Abhisek Ukil

List of Publications by Year
in descending order

186 papers	4,126 citations	136950 32 h-index	144013 57 g-index
189 all docs	189 docs citations	189 times ranked	3498 citing authors

#	Article	IF	Citations
1	Distributed Temperature Sensing: Review of Technology and Applications. IEEE Sensors Journal, 2012, 12, 885-892.	4.7	284
2	Hybrid Optimization for Economic Deployment of ESS in PV-Integrated EV Charging Stations. IEEE Transactions on Industrial Informatics, 2018, 14, 106-116.	11.3	262
3	Validation of Faster Joint Control Strategy for Battery- and Supercapacitor-Based Energy Storage System. IEEE Transactions on Industrial Electronics, 2018, 65, 3286-3295.	7.9	146
4	DC Grid Voltage Regulation Using New HESS Control Strategy. IEEE Transactions on Sustainable Energy, 2017, 8, 772-781.	8.8	144
5	Short-Time Fourier Transform Based Transient Analysis of VSC Interfaced Point-to-Point DC System. IEEE Transactions on Industrial Electronics, 2018, 65, 4080-4091.	7.9	140
6	Reconfiguration and Load Balancing in the LV and MV Distribution Networks for Optimal Performance. IEEE Transactions on Power Delivery, 2007, 22, 2534-2540.	4.3	137
7	Energy Management and Control for Grid Connected Hybrid Energy Storage System Under Different Operating Modes. IEEE Transactions on Smart Grid, 2019, 10, 1626-1636.	9.0	134
8	Agent-Based Aggregated Behavior Modeling for Electric Vehicle Charging Load. IEEE Transactions on Industrial Informatics, 2019, 15, 856-868.	11.3	130
9	Modeling and Validation of Electrical Load Profiling in Residential Buildings in Singapore. IEEE Transactions on Power Systems, 2015, 30, 2800-2809.	6.5	120
10	Development and Implementation of Parameterized FPGA-Based General Purpose Neural Networks for Online Applications. IEEE Transactions on Industrial Informatics, 2011, 7, 78-89.	11.3	107
11	Short-Circuit Fault Management in DC Electric Ship Propulsion System: Protection Requirements, Review of Existing Technologies and Future Research Trends. IEEE Transactions on Transportation Electrification, 2018, 4, 272-291.	7.8	97
12	Experimental Validation of Fault Identification in VSC-Based DC Grid System. IEEE Transactions on Industrial Electronics, 2018, 65, 4799-4809.	7.9	81
13	A Digital Method of Power-Sharing and Cross-Regulation Suppression for Single-Inductor Multiple-Input Multiple-Output DCâ€"DC Converter. IEEE Transactions on Industrial Electronics, 2017, 64, 2836-2847.	7.9	75
14	Time- and Frequency-Domain Fault Detection in a VSC-Interfaced Experimental DC Test System. IEEE Transactions on Industrial Informatics, 2018, 14, 4353-4364.	11.3	75
15	Current-Only Directional Overcurrent Protection for Distribution Automation: Challenges and Solutions. IEEE Transactions on Smart Grid, 2012, 3, 1687-1694.	9.0	67
16	Deadbeat Control for Hybrid Energy Storage Systems in DC Microgrids. IEEE Transactions on Sustainable Energy, 2019, 10, 1867-1877.	8.8	65
17	Detection of stator short circuit faults in three-phase induction motors using motor current zero crossing instants. Electric Power Systems Research, 2011, 81, 1036-1044.	3.6	63
18	Analysis and validation of wavelet transform based DC fault detection in HVDC system. Applied Soft Computing Journal, 2017, 61, 17-29.	7.2	63

