Weidong Xiao

List of Publications by Year
in descending order

143 papers	6,759 citations	81434 41 h-index	84171 75 g-index
154 all docs	154 docs citations	154 times ranked	6014 citing authors

#	Article	IF	Citations
1	Development of Frequency-Fixed All-Pass Filter-Based Single-Phase Phase-Locked Loop. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 506-517.	3.7	19
2	An Enhanced Time-Delay-Based Reference Current Identification Method for Single-Phase System. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2022, 3, 683-693.	3.0	5
3	A Graph Neural Network Based Deep Learning Predictor for Spatio-Temporal Group Solar Irradiance Forecasting. IEEE Transactions on Industrial Informatics, 2022, 18, 6142-6149.	7.2	31
4	Enhanced Single-Phase Phase Locked Loop Based on Complex-Coefficient Filter. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-8.	2.4	9
5	A Modulation Method for Capacitance Reduction in Active-Clamp Flyback-Based AC–DC Adapters. IEEE Transactions on Power Electronics, 2022, 37, 9455-9467.	5.4	10
6	Reference-Voltage-Line-Aided Power Incremental Algorithm for Photovoltaic GMPPT and Partial Shading Detection. IEEE Transactions on Sustainable Energy, 2022, 13, 1756-1770.	5.9	9
7	Adaptive Droop Control of Multi-Terminal HVDC Network for Frequency Regulation and Power Sharing. IEEE Transactions on Power Systems, 2021, 36, 566-578.	4.6	33
8	Nested Formation Approach for Networked Microgrid Self-Healing in Islanded Mode. IEEE Transactions on Power Delivery, 2021, 36, 452-464.	2.9	33
9	Single-Phase LED Driver With Reduced Power Processing and Power Decoupling. IEEE Transactions on Power Electronics, 2021, 36, 4540-4548.	5.4	20
10	A Comprehensive Study of Orthogonal Signal Generation Schemes for Single Phase Systems. , 2021, , .		5
11	Comparative Study of Numerical Solving Techniques for Modeling Photovoltaic Generators. , 2021, , .		0
12	A fast and accurate approach for power losses quantification of photovoltaic power systems under partial‐shading conditions. IET Renewable Power Generation, 2021, 15, 939-951.	1.7	6
13	Self-Tuning MPPT Scheme Based on Reinforcement Learning and Beta Parameter in Photovoltaic Power Systems. IEEE Transactions on Power Electronics, 2021, 36, 13826-13838.	5.4	17
14	An Enhanced Frequency-Fixed All-Pass Filter PLL for Single-Phase Application. , 2021, , .		0
15	Improved I–V Tracer for Detecting and Analyzing Photovoltaic Power Generators. , 2021, , .		0
16	A Low-cost and Stand-alone Ground Based Sensing Station for Efficient Solar Forecasting in PV Power Systems. , 2021, , .		0
17	Enhanced Modulation Technique for Power Quality Improvement of LED Drivers. , 2021, , .		0
18	A Resilient Scheme for Mitigating False Data Injection Attacks in Distributed DC Microgrids. , 2021, , .		1

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19	Single phase NTD PLL for fast dynamic response and operational robustness under abnormal grid condition. Electric Power Systems Research, 2020, 180, 106156.	2.1	15
20	A comprehensive review of topologies for photovoltaic I–V curve tracer. Solar Energy, 2020, 196, 346-357.	2.9	39
21	Design, analysis and experimental verification of a high voltage gain and high‐efficiency DC–DC converter for photovoltaic applications. IET Renewable Power Generation, 2020, 14, 1699-1709.	1.7	17
22	A cost-effective power ramp rate control strategy based on flexible power point tracking for photovoltaic system. Solar Energy, 2020, 208, 1058-1067.	2.9	15
23	Enhanced battery controller for inertia support in residential microgrid based on active disturbance rejection control. Electric Power Systems Research, 2020, 189, 106646.	2.1	5
24	A Ternary Search Based Maximum Power Point Tracking for Photovoltaic Applications. , 2020, , .		0
25	Optimized Coupled Inductor DC/DC Converter by Integrating Snubber Circuit with Voltage Lift Technique. , 2020, , .		1
26	Realisation of RPS from electrical home appliances in a smart home energy management system. IET Smart Grid, 2020, 3, 11-21.	1.5	7
27	Design and Development of High Step-up DC-DC Converter to Realize High Efficiency and Reduced Voltage Stress. , 2020, , .		5
28	Reconfigurable Nonisolated DC–DC Converter With Fault-Tolerant Capability. IEEE Transactions on Power Electronics, 2020, 35, 8934-8943.	5.4	31
29	A High Conversion Ratio and High-Efficiency Bidirectional DC–DC Converter With Reduced Voltage Stress. IEEE Transactions on Power Electronics, 2020, 35, 11827-11842.	5.4	26
30	LED driver based on novel ripple cancellation technique for flicker‐free operation and reduced power processing. IET Power Electronics, 2020, 13, 3026-3031.	1.5	4
31	Comparative Study of Phase Lead Compensator based In-loop Filtering Method in Single-Phase PLL. , 2020, , .		2
32	A High Gain Flyback DC-DC Converter for PV Applications. , 2020, , .		3
33	Forecasting-Based Power Ramp-Rate Control Strategies for Utility-Scale PV Systems. IEEE Transactions on Industrial Electronics, 2019, 66, 1862-1871.	5.2	78
34	Analysis and experimental verification of a single‐switch high‐voltage gain ZCS DC–DC converter. IET Power Electronics, 2019, 12, 2146-2153.	1.5	19
35	Comprehensive Studies on Operational Principles for Maximum Power Point Tracking in Photovoltaic Systems. IEEE Access, 2019, 7, 121407-121420.	2.6	80
36	Advanced Control Scheme for DC Microgrid via Dual Active Bridge and Bus Signaling. , 2019, , .		1

