

Zhikang Shuai

List of Publications by Year in descending order

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128
papers

4,042
citations

101384

36
h-index

128067

60
g-index

133
all docs

133
docs citations

133
times ranked

3114
citing authors

#	ARTICLE	IF	CITATIONS
1	Microgrid stability: Classification and a review. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 58, 167-179.	8.2	250
2	Transient Angle Stability of Virtual Synchronous Generators Using Lyapunov's Direct Method. <i>IEEE Transactions on Smart Grid</i> , 2019, 10, 4648-4661.	6.2	212
3	Combined System for Harmonic Suppression and Reactive Power Compensation. <i>IEEE Transactions on Industrial Electronics</i> , 2009, 56, 418-428.	5.2	183
4	Fault Analysis of Inverter-Interfaced Distributed Generators With Different Control Schemes. <i>IEEE Transactions on Power Delivery</i> , 2018, 33, 1223-1235.	2.9	176
5	Characteristics and Restraining Method of Fast Transient Inrush Fault Currents in Synchronverters. <i>IEEE Transactions on Industrial Electronics</i> , 2017, 64, 7487-7497.	5.2	158
6	Dynamic Stability Analysis of Synchronverter-Dominated Microgrid Based on Bifurcation Theory. <i>IEEE Transactions on Industrial Electronics</i> , 2017, 64, 7467-7477.	5.2	150
7	An Improved Control Method for Multiple Bidirectional Power Converters in Hybrid AC/DC Microgrid. <i>IEEE Transactions on Smart Grid</i> , 2016, 7, 340-347.	6.2	131
8	Transient Angle Stability of Paralleled Synchronous and Virtual Synchronous Generators in Islanded Microgrids. <i>IEEE Transactions on Power Electronics</i> , 2020, 35, 8751-8765.	5.4	121
9	Railway Static Power Conditioners for High-speed Train Traction Power Supply Systems Using Three-phase V/V Transformers. <i>IEEE Transactions on Power Electronics</i> , 2011, 26, 2844-2856.	5.4	118
10	A Railway Traction Power Conditioner Using Modular Multilevel Converter and Its Control Strategy for High-Speed Railway System. <i>IEEE Transactions on Transportation Electrification</i> , 2016, 2, 96-109.	5.3	107
11	Robust Circuit Parameters Design for the CLLC-Type DC Transformer in the Hybrid AC-DC Microgrid. <i>IEEE Transactions on Industrial Electronics</i> , 2019, 66, 1906-1918.	5.2	102
12	Power Electronic Hybrid System for Load Balancing Compensation and Frequency-Selective Harmonic Suppression. <i>IEEE Transactions on Industrial Electronics</i> , 2012, 59, 723-732.	5.2	89
13	Development of Hybrid Active Power Filter Based on the Adaptive Fuzzy Dividing Frequency-Control Method. <i>IEEE Transactions on Power Delivery</i> , 2009, 24, 424-432.	2.9	87
14	Design Considerations of a Fault Current Limiting Dynamic Voltage Restorer (FCL-DVR). <i>IEEE Transactions on Smart Grid</i> , 2015, 6, 14-25.	6.2	78
15	Active Power Oscillation and Suppression Techniques Between Two Parallel Synchronverters During Load Fluctuations. <i>IEEE Transactions on Power Electronics</i> , 2020, 35, 4127-4142.	5.4	75
16	Cyber Attacks Against the Economic Operation of Power Systems: A Fast Solution. <i>IEEE Transactions on Smart Grid</i> , 2017, 8, 1023-1025.	6.2	73
17	An Improved Reactive Current Detection and Power Control Method for Single-Phase Photovoltaic Grid-Connected DG System. <i>IEEE Transactions on Energy Conversion</i> , 2013, 28, 823-831.	3.7	69
18	Design Considerations for Maintaining DC-Side Voltage of Hybrid Active Power Filter With Injection Circuit. <i>IEEE Transactions on Power Electronics</i> , 2009, 24, 75-84.	5.4	68

