

# Filippo Spertino

## List of Publications by Year in descending order

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164  
papers

4,728  
citations

126858

33  
h-index

118793

62  
g-index

166  
all docs

166  
docs citations

166  
times ranked

3777  
citing authors

#	ARTICLE	IF	CITATIONS
1	Sliding-Mode Robot Control With Exponential Reaching Law. IEEE Transactions on Industrial Electronics, 2011, 58, 600-610.	5.2	403
2	Packed U Cells Multilevel Converter Topology: Theoretical Study and Experimental Validation. IEEE Transactions on Industrial Electronics, 2011, 58, 1294-1306.	5.2	391
3	A New Sensorless Hybrid MPPT Algorithm Based on Fractional Short-Circuit Current Measurement and P&O MPPT. IEEE Transactions on Sustainable Energy, 2015, 6, 1426-1434.	5.9	313
4	A Lyapunov-Function-Based Control for a Three-Phase Shunt Hybrid Active Filter. IEEE Transactions on Industrial Electronics, 2012, 59, 1418-1429.	5.2	185
5	â€œSRF Theory Revisitedâ€ to Control Self-Supported Dynamic Voltage Restorer (DVR) for Unbalanced and Nonlinear Loads. IEEE Transactions on Industry Applications, 2013, 49, 2330-2340.	3.3	157
6	A Novel Six-Band Hysteresis Control for the Packed U Cells Seven-Level Converter: Experimental Validation. IEEE Transactions on Industrial Electronics, 2012, 59, 3808-3816.	5.2	133
7	Control of Reduced-Rating Dynamic Voltage Restorer With a Battery Energy Storage System. IEEE Transactions on Industry Applications, 2014, 50, 1295-1303.	3.3	133
8	Grid integration aspects of large solar PV installations: LVRT capability and reactive power/voltage support requirements. , 2011, , .		121
9	Electrical Impact of Photovoltaic Plant in Distributed Network. IEEE Transactions on Industry Applications, 2009, 45, 341-347.	3.3	118
10	Experimental assessment of the waveform distortion in grid-connected photovoltaic installations. Solar Energy, 2009, 83, 1026-1039.	2.9	98
11	DSP-Based Implementation of an LQR With Integral Action for a Three-Phase Three-Wire Shunt Active Power Filter. IEEE Transactions on Industrial Electronics, 2009, 56, 2821-2828.	5.2	91
12	Capacitor charging method for Iâ€V curve tracer and MPPT in photovoltaic systems. Solar Energy, 2015, 119, 461-473.	2.9	83
13	Power Factor Correction in Bridgeless-Luo Converter-Fed BLDC Motor Drive. IEEE Transactions on Industry Applications, 2015, 51, 1179-1188.	3.3	73
14	A maximum power point tracking technique based on bypass diode mechanism for PV arrays under partial shading. Energy and Buildings, 2014, 73, 13-25.	3.1	68
15	An Improved Control Algorithm for Active Filters. IEEE Transactions on Power Delivery, 2007, 22, 1009-1020.	2.9	67
16	Economic analysis of investment in the rooftop photovoltaic systems: A long-term research in the two main markets. Renewable and Sustainable Energy Reviews, 2013, 28, 531-540.	8.2	65
17	Compressive Spatio-Temporal Forecasting of Meteorological Quantities and Photovoltaic Power. IEEE Transactions on Sustainable Energy, 2016, 7, 1295-1305.	5.9	63
18	Power Quality Enhancement Using DSTATCOM in Distributed Power Generation System. IEEE Transactions on Industry Applications, 2016, 52, 5203-5212.	3.3	60