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37	Analysis, Design, and Experimental Verification of High Step-up DC-DC Converter to Interface Renewable Energy Sources into DC Nanogrid. , 2019, , .		5
38	Advanced Modulation Scheme of Dual Active Bridge for High Conversion Efficiency. , 2019, , .		5
39	Single-Switch High Step-Up DC–DC Converter With Low and Steady Switch Voltage Stress. IEEE Transactions on Industrial Electronics, 2019, 66, 9326-9338.	5.2	89
40	Novel Piecewise Linear Formation of Droop Strategy for DC Microgrid. IEEE Transactions on Smart Grid, 2019, 10, 6747-6755.	6.2	33
41	A novel global maximum power point tracking algorithm for photovoltaic system with variable perturbation frequency and zero oscillation. Solar Energy, 2019, 181, 345-356.	2.9	31
42	Enhanced softâ€switching strategy for flybackâ€based microinverter in PV power systems. IET Renewable Power Generation, 2019, 13, 2830-2839.	1.7	10
43	Co-ordinated Approach of Hybrid Adaptive Control on Wind Energy Integrated VSC-Multiterminal HVDC Grids. , 2019, , .		0
44	Performance Enhancement of High Step-up DC-DC Converter to Attain High Efficiency and Low Voltage Stress. , 2019, , .		1
45	A GaN-based High Step-Up Half-Bridge Resonant Converter for Interfacing PV Modules to DC Data Centers. , 2019, , .		1
46	mixedâ€sensitivity robust control design for damping lowâ€frequency oscillations with DFIG wind power generation. IET Generation, Transmission and Distribution, 2019, 13, 4274-4286.	1.4	24
47	Dualâ€loop control of transfer delay based PLL for fast dynamics in singleâ€phase AC power systems. IET Power Electronics, 2019, 12, 3571-3581.	1.5	7
48	Fast Simulation Technique for Photovoltaic Power Systems using Simulink. , 2019, , .		1
49	Generatorâ€based threshold for transient stability assessment. IET Smart Grid, 2019, 2, 407-419.	1.5	7
50	A Novel Sensorless Photovoltaic Power Reserve Control With Simple Real-Time MPP Estimation. IEEE Transactions on Power Electronics, 2019, 34, 7521-7531.	5.4	64
51	Modified Beta Algorithm for GMPPT and Partial Shading Detection in Photovoltaic Systems. IEEE Transactions on Power Electronics, 2018, 33, 2172-2186.	5.4	90
52	A Novel Power Incremental GMPPT Method based on Modified Voltage Lines for Photovoltaic System. , 2018, , .		5
53	Comprehensive solution of networked microgrid towards enhanced overload resiliency. , 2018, , .		5
54	Designing Localized MPPT for PV Systems Using Fuzzy-Weighted Extreme Learning Machine. Energies, 2018, 11, 2615.	1.6	42