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19	Cyber Cascades Screening Considering the Impacts of False Data Injection Attacks. IEEE Transactions on Power Systems, 2018, 33, 6545-6556.	4.6	66
20	Transient Response Analysis of Inverter-Based Microgrids Under Unbalanced Conditions Using a Dynamic Phasor Model. IEEE Transactions on Industrial Electronics, 2019, 66, 2868-2879.	5.2	65
21	Dual-Functional Dynamic Voltage Restorer to Limit Fault Current. IEEE Transactions on Industrial Electronics, 2019, 66, 5300-5309.	5.2	60
22	A Flexible Power Control Strategy for Hybrid AC/DC Zones of Shipboard Power System With Distributed Energy Storages. IEEE Transactions on Industrial Informatics, 2018, 14, 5496-5508.	7.2	58
23	Dynamic Equivalent Modeling for Multi-Microgrid Based on Structure Preservation Method. IEEE Transactions on Smart Grid, 2019, 10, 3929-3942.	6.2	51
24	Analysis and Control of a Novel Modular-Based Energy Router for DC Microgrid Cluster. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 331-342.	3.7	51
25	Modeling and Stability Analysis of Inverter-Based Microgrid Under Harmonic Conditions. IEEE Transactions on Smart Grid, 2020, 11, 1330-1342.	6.2	50
26	Parameter Stability Region Analysis of Islanded Microgrid Based on Bifurcation Theory. IEEE Transactions on Smart Grid, 2019, 10, 6580-6591.	6.2	49
27	A self-powered ultra-fast DC solid state circuit breaker using a normally-on SiC JFET. , 2015, , ,		47
28	Robust droop control of DC distribution networks. IET Renewable Power Generation, 2016, 10, 807-814.	1.7	45
29	Robust Grid-Current-Feedback Resonance Suppression Method for LCL-Type Grid-Connected Inverter Connected to Weak Grid. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2018, 6, 2126-2137.	3.7	45
30	Multilevel Cascaded-Type Dynamic Voltage Restorer With Fault Current-Limiting Function. IEEE Transactions on Power Delivery, 2016, 31, 1261-1269.	2.9	44
31	Study on a Novel Hybrid Active Power Filter Applied to a High-Voltage Grid. IEEE Transactions on Power Delivery, 2009, 24, 2344-2352.	2.9	42
32	Divided DQ Small-Signal Model: A New Perspective for the Stability Analysis of Three-Phase Grid-Tied Inverters. IEEE Transactions on Industrial Electronics, 2019, 66, 6493-6504.	5.2	42
33	Transient Stability and Current Injection Design of Paralleled Current-Controlled VSCs and Virtual Synchronous Generators. IEEE Transactions on Smart Grid, 2021, 12, 1118-1134.	6.2	41
34	Comparative Study of Short-Circuit Fault Characteristics for VSC-Based DC Distribution Networks With Different Distributed Generators. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 528-540.	3.7	40
35	Droop control method for load share and voltage regulation in high-voltage microgrids. Journal of Modern Power Systems and Clean Energy, 2016, 4, 76-86.	3.3	38
36	Impedance Analysis and Stabilization of Virtual Synchronous Generators With Different DC-Link Voltage Controllers Under Weak Grid. IEEE Transactions on Power Electronics, 2021, 36, 11397-11408.	5.4	38