#	ARTICLE	IF	CITATIONS
19	An Implementation of Solar PV Array Based Multifunctional EV Charger. IEEE Transactions on Industry Applications, 2020, , 1-1.	3.3	55
20	An Efficient and Cost-Effective Hybrid MPPT Method for a Photovoltaic Flyback Microinverter. IEEE Transactions on Sustainable Energy, 2018, 9, 1137-1144.	5.9	52
21	Power conditioning units in grid-connected photovoltaic systems: A comparison with different technologies and wide range of power ratings. Solar Energy, 2014, 108, 219-229.	2.9	51
22	Lyapunov-Based Model Predictive Control of a PUC7 Grid-Connected Multilevel Inverter. IEEE Transactions on Industrial Electronics, 2019, 66, 7012-7021.	5.2	51
23	Which are the constraints to the photovoltaic grid-parity in the main European markets?. Solar Energy, 2014, 105, 390-400.	2.9	47
24	A power and energy procedure in operating photovoltaic systems to quantify the losses according to the causes. Solar Energy, 2015, 118, 313-326.	2.9	47
25	Monitoring and checking of performance in photovoltaic plants: A tool for design, installation and maintenance of grid-connected systems. Renewable Energy, 2013, 60, 722-732.	4.3	46
26	Self-Consumption and Self-Sufficiency in Photovoltaic Systems: Effect of Grid Limitation and Storage Installation. Energies, 2021, 14, 1591.	1.6	45
27	On the performance of the double-diode model in estimating the maximum power point for different photovoltaic technologies. Measurement: Journal of the International Measurement Confederation, 2013, 46, 3549-3559.	2.5	44
28	A Network Tearing Technique for FPGA-Based Real-Time Simulation of Power Converters. IEEE Transactions on Industrial Electronics, 2014, , 1-1.	5.2	44
29	Transient Modeling of Squirrel-Cage Induction Machine Considering Air-Gap Flux Saturation Harmonics. IEEE Transactions on Industrial Electronics, 2008, 55, 2798-2809.	5.2	42
30	PV Module Parameter Characterization From the Transient Charge of an External Capacitor. IEEE Journal of Photovoltaics, 2013, 3, 1325-1333.	1.5	42
31	A Single-Stage Stand-Alone Photovoltaic Energy System With High Tracking Efficiency. IEEE Transactions on Sustainable Energy, 2017, 8, 755-762.	5.9	40
32	Thermal-electrical model for energy estimation of a water cooled photovoltaic module. Solar Energy, 2016, 133, 119-140.	2.9	38
33	23-level Single DC Source Hybrid PUC (H-PUC) Converter Topology With Reduced Number of Components: Real-Time Implementation With Model Predictive Control. IEEE Open Journal of the Industrial Electronics Society, 2020, 1, 127-137.	4.8	38
34	Optimized Based Algorithm First Order Sliding Mode Control for Grid-Connected Packed E-Cell (PEC) Inverter. , 2019, , .		36
35	Voltage Control in Low-Voltage Grids Using Distributed Photovoltaic Converters and Centralized Devices. IEEE Transactions on Industry Applications, 2019, 55, 225-237.	3.3	35
36	Toward the Complete Self-Sufficiency of an nZEBs Microgrid by Photovoltaic Generators and Heat Pumps: Methods and Applications. IEEE Transactions on Industry Applications, 2019, 55, 7028-7040.	3.3	33