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19	Intelligent Systems and Signal Processing in Power Engineering. Power Systems, 2007, , .	0.5	57
20	Abrupt change detection in power system fault analysis using adaptive whitening filter and wavelet transform. Electric Power Systems Research, 2006, 76, 815-823.	3.6	56
21	Toward Threat of Implementation Attacks on Substation Security: Case Study on Fault Detection and Isolation. IEEE Transactions on Industrial Informatics, 2018, 14, 2442-2451.	11.3	54
22	Optimization of Charge/Discharge Rates of a Battery Using a Two-Stage Rate-Limit Control. IEEE Transactions on Sustainable Energy, 2017, 8, 516-529.	8.8	51
23	Current-Only Directional Overcurrent Relay. IEEE Sensors Journal, 2011, 11, 1403-1404.	4.7	48
24	Hybrid energy storage system using bidirectional single-inductor multiple-port converter with model predictive control in DC microgrids. Electric Power Systems Research, 2019, 173, 38-47.	3.6	46
25	Efficiency comparison of DC and AC microgrid. , 2015, , .		43
26	Model Predictive and Iterative Learning Control Based Hybrid Control Method for Hybrid Energy Storage System. IEEE Transactions on Sustainable Energy, 2021, 12, 2146-2158.	8.8	42
27	Application of Abrupt Change Detection in Power Systems Disturbance Analysis and Relay Performance Monitoring. IEEE Transactions on Power Delivery, 2007, 22, 59-66.	4.3	41
28	Comparative evaluation of power loss in HVAC and HVDC transmission systems. , 2016, , .		39
29	Comparative Performance Analysis of Induction and Synchronous Reluctance Motors in Chiller Systems for Energy Efficient Buildings. IEEE Transactions on Industrial Informatics, 2019, 15, 4384-4393.	11.3	37
30	Consensus-Based Control of Hybrid Energy Storage System With a Cascaded Multiport Converter in DC Microgrids. IEEE Transactions on Sustainable Energy, 2020, 11, 2356-2366.	8.8	36
31	Modeling and Real-Time Scheduling of DC Platform Supply Vessel for Fuel Efficient Operation. IEEE Transactions on Transportation Electrification, 2017, 3, 762-778.	7.8	35
32	Hybrid Maximum Power Point Tracking Method Based on Iterative Learning Control and Perturb & Observe Method. IEEE Transactions on Sustainable Energy, 2021, 12, 659-670.	8.8	35
33	Fault detection in HVDC system using Short Time Fourier Transform. , 2016, , .		34
34	DC Marine Power System: Transient Behavior and Fault Management Aspects. IEEE Transactions on Industrial Informatics, 2019, 15, 1911-1925.	11.3	34
35	Capacitive discharge based transient analysis with fault detection methodology in DC system. International Journal of Electrical Power and Energy Systems, 2018, 97, 127-137.	5.5	33
36	Joint Control of Three-Level DCâ€"DC Converter Interfaced Hybrid Energy Storage System in DC Microgrids. IEEE Transactions on Energy Conversion, 2019, 34, 2248-2257.	5.2	33