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37	Robust predictive dual-loop control strategy with reactive power compensation for single-phase grid-connected distributed generation system. IET Power Electronics, 2013, 6, 1320-1328.	1.5	36
38	A SiC JFET-Based Solid State Circuit Breaker With Digitally Controlled Current-Time Profiles. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 1556-1565.	3.7	36
39	A Maximum Power Loading Factor (MPLF) Control Strategy for Distributed Secondary Frequency Regulation of Islanded Microgrid. IEEE Transactions on Power Electronics, 2019, 34, 2275-2291.	5.4	35
40	Principle and Robust Impedance-Based Design of Grid-tied Inverter with LLCL-Filter under Wide Variation of Grid-Reactance. IEEE Transactions on Power Electronics, 2019, 34, 4362-4374.	5.4	35
41	Robust Control Parameters Design of PBC Controller for LCL-Filtered Grid-Tied Inverter. IEEE Transactions on Power Electronics, 2020, 35, 8102-8115.	5.4	35
42	Control Techniques for Bidirectional Interlinking Converters in Hybrid Microgrids: Leveraging the advantages of both ac and dc. IEEE Power Electronics Magazine, 2019, 6, 39-47.	0.6	33
43	Stability Analysis and Location Optimization Method for Multiconverter Power Systems Based on Nodal Admittance Matrix. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 529-538.	3.7	32
44	Performance Improvement of the Unbalanced Voltage Compensation in Islanded Microgrid Based on Small-Signal Analysis. IEEE Transactions on Industrial Electronics, 2020, 67, 5531-5542.	5.2	30
45	Transient Characteristics of Synchronverters Subjected to Asymmetric Faults. IEEE Transactions on Power Delivery, 2019, 34, 1171-1183.	2.9	29
46	Frequency Shifting and Filtering Algorithm for Power System Harmonic Estimation. IEEE Transactions on Industrial Informatics, 2019, 15, 1554-1565.	7.2	26
47	Modulated Model Predictive Control for Modular Multilevel AC/AC Converter. IEEE Transactions on Power Electronics, 2019, 34, 10359-10372.	5.4	26
48	Distribution static compensator based on an improved direct power control strategy. IET Power Electronics, 2014, 7, 957-964.	1.5	24
49	A self-powered bidirectional DC solid state circuit breaker using two normally-on SiC JFETs. , 2015, , .		21
50	Overcurrent and its Restraining Method of PQ-Controlled Three-Phase Four-Wire Converter Under Asymmetrical Grid Fault. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 2057-2069.	3.7	21
51	Large-scale photovoltaic plant harmonic transmission model and analysis on resonance characteristics. IET Power Electronics, 2015, 8, 565-573.	1.5	20
52	Secondary Power Sharing Regulation Strategy for a DC Microgrid via Maximum Loading Factor. IEEE Transactions on Power Electronics, 2019, 34, 11856-11867.	5.4	19
53	Wideband dq-Frame Impedance Modeling of Load-Side Virtual Synchronous Machine and Its Stability Analysis in Comparison With Conventional PWM Rectifier in Weak Grid. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 2440-2451.	3.7	19
54	Generalised design method for improving control quality of hybrid active power filter with injection circuit. IET Power Electronics, 2014, 7, 1204-1215.	1.5	18

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55	A New PFC Design With Interleaved MHz-Frequency GaN Auxiliary Active Filter Phase and Low-Frequency Base Power Si Phase. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 557-566.	3.7	18
56	Double deadbeat loop control method for distribution static compensator. IET Power Electronics, 2015, 8, 1104-1110.	1.5	17
57	A Notch Filter-Based Active Damping Control Method for Low-Frequency Oscillation Suppression in Train Network Interaction Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 2417-2427.	3.7	17
58	Stability Analysis of Low-Frequency Oscillation in Train-Network System Using RLC Circuit Model. IEEE Transactions on Transportation Electrification, 2019, 5, 502-514.	5.3	16
59	A New Proportional Base Drive Technique for SiC Bipolar Junction Transistor. IEEE Transactions on Power Electronics, 2017, 32, 4600-4606.	5.4	14
60	Design optimisation of self-powered gate driver for ultra-fast DC solid-state circuit breakers using SiC JFETs. IET Power Electronics, 2017, 10, 2149-2156.	1.5	14
61	Optimal Transmission Overloads Mitigation Following Disturbances in Power Systems. IEEE Transactions on Industrial Informatics, 2019, 15, 2592-2604.	7.2	14
62	Small-Signal Stability Analysis Method for Hybrid AC-DC Systems With Multiple DC Buses. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2021, 11, 17-27.	2.7	14
63	Transient Voltage Stability of Paralleled Synchronous and Virtual Synchronous Generators With Induction Motor Loads. IEEE Transactions on Smart Grid, 2021, 12, 4983-4999.	6.2	14
64	Transient Synchronization Stability Analysis and Enhancement of Paralleled Converters Considering Different Current Injection Strategies. IEEE Transactions on Sustainable Energy, 2022, 13, 1957-1968.	5.9	14
65	Reduced order modeling method of inverter-based microgrid for stability analysis. , 2017, , .		13
66	A Unified Model of Voltage-Controlled Inverter for Transient Angle Stability Analysis. IEEE Transactions on Power Delivery, 2022, 37, 2275-2288.	2.9	13
67	Waveform Difference Feature-Based Protection Scheme for Islanded Microgrids. IEEE Transactions on Smart Grid, 2021, 12, 1939-1952.	6.2	13
68	A new self-synchronization control strategy for grid interface inverters with local loads. , 2015, , .		12
69	Power Management for Islanded Hybrid AC/DC Microgrid With Low-bandwidth Communication. IEEE Transactions on Energy Conversion, 2021, 36, 2646-2658.	3.7	12
70	An Insulated-Gate Bipolar Transistor With a Collector Trench Electron Extraction Channel. IEEE Electron Device Letters, 2015, 36, 935-937.	2.2	11
71	General High-Frequency-Link Analysis and Application of Dual Active Bridge Converters. IEEE Transactions on Power Electronics, 2020, 35, 8673-8688.	5.4	11
72	Flexible Control Strategy for Enhancing Power Injection Capability of Three-Phase Four-Wire Inverter During Asymmetrical Grid Faults. IEEE Transactions on Power Electronics, 2021, 36, 9592-9608.	5.4	11