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55	Evaluation of Shunt Model for Simulating Photovoltaic Modules. IEEE Journal of Photovoltaics, 2018, 8, 1818-1823.	1.5	32
56	Feasibility Study on Using Electrical Home Appliances for Distributed Reactive Power Support. , 2018, , .		2
57	Optimal Analysis and Design of DC-DC Converter to Achieve High Voltage Conversion Gain and High Efficiency for Renewable Energy Systems. , 2018, , .		8
58	Review and qualitative analysis of submodule-level distributed power electronic solutions in PV power systems. Renewable and Sustainable Energy Reviews, 2017, 76, 516-528.	8.2	42
59	A New PV System Configuration Based on Submodule Integrated Converters. IEEE Transactions on Power Electronics, 2017, 32, 3278-3284.	5.4	30
60	Improved Sample Value Adjustment for Synchrophasor Estimation at Off-Nominal Power System Conditions. IEEE Transactions on Power Delivery, 2017, 32, 33-44.	2.9	27
61	Review and simulation of flyback topology for module level parallel inverters in PV power systems. , 2017, , .		4
62	Comprehensive harmonic current control in an islanded microgrid. , 2017, , .		1
63	Fast identification of active and reactive current component for single phase grid interconnection. , 2017, , .		3
64	Bridging the transition to DC distribution: A hybrid microgrid for residential apartments. , 2017, , .		7
65	A modified MPPT technique based on the MPP-locus method for photovoltaic system. , 2017, , .		8
66	High frequency inverter topologies integrated with the coupled inductor bridge arm. IET Power Electronics, 2016, 9, 1144-1152.	1.5	5
67	Integration of Startâ€"Stop Mechanism to Improve Maximum Power Point Tracking Performance in Steady State. IEEE Transactions on Industrial Electronics, 2016, 63, 6126-6135.	5.2	16
68	Novel Power Smoothing and Generation Scheduling Strategies for a Hybrid Wind and Marine Current Turbine System. IEEE Transactions on Power Systems, 2016, , 1-1.	4.6	17
69	Review of gridâ€tied converter topologies used in photovoltaic systems. IET Renewable Power Generation, 2016, 10, 1543-1551.	1.7	87
70	An Improved MPPT Method for PV System With Fast-Converging Speed and Zero Oscillation. IEEE Transactions on Industry Applications, 2016, 52, 5051-5064.	3.3	92
71	SPSAâ€NC: simultaneous perturbation stochastic approximation localization based on neighbor confidence. Wireless Communications and Mobile Computing, 2016, 16, 1570-1587.	0.8	2
72	Comprehensive Parameterization of Solar Cell: Improved Accuracy With Simulation Efficiency. IEEE Transactions on Industrial Electronics, 2016, 63, 1549-1560.	5.2	43

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73	Dispatching and Frequency Control Strategies for Marine Current Turbines Based on Doubly Fed Induction Generator. IEEE Transactions on Sustainable Energy, 2016, 7, 262-270.	5.9	16
74	Advanced Fault Ride-Through Management Scheme for VSC-HVDC Connecting Offshore Wind Farms. IEEE Transactions on Power Systems, 2016, 31, 4923-4934.	4.6	55
75	Gallium-Nitride-Based Submodule Integrated Converters for High-Efficiency Distributed Maximum Power Point Tracking PV Applications. IEEE Transactions on Industrial Electronics, 2016, 63, 966-975.	5.2	56
76	An Efficient Modeling Technique to Simulate and Control Submodule-Integrated PV System for Single-Phase Grid Connection. IEEE Transactions on Sustainable Energy, 2016, 7, 96-107.	5.9	66
77	Ultra-High Step-up DC-DC Converter for Distributed Generation by Three Degrees of Freedom (3DoF) Approach. IEEE Transactions on Power Electronics, 2015, , 1-1.	5.4	23
78	Four-Axis Vector-Controlled Dual-Rotor PMSM for Plug-in Electric Vehicles. IEEE Transactions on Industrial Electronics, 2015, 62, 3202-3212.	5.2	75
79	Modeling and Affine Parameterization for Dual Active Bridge DC-DC Converters. Electric Power Components and Systems, 2015, 43, 665-673.	1.0	3
80	A Direct Phase-coordinates Approach to Fault Ride Through of Unbalanced Faults in Large-scale Photovoltaic Power Systems. Electric Power Components and Systems, 2015, 43, 902-913.	1.0	19
81	Improved deterministic real-time estimation of Maximum Power Point in photovoltaic power systems. , 2015, , .		1
82	DC†link voltage control strategy for reducing capacitance and total harmonic distortion in single†phase grid†connected photovoltaic inverters. IET Power Electronics, 2015, 8, 1386-1393.	1.5	46
83	Perturbation optimization of maximum power point tracking of photovoltaic power systems based on practical solar irradiance data. , 2015, , .		18
84	Monitoring, Diagnosis, Prognosis, and Techniques for Increasing the Lifetime/Reliability of Photovoltaic Systems. IEEE Transactions on Industrial Electronics, 2015, 62, 7226-7227.	5.2	14
85	Closed-Form Solution of Time-Varying Model and Its Applications for Output Current Harmonics in Two-Stage PV Inverter. IEEE Transactions on Sustainable Energy, 2015, 6, 142-150.	5.9	37
86	A Novel Droop-Based Average Voltage Sharing Control Strategy for DC Microgrids. IEEE Transactions on Smart Grid, 2015, 6, 1096-1106.	6.2	171
87	Three-Port DC†"DC Converter for Stand-Alone Photovoltaic Systems. IEEE Transactions on Power Electronics, 2015, 30, 3068-3076.	5.4	131
88	Subsynchronous Resonance Mitigation for Series-Compensated DFIG-Based Wind Farm by Using Two-Degree-of-Freedom Control Strategy. IEEE Transactions on Power Systems, 2015, 30, 1442-1454.	4.6	144
89	Constrained Cross Entropy Localization Technique for Wireless Sensor Networks. International Journal of Distributed Sensor Networks, 2015, 11, 267369.	1.3	2
90	An improved Extremum-Seeking based MPPT for grid-connected PV systems with partial shading. , 2014, , .		9