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37	Wavelet based fault analysis in HVDC system. , 2014, , .		32
38	Feeder load balancing using fuzzy logic and combinatorial optimization-based implementation. Electric Power Systems Research, 2008, 78, 1922-1932.	3.6	31
39	Fast computation of arctangent functions for embedded applications: A comparative analysis. , 2011, , .		31
40	Automated analysis of power systems disturbance records: Smart Grid big data perspective. , 2014, , .		31
41	Smart I/O Modules for Mitigating Cyber-Physical Attacks on Industrial Control Systems. IEEE Transactions on Industrial Informatics, 2020, 16, 4659-4669.	11.3	31
42	Improved S Transform-Based Fault Detection Method in Voltage Source Converter Interfaced DC System. IEEE Transactions on Industrial Electronics, 2021, 68, 5024-5035.	7.9	31
43	A Method for Incipient Interturn Fault Detection and Severity Estimation of Induction Motors Under Inherent Asymmetry and Voltage Imbalance. IEEE Transactions on Transportation Electrification, 2017, 3, 703-715.	7.8	30
44	Simulation and analysis of faults in high voltage DC (HVDC) power transmission. , 2014, , .		28
45	Water Ingress Detection in Low-Pressure Gas Pipelines Using Distributed Temperature Sensing System. IEEE Sensors Journal, 2017, 17, 3165-3173.	4.7	28
46	Monitoring of HV Generator Circuit Breaker Contact Ablation Based on Acoustic Emission. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 2683-2693.	4.7	27
47	Estimation of Induction Motor Operating Power Factor From Measured Current and Manufacturer Data. IEEE Transactions on Energy Conversion, 2011, 26, 699-706.	5.2	26
48	Reinforcement Learning Controllers for Enhancement of Low Voltage Ride Through Capability in Hybrid Power Systems. IEEE Transactions on Industrial Informatics, 2020, 16, 5023-5031.	11.3	25
49	Adjusted Haar wavelet for application in the power systems disturbance analysis. , 2008, 18, 103-115.		24
50	Feeder Load Balancing Using Neural Network. Lecture Notes in Computer Science, 2006, , 1311-1316.	1.3	22
51	The detection of abrupt changes using recursive identification for power system fault analysis. Electric Power Systems Research, 2007, 77, 259-265.	3.6	21
52	Leak detection in gas distribution pipelines using acoustic impact monitoring. , 2016, , .		20
53	Hybrid Maximum Power Point Tracking Method Based on Iterative Learning Control and Perturb & Observe Method. , 2021, , .		20
54	Smart distribution protection using current-only directional overcurrent relay. , 2010, , .		19

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55	Protection strategies for LVDC distribution system. , 2015, , .		19
56	Modeling of Room Temperature Dynamics for Efficient Building Energy Management. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 717-725.	9.3	19
57	Nonlinear rotor side converter control of DFIG based wind energy system. Electric Power Systems Research, 2021, 198, 107358.	3.6	19
58	Hilbertâ€"Huang Transform Based Transient Analysis in Voltage Source Converter Interfaced Direct Current System. IEEE Transactions on Industrial Electronics, 2021, 68, 11014-11025.	7.9	19
59	Directional protection scheme for MVDC shipboard power system. , 2016, , .		17
60	Leak detection in low-pressure gas distribution networks by probabilistic methods. Journal of Natural Gas Science and Engineering, 2018, 58, 69-79.	4.4	16
61	Model Predictive Control Based Dynamic Power Loss Prediction for Hybrid Energy Storage System in DC Microgrids. IEEE Transactions on Industrial Electronics, 2022, 69, 8080-8090.	7.9	16
62	Nonlinear Excitation Control of Diesel Generator: A Command Filter Backstepping Approach. IEEE Transactions on Industrial Informatics, 2021, 17, 4809-4817.	11.3	15
63	Short-circuit protection for MV & LVDC grid. , 2014, , .		14
64	Q-learning and Dynamic Fuzzy Q-learning Based Intelligent Controllers for Wind Energy Conversion Systems. , 2018, , .		14
65	Design, Analysis, and Comparison of Automatic Flux Regulator With Automatic Voltage Regulator-Based Generation System for DC Marine Vessels. IEEE Transactions on Transportation Electrification, 2018, 4, 694-706.	7.8	14
66	Dynamic evolution control based power sharing method for hybrid energy storage system. IET Power Electronics, 2019, 12, 276-283.	2.1	14
67	Towards networked smart digital sensors: A review. , 2008, , .		13
68	Denoising and Frequency Analysis of Noninvasive Magnetoencephalography Sensor Signals for Functional Brain Mapping. IEEE Sensors Journal, 2012, 12, 447-455.	4.7	13
69	NPC photovoltaic grid-connected inverter using proportional-resonant controller. , 2014, , .		12
70	Fault location estimation for VSC-HVDC system using Artificial Neural Network. , 2016, , .		12
71	Pressure and flow variation in gas distribution pipeline for leak detection. , 2016, , .		12
72	Experimental Validation of Leak and Water-Ingression Detection in Low-Pressure Gas Pipeline Using Pressure and Flow Measurements. IEEE Sensors Journal, 2017, 17, 6734-6742.	4.7	12