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37	Three-Phase Current-Injection Rectifiers: Competitive Topologies for Power Factor Correction. IEEE Industrial Electronics Magazine, 2012, 6, 24-40.	2.3	30
38	Vehicle-to-Home Usage Scenarios for Self-Consumption Improvement of a Residential Prosumer With Photovoltaic Roof. IEEE Transactions on Industry Applications, 2020, 56, 2945-2956.	3.3	29
39	A New Configuration of Paralleled Modular ANPC Multilevel Converter Controlled by an Improved Modulation Method for 1 MHz, 1 MW EV Charger. IEEE Transactions on Industry Applications, 2021, 57, 3164-3178.	3.3	29
40	A method for obtaining the I-V curve of photovoltaic arrays from module voltages and its applications for MPP tracking. Solar Energy, 2016, 139, 489-505.	2.9	28
41	Photovoltaic applications. Journal of Materials Processing Technology, 2007, 181, 267-273.	3.1	27
42	Real-Time Simulation-Based Multisolver Decoupling Technique for Complex Power-Electronics Circuits. IEEE Transactions on Power Delivery, 2016, 31, 2313-2321.	2.9	27
43	Development and assessment of a solar home system to cover cooking and lighting needs in developing regions as a better alternative for existing practices. Solar Energy, 2017, 155, 7-17.	2.9	27
44	Characterisation and assessment of the harmonic emission of grid-connected photovoltaic systems. , 2005, , .		26
45	Low Frequency Finite Set Model Predictive Control for Seven-Level Modified Packed U-Cell Rectifier. , 2019, , .		26
46	Maintenance Activity, Reliability, Availability, and Related Energy Losses in Ten Operating Photovoltaic Systems up to 1.8 MW. IEEE Transactions on Industry Applications, 2021, 57, 83-93.	3.3	26
47	Experimental Indicators of Current Unbalance in Building-Integrated Photovoltaic Systems. IEEE Journal of Photovoltaics, 2014, 4, 924-934.	1.5	25
48	GI-Based Control Scheme for Single-Stage Grid Interfaced SECS for Power Quality Improvement. IEEE Transactions on Industry Applications, 2019, 55, 869-881.	3.3	24
49	Limits of Advisability for Masterâ€“Slave Configuration of DCâ€“AC Converters in Photovoltaic Systems. IEEE Journal of Photovoltaics, 2012, 2, 547-554.	1.5	23
50	MPPT technique based on improved evaluation of photovoltaic parameters for uniformly irradiated photovoltaic array. Electric Power Systems Research, 2017, 145, 248-263.	2.1	22
51	Experimental Evidence of PID Effect on CIGS Photovoltaic Modules. Energies, 2020, 13, 537.	1.6	22
52	A comparative study of adaptive control algorithms in Distribution Static Compensator. , 2013, , .		21
53	Synergistic freshwater and electricity production using passive membrane distillation and waste heat recovered from camouflaged photovoltaic modules. Journal of Cleaner Production, 2021, 318, 128464.	4.6	21
54	Detection of Typical Defects in Silicon Photovoltaic Modules and Application for Plants with Distributed MPPT Configuration. Energies, 2019, 12, 4547.	1.6	21

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55	Comparison between isolated and non-isolated DC/DC converters for bidirectional EV chargers. , 2017, , .		20
56	Error Assessment of Solar Irradiance Forecasts and AC Power from Energy Conversion Model in Grid-Connected Photovoltaic Systems. Energies, 2016, 9, 8.	1.6	19
57	Assessment of unbalance and distortion components in three-phase systems with harmonics and interharmonics. Electric Power Systems Research, 2017, 147, 201-212.	2.1	19
58	Reliability Analysis and Repair Activity for the Components of 350 kW Inverters in a Large Scale Grid-Connected Photovoltaic System. Electronics (Switzerland), 2021, 10, 564.	1.8	19
59	A novel transformerless hybrid series active filter. , 2012, , .		18
60	An MPPT technique for unshaded/shaded photovoltaic array based on transient evolution of series capacitor. Solar Energy, 2017, 157, 377-389.	2.9	18
61	Module Level Electronic Circuit Based PV Array for Identification and Reconfiguration of Bypass Modules. IEEE Transactions on Energy Conversion, 2021, 36, 380-389.	3.7	18
62	Efficient MPP Tracking of Photovoltaic (PV) Array Through Modified Boost Converter With Simple SMC Voltage Regulator. IEEE Transactions on Sustainable Energy, 2022, 13, 1790-1801.	5.9	18
63	An Efficient Approach to Design Discrete Packaging of Bidirectional Resonant Power Switch for Matrix Converter Applications. IEEE Transactions on Power Electronics, 2008, 23, 2195-2200.	5.4	17
64	DFIG equivalent circuit and mismatch assessment between manufacturer and experimental power-wind speed curves. Renewable Energy, 2012, 48, 333-343.	4.3	17
65	Performance of Grid-Connected Photovoltaic Systems in Fixed and Sun-Tracking Configurations. , 2007, , .		16
66	Improved Restricted Control Set Model Predictive Control (iRCS-MPC) Based Maximum Power Point Tracking of Photovoltaic Module. IEEE Access, 2019, 7, 149422-149432.	2.6	16
67	Inverters for grid connection of photovoltaic systems and power quality: Case studies. , 2012, , .		15
68	Supraharmonics: Concepts and experimental results on photovoltaic systems. , 2015, , .		15
69	Uncertainty issues in the experimental assessment of degradation rate of power ratings in photovoltaic modules. Measurement: Journal of the International Measurement Confederation, 2017, 111, 432-440.	2.5	15
70	Energy Evaluation of a PV-Based Test Facility for Assessing Future Self-Sufficient Buildings. Energies, 2021, 14, 329.	1.6	15
71	Assessing the role of fluctuating renewables in energy transition: Methodologies and tools. Applied Energy, 2022, 314, 118968.	5.1	15
72	Voltage and frequency controller for an autonomous micro hydro generating system. , 2008, , .		14