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91	Interleaved Flyback Micro-inverter with Primary Side Current Control for PV Application. , 2014, , .		0
92	Control approach to achieve burst mode operation with DC-link voltage protection in single-phase two-stage PV inverters. , 2014, , .		1
93	Dynamic Modeling and Control of Interleaved Flyback Module-Integrated Converter for PV Power Applications. IEEE Transactions on Industrial Electronics, 2014, 61, 1377-1388.	5.2	123
94	Novel Configuration and Transient Management Control Strategy for VSC-HVDC. IEEE Transactions on Power Systems, 2014, 29, 2478-2488.	4.6	34
95	Fault Ride-Through Configuration and Transient Management Scheme for Self-Excited Induction Generator-Based Wind Turbine. IEEE Transactions on Sustainable Energy, 2014, 5, 148-159.	5.9	22
96	Two Degrees of Freedom Active Damping Technique for LCL Filter-Based Grid Connected PV Systems. IEEE Transactions on Industrial Electronics, 2014, 61, 2795-2803.	5.2	160
97	New Modular Structure DC–DC Converter Without Electrolytic Capacitors for Renewable Energy Applications. IEEE Transactions on Sustainable Energy, 2014, 5, 1184-1192.	5.9	42
98	Three‐phase interleaved high‐step‐up converter with coupled‐inductor‐based voltage quadrupler. IET Power Electronics, 2014, 7, 1841-1849.	1.5	47
99	A Novel Transient Control Strategy for VSC-HVDC Connecting Offshore Wind Power Plant. IEEE Transactions on Sustainable Energy, 2014, 5, 1056-1069.	5.9	68
100	Nonactive Power Loss Minimization in a Bidirectional Isolated DC–DC Converter for Distributed Power Systems. IEEE Transactions on Industrial Electronics, 2014, 61, 6822-6831.	5.2	152
101	Online Supervisory Voltage Control for Grid Interface of Utility-Level PV Plants. IEEE Transactions on Sustainable Energy, 2014, 5, 843-853.	5.9	34
102	A Parameterization Approach for Enhancing PV Model Accuracy. IEEE Transactions on Industrial Electronics, 2013, 60, 5708-5716.	5.2	190
103	Fault ride through capability for grid interfacing large scale PV power plants. IET Generation, Transmission and Distribution, 2013, 7, 1027-1036.	1.4	116
104	A practical load sharing control strategy for DC microgrids and DC supplied houses. , 2013, , .		9
105	Photovoltaic Voltage Regulation by Affine Parameterization. International Journal of Green Energy, 2013, 10, 302-320.	2.1	10
106	Current-Fed High-Frequency AC Distributed Power System for Medium–High-Voltage Gate Driving Applications. IEEE Transactions on Industrial Electronics, 2013, 60, 3736-3751.	5.2	14
107	Loss modeling for enhancement mode gallium nitride field efect transistor in power converter applications. , 2013, , .		0
108	Novel Fault Ride-Through Configuration and Transient Management Scheme for Doubly Fed Induction Generator. IEEE Transactions on Energy Conversion, 2013, 28, 86-94.	3.7	41