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73	Research of the high supply voltage quality control for solid-state transformer. IET Power Electronics, 2018, 11, 1788-1795.	1.5	10
74	Toward Flexible Risk-Limiting Operation of Multi-Terminal HVDC Grids With Vast Wind Generation. IEEE Transactions on Sustainable Energy, 2020, 11, 1750-1760.	5.9	10
75	Feasibility of high voltage SiC thyristor in HVDC transmission. , 2014, , .		9
76	Voltage ripple analysis of simplified active power compensator for negative sequence and reactive power compensation. IET Power Electronics, 2014, 7, 2582-2594.	1.5	9
77	Low-frequency harmonic resonance analysis and suppression method of modular multilevel converter. IET Power Electronics, 2018, 11, 755-763.	1.5	9
78	A Novel Harmonic Suppression Traction Transformer with Integrated Filtering Inductors for Railway Systems. Energies, 2020, 13, 473.	1.6	9
79	A Multilateral Transactive Energy Framework of Hybrid Charging Stations for Low-Carbon Energy-Transport Nexus. IEEE Transactions on Industrial Informatics, 2022, 18, 8270-8281.	7.2	9
80	A Deep Neural Network Based Predictive Control Strategy for High Frequency Multilevel Converters. , 2018, , .		7
81	Dynamical Reconfigurable Master-Slave Control Architecture (DRMSCA) for Voltage Regulation in Islanded Microgrids. IEEE Transactions on Power Electronics, 2022, 37, 249-263.	5.4	7
82	Single-Phase to Ground Fault Line Identification for Medium Voltage Islanded Microgrids With Neutral Ineffectively Grounded Modes. IEEE Transactions on Smart Grid, 2022, 13, 4312-4326.	6.2	7
83	Development and Application of the Two-Phase Orthogonal Power Supply for Electromagnetic Stirring. IEEE Transactions on Power Electronics, 2013, 28, 3438-3446.	5.4	6
84	Fast inrush voltage and current restraining method for droop controlled inverter during grid fault clearance in distribution network. IET Generation, Transmission and Distribution, 2018, 12, 4597-4604.	1.4	6
85	Dynamic Stability Improvement and Accurate Power Regulation of Single-Phase Virtual Oscillator Based Microgrids. IEEE Transactions on Sustainable Energy, 2022, 13, 277-289.	5.9	6
86	5-Level Flying Capacitor Bridgeless PFC Converter Using Cost-Effective Low-Voltage GaN Transistors. , 2019, , .		5
87	Comparison of Transient Angle Stability Between Virtual Synchronous Generator and Droop-controlled Inverter. , 2020, , .		5
88	Analysis and Control of Modular Multi-terminal DC Power Flow Controller with Fault Current Limiting Function. Journal of Modern Power Systems and Clean Energy, 2021, 9, 1375-1385.	3.3	5
89	Transient Stabilization Control of Electric Synchronous Machine for Preventing the Collapse of DC-Link Voltage. IEEE Transactions on Smart Grid, 2023, 14, 82-93.	6.2	5
90	Simulation Study of an Insulated Gate Bipolar Transistor With Pinched-Off N-Type Pillar. IEEE Journal of the Electron Devices Society, 2016, 4, 144-148.	1.2	4