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73	Multi-Objective Optimal Sensor Placement for Low-Pressure Gas Distribution Networks. IEEE Sensors Journal, 2018, 18, 6660-6668.	4.7	12
74	Low autocorrelation binary sequences: Number theory-based analysis for minimum energy level, Barker codes. , 2010, 20, 483-495.		11
75	Improved Calibration of Near-Infrared Spectra by Using Ensembles of Neural Network Models. IEEE Sensors Journal, 2010, 10, 578-584.	4.7	11
76	Differentiation of fault and load change in HVDC system using Amplitude Tracking Square Wave. , 2015, , .		10
77	STFT analysis of high frequency components in transient signals in multi-terminal HVDC system. , 2016, , .		10
78	Distributed fiber optics techniques for gas network monitoring. , 2016, , .		10
79	A DC microgrid integrated dynamic voltage restorer with model predictive control. , 2017, , .		10
80	Ampacity Estimation for Submarine Power Cables Installed in Saturated Seabedâ€"Experimental Studies. IEEE Transactions on Industry Applications, 2020, 56, 6229-6237.	4.9	10
81	Fault Analysis and Protection System Design for DC Grids. Power Systems, 2020, , .	0.5	10
82	Neural Network-Based Active Learning in Multivariate Calibration. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2012, 42, 1763-1771.	2.9	9
83	Load profiling of Singapore buildings for peak shaving. , 2014, , .		9
84	Modelling of DC shipboard power system. , 2016, , .		9
85	Flux estimation based dc bus voltage control in marine dc power system. , 2016, , .		9
86	Energy storage management for EV charging stations: Comparison between uncoordinated and statistical charging loads. , 2016, , .		9
87	TOU pricing based energy management of public EV charging stations using energy storage system. , 2016, , .		9
88	Adaptive Solid-State Circuit Breaker Without Varistors in VSC-Interfaced DC System. IEEE Transactions on Industrial Electronics, 2022, 69, 4824-4835.	7.9	9
89	Microgrid frequency stabilization using model predictive controller. , 2016, , .		8
90	Fuzzy Logic Controller for Efficient Energy Management of a PV System with HESS. , 2018, , .		8

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91	Implementation of Discrete Wavelet Transform for Embedded Applications using TMS320VC5510. , 2007, , .		7
92	Harmonic analysis-based diagnostics of noflow pulsation in vortex and swirl flowmeter. , 2009, 19, 700-707.		7
93	Evaluation of Low Voltage Ride-Through capability of synchronous generator connected to a grid. , 2015, , .		7
94	Framework for multipoint sensing simulation for energy efficient HVAC operation in buildings. , 2015, , .		7
95	A new control approach for PV system with hybrid energy storage system. , 2017, , .		7
96	Control and Coordination of Hybrid AC/DC Microgrid. , 2018, , .		7
97	Fault detection method using high-pass filtering in VSC based multi-terminal DC system. International Journal of Electrical Power and Energy Systems, 2021, 132, 107207.	5.5	7
98	Model-based failure prediction for electric machines using particle filter. , 2014, , .		6
99	Building HVAC load profiling using EnergyPlus. , 2015, , .		6
100	Application of HESS for PV system with modified control strategy. , 2015, , .		6
101	Testbed for real-time monitoring of leak in low pressure gas pipeline. , 2016, , .		6
102	A stand-alone hybrid pv/fuel cell power system using single-inductor dual-input single-output boost converter with model predictive control. , 2017, , .		6
103	Power systems frequency estimation using amplitude tracking square wave for low-end protective relays. Measurement: Journal of the International Measurement Confederation, 2019, 141, 70-84.	5.0	6
104	Flow-Based Estimation and Comparative Study of Gas Demand Profile for Residential Units in Singapore. IEEE Transactions on Sustainable Energy, 2019, 10, 1120-1128.	8.8	6
105	Rising and falling edge compensation based faster control strategy for hybrid energy storage system in PV microgrid. Electric Power Systems Research, 2021, 190, 106856.	3.6	6
106	Protection of MVDC shipboard power system using Rogowski coil. , 2016, , .		5
107	Suitability of Rogowski coil for DC shipboard protection. , 2016, , .		5
108	Cable ampacity calculation and analysis for power flow optimization. , 2016, , .		5