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73	Neural Network Controller to Manage the Power Flow of a Hybrid Source for Electric Vehicles. , 2015, , .		14
74	A Stability and Accuracy Validation Method for Multirate Digital Simulation. IEEE Transactions on Industrial Informatics, 2017, 13, 512-519.	7.2	14
75	Forecast-Based V2G Aggregation Model for Day-Ahead and Real-Time Operations. , 2020, , .		14
76	An advanced control algorithm for Series hybrid active filter adopting UPQC behavior. , 2012, , .		13
77	Implementation of adaptive filter based control algorithm for Distribution Static Compensator. , 2012, , .		13
78	Renewable sources with storage for cost-effective solutions to supply commercial loads. , 2016, , .		13
79	An Innovative Correction Method of Wind Speed for Efficiency Evaluation of Wind Turbines. Acta IMEKO (2012), 2021, 10, 46.	0.4	13
80	Energetic-Environmental-Economic Feasibility and Impact Assessment of Grid-Connected Photovoltaic System in Wastewater Treatment Plant: Case Study. Energies, 2021, 14, 100.	1.6	13
81	Power factor correction and zero voltage regulation in distribution system using DSTATCOM. , 2012, , .		12
82	Uncertainty analysis of degradation parameters estimated in long-term monitoring of photovoltaic plants. Measurement: Journal of the International Measurement Confederation, 2014, 55, 641-649.	2.5	12
83	Maintenance Activity, Reliability Analysis and Related Energy Losses in Five Operating Photovoltaic Plants. , 2019, , .		12
84	Small-Signal Averaged Model and Carrier-Based Linear Control of a Sheppard-Taylor PFC. , 2007, , .		11
85	An experimental procedure to check the performance degradation on-site in grid-connected photovoltaic systems. , 2014, , .		11
86	Finite element simulation of hydro generators with rotor inter turn short circuit. , 2017, , .		11
87	Averaged Model Based Control of a Sheppard-Taylor PFC with Nonlinearity Compensation. , 2007, , .		10
88	Carrier based PWM for even power distribution in cascaded H-bridge multilevel inverters within single power cycle. , 2016, , .		10
89	Variable Parameters for a Single Exponential Model of Photovoltaic Modules in Crystalline-Silicon. Energies, 2018, 11, 2138.	1.6	10
90	Improved Voltage Controlled Three Phase Voltage Source Inverter Using Model Predictive Control for Standalone System. , 2018, , .		10

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91	Improvement of Self-Sufficiency for an Innovative Nearly Zero Energy Building by Photovoltaic Generators. , 2019, , .		10
92	In-field monitoring of eight photovoltaic plants: degradation rate along seven years of continuous operation. Acta IMEKO (2012), 2019, 7, 75.	0.4	10
93	Experimental Analysis of Wind Farms connected to the High Voltage Grid: the Viewpoint of Power Quality. , 2006, , .		9
94	Experimental Evaluation of Unbalance and Distortion Indicators in Three-Phase Systems with Neutral. , 2007, , .		9
95	A single-phase transformerless active filter with reduced DC-link voltage. , 2014, , .		9
96	Choice of the most suitable wind turbine in the installation site: A case study. , 2015, , .		9
97	Matching between electric generation and load: Hybrid PV-wind system and tertiary-sector users. , 2015, , .		9
98	A short-term spatio-temporal approach for Photovoltaic power forecasting. , 2016, , .		9
99	Modeling and optimal operation of a university campus microgrid. , 2016, , .		9
100	Optimal size of photovoltaic systems with storage for office and residential loads in the Italian net-billing scheme. , 2016, , .		9
101	A hybrid maximum power point tracking method for photovoltaic applications with reduced offline measurements. , 2017, , .		9
102	Voltage control in low voltage grids: A comparison between the use of distributed photovoltaic converters or centralized devices. , 2017, , .		9
103	Harmonic distortion and unbalance analysis in multi-inverter photovoltaic systems. , 2018, , .		9
104	A Novel Procedure to Adjust the Equivalent Circuit Parameters of Photovoltaic Modules under Shading. , 2020, , .		9
105	Storage sizing procedure and experimental verification of stand-alone photovoltaic systems. , 2012, , .		8
106	Accurate measurements of solar irradiance for evaluation of photovoltaic power profiles. , 2013, , .		8
107	Best compromise of net power gain in a cooled photovoltaic system. , 2016, , .		8
108	Theoretical and Numerical Study of a Photovoltaic System with Active Fluid Cooling by a Fully-Coupled 3D Thermal and Electric Model. Energies, 2020, 13, 852.	1.6	8