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91	Eigenvalue Sensitivity of Stability Analysis for a Droop Controlled Inverter. , 2018, , .		4
92	The Impact of Ramp-Induced Data Attacks on Power System Operational Security. IEEE Transactions on Industrial Informatics, 2019, 15, 5064-5075.	7.2	4
93	Transient Angle Stability Prediction of Virtual Synchronous Generator Using LSTM Neural Network. , 2021, , .		4
94	Vector Analysis Based Multiobjective-Modulated Model Predictive Control for Four-Switching-State Multilevel Converters. IEEE Transactions on Industrial Electronics, 2022, 69, 12999-13010.	5.2	4
95	Capacitor Voltage Ripple Suppression for Z-Source Wind Energy Conversion System. Energies, 2016, 9, 56.	1.6	3
96	Dynamic-Phasor Modeling and Transient Analysis of Inverter-Based Microgrid Under Unbalanced and Harmonic Condition. , 2018, , .		3
97	Short-Circuit Fault Analysis of Energy Storage System Converter with Different Control in DC Microgrid. , 2019, , .		3
98	A new proportional base driver technique for SiC bipolar junction transistor. , 2015, , .		2
99	An asymmetrical fault current calculation method of synchronverter. , 2019, , .		2
100	Re-synchronization Capability Analysis of Virtual Synchronous Generators in Microgrids. , 2019, , .		2
101	A 400V/300A Ultra-Fast Intelligent DC Solid State Circuit Breaker Using Parallel Connected SiC JFETs. , 2019, , .		2
102	A 2 kV Intelligent DC Solid State Circuit Breaker Using Series Connected SiC JFETs. , 2019, , .		2
103	Development of a comprehensive power quality controlling device for power distribution system. , 2008, , .		1
104	Harmonic Prediction Control for Time Delay Canceling and its Realization in Distribution Static Synchronous Compensator. , 2009, , .		1
105	Configuration of a Novel Hybrid Active Power Filter and its Control Method. , 2009, , .		1
106	Resonance suppression for Large-scale Grid- connected photovoltaic plant. , 2014, , .		1
107	Commutation strategies for single-chip dual-gate bidirectional IGBTs in matrix converters. , 2016, , .		1
108	Droop control with an adjustable complex virtual impedance loop based on cloud model theory. , 2016, , .		1

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109	A power allocation method for grid-connected MMC inverter based on droop control. Chinese Journal of Electrical Engineering, 2016, 2, 84-91.	2.3	1
110	Bifurcation analysis of the islanded microgrid with constant power loads. Journal of Engineering, 2017, 2017, 1912-1917.	0.6	1
111	An Asymmetrical Fault Current Iterative Algorithm of Droop-controlled Inverter. , 2019, , .		1
112	Asymmetrical Fault Current Calculation Method and Coupling Effect Analysis in N-Paralleled Droop-Controlled Inverters. , 2020, , .		1
113	Detection and Identification of Power Device Failures Using Discrete Fourier Transform for Fault-Tolerant Operation of Flying Capacitor Multilevel Converters. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 5081-5091.	3.7	1
114	A Table Segmentation and Text Information Extraction Method for Power Work Ticket. , 2021, , .		1
115	Asymmetrical Voltage Support Control of Three-Phase Four-Wire Inverters with Zero Active Power Oscillation during Grid Faults. , 2021, , .		1
116	Coordinated Control for Power Balance Based on Per-Unit Voltage for Multivoltage-Level DC Microgrid. , 2020, , .		1
117	An Active Clamping Control Method for DC Solid State Circuit Breaker Based on Cascaded SiC JFETs. , 2020, , .		1
118	Integrated mathematical model and closed loop control characteristic analysis of hybrid active power filter. , 2009, , .		0
119	Applicability of single-chip dual-gate bidirectional IGBTs in matrix converters. , 2016, , .		0
120	Comparison of Transient Angle Stability Between Different Virtual Synchronous Generators. , 2019, , .		0
121	Power Electronic Traction Transformer Based on No Phase-locked Loop Control. , 2019, , .		0
122	A Calculation Method of Asymmetric Faults Current in Three-Phase Four-Wire Synchronverter. , 2019, , .		0
123	Modeling and Analysis of Low-Frequency Oscillation in PETF-based Train-network System. , 2020, , .		0
124	Power Oscillation Control of Grid-Feeding Converter Considering Next Generation Grid Code During Asymmetrical Faults. , 2020, , .		0
125	Fault Ride Through Control Methods of VSG Controlled IIDGs. , 2021, , 81-100.		0
126	Spatial-Scale Model Reduction of Multi-Microgrid Based on Dynamic Equivalent Theory. , 2021, , 161-184.		0

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127	Modeling and Stability Analysis of Asymmetrical Microgrid Based on Dynamic Phasor Theory. , 2021, , 185-216.		0
128	Analysis of An Abnormal Overcurrent Phenomenon of Fault Ride-Through of Virtual Synchronous Generator. , 2021, , .		0