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109	Fault identification in AC and DC systems using stft analysis of high frequency components. , 2017, , .		5
110	An isolated bipolar DC-DC converter for energy storage integration in marine vessels. , 2017, , .		5
111	Energy Management of a Dual Hybrid Energy Storage System of PV Microgrids in Grid-connected Mode Based on Adaptive PQ Control. , 2019, , .		5
112	Computational fluid dynamics-based thermal modeling for efficient building energy management. , 2015, , .		4
113	Theoretical analysis of tuned HVAC line for low loss long distance bulk power transmission. International Journal of Electrical Power and Energy Systems, 2015, 73, 433-437.	5.5	4
114	Modeling and validation of electrical load profiling in residential buildings in Singapore. , 2015, , .		4
115	Leak detection in natural gas distribution pipeline using distributed temperature sensing. , 2016, , .		4
116	Circulating current controller in dq reference frame for MMC based HVDC system. , 2016, , .		4
117	Design of safety critical substation earthing system based on soil characteristics. , 2017, , .		4
118	Enumerated-MPC-based dynamic voltage restorer using lc filter with damping resistor. , 2017, , .		4
119	Enhanced Hierarchical Control of Hybrid Energy Storage System in Microgrids. , 2018, , .		4
120	Ampacity Estimation for HV Submarine Power Cables Installed in Saturated Seabed. , 2018, , .		4
121	Comparison of Current-Only Directional Protection in AC and DC Power Systems. , 2018, , .		4
122	Design of ANFIS Controller for a DC Microgrid. , 2021, , .		4
123	Fault and load change differentiation in High Voltage Direct Current (HVDC) system. , 2016, , .		4
124	Disturbance detection in the MV and the LV distribution networks using time-domain method. , 2014, , .		3
125	A closed-form solution to fault parameter estimation and faulty phase identification of stator winding inter-turn fault in induction machines. , 2015, , .		3
126	On asymptotic merit factor of low autocorrelation binary sequences. , 2015, , .		3

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127	Bayesian detection of leaks in gas distribution networks. , 2016, , .		3
128	Virtual synchronous generators as potential solution for electricity Grid compliance studies. , 2016, , .		3
129	Design of fuzzy logic based controller for energy efficient operation in building. , 2016, , .		3
130	Energy management of AC-DC microgrid under grid-connected and islanded modes. , 2016, , .		3
131	A low complexity control and energy management for DC-coupled hybrid microgrid with hybrid energy storage system. , 2017, , .		3
132	LVRT capability enhancement for grid connected distributed synchronous generators using switch-in braking resistors. , 2017, , .		3
133	Energy Efficiency in Variable Speed Centrifugal Chiller Systems Driven by Synchronous Reluctance Motors. , 2018, , .		3
134	Fault Detection in HVDC Transmission Line by S-Transform Technique. , 2019, , .		3
135	Frequency-Domain Based Fault Detection: Application of Short-Time Fourier Transform. Power Systems, 2020, , 195-221.	0.5	3
136	Memristance View of Piezoelectricity. IEEE Sensors Journal, 2011, 11, 2514-2517.	4.7	2
137	Time-domain estimation of sub-harmonic sinusoidal disturbance in sinusoidal signal with applications in induction motor diagnostics. , 2012, , .		2
138	NPC photovoltaic grid-connected inverter using proportional-resonant controller. , 2014, , .		2
139	Detection of direction change in prefault current in current-only directional overcurrent protection. , 2016, , .		2
140	Development of low voltage ride-through capability curve for grid connected diesel engine generators. , 2016, , .		2
141	Application of two stage rate limit control for different operating modes of battery. , 2017, , .		2
142	Modeling and analysis of HV cable ampacity for power flow optimization. , 2017, , .		2
143	A control architecture for optimal power sharing among interconnected microgrids. , 2017, , .		2
144	Water ingress detection in low-pressure gas pipelines using vibration sensors. , 2017, , .		2