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109	Small-signal averaged model and carrier-based linear control of a new Sheppard-Taylor-based PFC. , 2008, , .		7
110	PV system integration in buildings: An energy and economic case study. , 2017, , .		7
111	How much is the advisable self-sufficiency of aggregated prosumers with photovoltaic-wind power and storage to avoid grid upgrades?. , 2017, , .		7
112	A Direct PWM Voltage Controller of MPPT & Sizing of DC Loads for Photovoltaic System. IEEE Transactions on Energy Conversion, 2018, 33, 991-1001.	3.7	7
113	Realization and Use of an IR Camera for Laboratory and On-field Electroluminescence Inspections of Silicon Photovoltaic Modules. , 2019, , .		7
114	Operational characteristics of a 27-MW wind farm from experimental data. , 2008, , .		6
115	Weather forecast-based power predictions and experimental results from photovoltaic systems. , 2014, , .		6
116	Electricity consumption assessment and PV system integration in grid-connected office buildings. , 2015, , .		6
117	Technical Solutions and Standards Upgrade for Photovoltaic Systems Operated Over 1500 Vdc. , 2018, , .		6
118	Self-Consumption Improvement for a Nanogrid with Photovoltaic and Vehicle-to-Home Technologies. , 2018, , .		6
119	Revised Perturb and Observe Approach For Maximum Power Point Tracking Of Photovoltaic Module Using Finite Control Set Model Predictive Control. , 2019, , .		6
120	A Novel MPPT Technique Based on Mutual Coordination between Two PV Modules/Arrays. Energies, 2021, 14, 6996.	1.6	6
121	Protections impact on the availability of a wind power plant operating in real conditions. , 2009, , .		5
122	Real-time simulation of modular multilevel converter on FPGA with sub-microsecond time-step. , 2014, , .		5
123	A distribution grid tied multifunctional SPV system operating with control approach based on decoupled adaptive neural network. , 2015, , .		5
124	Performance enhancement of a flyback photovoltaic inverter using hybrid maximum power point tracking. , 2015, , .		5
125	Constant Switching Frequency Hierarchical Deadbeat Predictive Direct Power Controller with Dynamic Power Estimator for 3L-ANPC AFE Rectifier for EV Charger Applications. , 2020, , .		5
126	Long Term Wind Turbine Performance Analysis Through SCADA Data: A Case Study. , 2021, , .		5



