabilistic analysis of compensating capacity. , 2016, , .		0
132	Study on SVG plus FC allocation optimization by considering reactive load fluctuation coefficients and probabilistic analysis of compensating capacity. , 2016, , .		0
133	Redefinition of safety operating area (SOA) considering transient thermal dynamics of IGET module. , 2017, , .		0
134	A research of discrete-time modeling method for the modular multilevel converter. , 2017, , .		0
135	Frequency-dependent impedance modeling of power grid with high power electronics penetration. , 2017, , .		0
136	Interaction of voltage and current control loop in three-phase voltage source converter. , 2017, , .		0
137	Stability Analysis of MMC under Grid Voltage Phase Change. , 2019, , .		0
138	An Improved Control Strategy for A Single-Phase Non-Isolated Photovoltaic Grid-Tied Inverter. , 2020, , .		0
139	A Novel MMC Topology for Decoupling Capacitance Minimization with an Integrated Three-Port Coupling Transformer. , 2021, , .		0
140	Voltage Balancing Scheme Based on Active Voltage Cross Control for Series-Connected IGBTs. , 2020, , .		0
141	Lifetime Estimation for Aluminum Electrolytic Capacitors in Active Power Filter. , 2020, , .		0
142	Interaction Analysis of Current Control Loops in MMC Under Asymmetrical Grid Faults. , 2021, , .		0
143	Optimization of DC-Link Capacitance Based on the Power Loss Modeling of IGBT for Inverters Under Swing Bus Operation. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2022, 12, 73-80.	2.7	0
144	Transient Stability Analysis for Grid-tied Virtual Synchronous Generator Based on T-S Fuzzy Modeling and LMI Approach. , 2021, , .		0

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145	Research on Improvement Mechanism of Transient Stability of Droop Converter Based on SVG Compensation. , 2021, , .		0