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109	Reliability assessment of photovoltaic power systems: Review of current status and future perspectives. Applied Energy, 2013, 104, 822-833.	5.1	199
110	Efficient Approaches for Modeling and Simulating Photovoltaic Power Systems. IEEE Journal of Photovoltaics, 2013, 3, 500-508.	1.5	158
111	Review of current sensorless maximum power point tracking technologies for photovoltaic power systems. , 2013, , .		7
112	Statistic and Parallel Testing Procedure for Evaluating Maximum Power Point Tracking Algorithms of Photovoltaic Power Systems. IEEE Journal of Photovoltaics, 2013, 3, 1062-1069.	1.5	37
113	Optimal penetration levels for inverter-based distributed generation considering harmonic limits. Electric Power Systems Research, 2013, 97, 68-75.	2.1	43
114	Determining Optimal Location and Size of Distributed Generation Resources Considering Harmonic and Protection Coordination Limits. IEEE Transactions on Power Systems, 2013, 28, 1245-1254.	4.6	196
115	Design and performance evaluation of a bidirectional isolated dc–dc converter with extended dual‐phase‐shift scheme. IET Power Electronics, 2013, 6, 914-924.	1.5	46
116	Adaptive control of grid connected photovoltaic inverter for maximum VA utilization. , 2013, , .		19
117	Localization in Wireless Sensor Networks by Cross Entropy Method. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2013, , 103-118.	0.2	3
118	Localization in wireless sensor networks by constrained simultaneous perturbation stochastic approximation technique. , 2012, , .		5
119	Comparative evaluation of DC-link capacitors for electric vehicle application. , 2012, , .		13
120	Passive harmonic filter planning to overcome power quality issues in radial distribution systems. , 2012, , .		17
121	Online Overvoltage Prevention Control of Photovoltaic Generators in Microgrids. IEEE Transactions on Smart Grid, 2012, 3, 2071-2078.	6.2	90
122	Design and optimization of laminated busbar to reduce transient voltage spike. , 2012, , .		18
123	Analysis and Evaluation of DC-Link Capacitors for High-Power-Density Electric Vehicle Drive Systems. IEEE Transactions on Vehicular Technology, 2012, 61, 2950-2964.	3.9	205
124	Performance of frequency relays with multiple synchronous based DG units. , 2012, , .		2
125	Reliability Evaluation of Grid-Connected Photovoltaic Power Systems. IEEE Transactions on Sustainable Energy, 2012, 3, 379-389.	5.9	150
126	Topology review of single phase grid-connected module integrated converters for PV applications. , 2012, , .		37

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127	Modeling and control of DAB applied in a PV based DC microgrid. , 2012, , .		9
128	Affine parameterization and anti-windup approaches for controlling DC-DC converters. , 2012, , .		3
129	A Simple Approach to Modeling and Simulation of Photovoltaic Modules. IEEE Transactions on Sustainable Energy, 2012, 3, 185-186.	5.9	187
130	Optimal fault current limiter sizing for distribution systems with DG. , 2011, , .		24
131	Overview of maximum power point tracking technologies for photovoltaic power systems. , 2011, , .		79
132	Communication systems for grid integration of renewable energy resources. IEEE Network, 2011, 25, 22-29.	4.9	155
133	Allowable DG penetration level considering harmonic distortions. , 2011, , .		8
134	Estimating power losses in Dual Active Bridge DC-DC converter. , 2011, , .		19
135	Application of Centered Differentiation and Steepest Descent to Maximum Power Point Tracking. IEEE Transactions on Industrial Electronics, 2007, 54, 2539-2549.	5.2	135
136	Regulation of Photovoltaic Voltage. IEEE Transactions on Industrial Electronics, 2007, 54, 1365-1374.	5.2	291
137	Topology Study of Photovoltaic Interface for Maximum Power Point Tracking. IEEE Industrial Electronics Magazine, 2007, 54, 1696-1704.	2.3	480
138	Modeling of a constant Voltage transformer. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2006, 53, 409-418.	0.1	12
139	Real-Time Identification of Optimal Operating Points in Photovoltaic Power Systems. IEEE Transactions on Industrial Electronics, 2006, 53, 1017-1026.	5.2	215
140	A novel modeling method for photovoltaic cells. , 0, , .		169
141	Fuzzy logic auto-tuning applied on DC-DC converter. , 0, , .		6
142	Evaluating maximum power point tracking performance by using artificial lights. , 0, , .		7
143	A modified adaptive hill climbing MPPT method for photovoltaic power systems. , 0, , .		295