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127	Voltage control in low voltage grids with independent operation of on-load tap changer and distributed photovoltaic inverters. <i>Electric Power Systems Research</i> , 2022, 211, 108187.	2.1	5
128	Design, study, modeling and control of a modified Sheppard-Taylor PFC. , 2009, , .		4
129	Characterization of solar irradiance profiles for photovoltaic system studies through data rescaling in time and amplitude. , 2014, , .		4
130	Maximization of Self-Sufficiency with Grid Constraints: PV Generators, Wind Turbines and Storage to Feed Tertiary Sector Users. , 2017, , .		4
131	Benefits of On-Load Tap Changers Coordinated Operation for Voltage Control in Low Voltage Grids with High Photovoltaic Penetration. , 2020, , .		4
132	A Multilevel 30-Sided Space Vector Structure With Congruent Triangles and Timing Calculation Using Only Sampled Reference Voltages. <i>IEEE Transactions on Industrial Electronics</i> , 2021, 68, 7884-7894.	5.2	4
133	Closed-Form Modulation of a Dual-Active-Bridge Based Capacitorless Charger for Electric Vehicles. , 2018, , .		3
134	A Smart Battery Management System for Photovoltaic Plants in Households Based on Raw Production Forecast. , 0, , .		3
135	Particle Swarm Optimization “ Model Predictive Control for Microgrid Energy Management. , 2020, , .		3
136	Introduction“Advances and Challenges in Active Distribution Systems. <i>Lecture Notes in Electrical Engineering</i> , 2022, , 1-42.	0.3	3
137	Neighboring-Pixel-Based Maximum Power Point Tracking Algorithm for Partially Shaded Photovoltaic (PV) Systems. <i>Electronics (Switzerland)</i> , 2022, 11, 359.	1.8	3
138	Electrical Impact of Photovoltaic Plant in Distributed Network. <i>Conference Record - IAS Annual Meeting (IEEE Industry Applications Society)</i> , 2007, , .	0.0	2
139	Sensorless Nonlinear Control of a Three-Phase/ Switch/ Level Vienna Rectifier Based on a Numerical Reconstruction of DC and AC Voltages. , 2008, , .		2
140	Pulsed Injection Braking for EV Power Train: Fault Tolerant Application for Hybrid and Electric Vehicle (HEV - EV). , 2015, , .		2
141	Single-Phase Power Generation Employing VFC for Stand-Alone Three-Phase Doubly Wound Asynchronous Generator. <i>IEEE Transactions on Industry Applications</i> , 2015, 51, 4785-4796.	3.3	2
142	Experimental investigations to characterize power quality of AC supplied thermoelectric refrigerators. , 2017, , .		2
143	Subhour Simulation of a Microgrid of All-Electric nZEBs Based on Italian Market Rules. , 2020, , .		2
144	E-learning of Electrical Engineering Subjects in the Context of the EU-Mong Educational Project. , 2020, , .		2

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145	Ground currents in a photovoltaic power plant: Theoretical approach and experimental tests. , 2017, , .		2
146	An Innovative Method to Evaluate the Real Performance of Wind Turbines With Respect to the Manufacturer Power Curve: Case Study from Mauritania. , 2021, , .		2
147	Statistical Validation and Power Modelling of Hourly Profiles for a Large-Scale Photovoltaic Plant Portfolio. , 2021, , .		2
148	Application of the New Quasi-Linear Control Theory to the AC Current Shaping and DC Voltage Regulation of a Three-Phase boost-type AC/DC Vienna Converter Under Very Severe Operating Conditions. , 2007, , .		1
149	Flexible synchronous PWM control of cascaded inverters for photovoltaic generation. , 2010, , .		1
150	Power quality improved bridgeless converter based multiple output SMPS. , 2013, , .		1
151	Variable step learning control algorithm for VSC based shunt compensator. , 2013, , .		1
152	Micro-multigeneration modelling and operational assessment for residential applications. , 2015, , .		1
153	Simulation of sun tracking system for point focus fresnel collector. , 2017, , .		1
154	Quality Check during Manufacturing of Custom Photovoltaic Modules with Back-Contact Cells. , 2019, , .		1
155	Determination of Second-Life Battery Capacity and Load Rating for a Standalone E-Bike Charging Station Powered by Hybrid Renewable Energy System. , 2020, , .		1
156	Innovative Laboratories for Teaching on Photovoltaic Generation in Higher Education. , 2020, , .		1
157	Harmonic voltage distortion generated by grid-connected photovoltaic generators. , 2009, , .		1
158	An Innovative Technique for Energy Assessment of a Highly Efficient Photovoltaic Module. Solar, 2022, 2, 321-333.	0.9	1
159	Non-linear Optimization Approach to Determine Parameters of Small Salient-pole Synchronous Machines from the Short-circuit Test. Electric Power Components and Systems, 2010, 38, 1076-1096.	1.0	0
160	Converter Design for a Railway Voltage Booster Using Two Simulators. , 2015, , .		0
161	Probabilistic Harmonic Power Flow Calculations with Uncertain and Correlated Data. , 2015, , 95-154.		0
162	A Five-Level Inverter Scheme with Increased Linear Modulation Range. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
163	State of the Art of Electricity Generation (2007-2017). E3S Web of Conferences, 2019, 119, 00019.	0.2	0
164	Solar energy, wind energy and storage for the electricity grid of today and tomorrow. E3S Web of Conferences, 2019, 119, 00020.	0.2	0