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145	PQ Control-based Novel Passive Islanding Detection Method for Renewable Energy Application. , 2019, , .		2
146	Voltage Sensitivity Analysis and Demand Dispatch Option of Electric Vehicle in Smart Grid. , 2019, , .		2
147	Fault Detection in Ring-bus Multi-terminal DC System Based on Modified S Transform. , 2019, , .		2
148	Fault Detection and Locating Using Electromagnetic Time Reversal (EMTR) Technique for HVDC Transmission Network. , 2019, , .		2
149	Wind Energy Integration Using Hybrid Energy Storage System in East Nusa Tenggara, Indonesia. , 2019, , .		2
150	Optimal Method of Electric Vehicle Charging and Discharging with Voltage Sensitivity Analysis in Distribution Grid. , 2019, , .		2
151	Time-Frequency Domain Analysis: Wavelet-Transform Based Fault Detection. Power Systems, 2020, , 223-242.	0.5	2
152	Fault Location Estimation in Voltage-Source-Converter-Based DC System: The L Location. IEEE Transactions on Industrial Electronics, 2022, 69, 11198-11209.	7.9	2
153	Energy Management of Islanded Interconnected Dual Community Microgrids. , 2020, , .		2
154	Distributed Co-ordinated Consensus Control for Multi-Energy Storage of DC Microgrid. , 2021, , .		2
155	Diagnostics of gas bubbles using wavelet transform. , 2010, , .		1
156	Variable two stage rate-limit control for battery energy storage system. , 2015, , .		1
157	Condition monitoring and diagnostics for automotive applications. , 2015, , .		1
158	Analysis of ambient temperature effects and airflow rate for energy efficient HVAC in buildings. , 2016, , .		1
159	Modeling and performance assessment of pontoon roller wave energy converter in Singapore. , 2016, , .		1
160	Frequency converter based tuned high voltage AC transmission: Design and Implementation Issues. , 2016, , .		1
161	Inter-turn fault and condition identification in induction machines using multiple indicator approach. , 2016, , .		1
162	Approximate-model-based predictive current control for buck converter in CCM. , 2017, , .		1

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163	Vanadium Redox & Lithium Ion Based Multi-Battery Hybrid Energy Storage System for Microgrid. , 2019, , .		1
164	Parameter Estimation of Thermal Model of a Building: A Meta-Heuristic Approach. , 2019, , .		1
165	Grid Integration and Demand Response Management of Geothermal Power Plant with Hybrid Energy Storage System in Indonesia. , 2019, , .		1
166	Design of Experiment and Fault Studies. Power Systems, 2020, , 325-354.	0.5	1
167	Practical Denoising of MEG Data Using Wavelet Transform. Lecture Notes in Computer Science, 2006, , 578-585.	1.3	1
168	Optimized Algorithm for Industrial Process Instrumentation Calibration based on Nonlinear Function Approximation. , 2007, , .		0
169	Modeling diesel generators for weak and strong grid conditions: Emphasis on LVRT compliance. , 2016, , .		0
170	A multiple indicator approach for FDI of inter-turn fault in induction machines. , 2016, , .		0
171	FLoGPN: A reputation based scheme for fault localization in gas pipeline network. , 2016, , .		0
172	Interturn fault and condition identification in BLSG using multiple indicator approach. , 2017, , .		0
173	Ampacity and Electro-Magnetic Modeling for High-Voltage Subsea Cables Installed in Saturated Seabed. , 2018, , .		0
174	Implementation of a Cost Effective Gas Pipeline Monitoring System for Water Ingress Detection. , 2018, , .		0
175	Direct Measurement Combined with S Transform Based Fault Detection Method on Radial-bus Multi-terminal DC System. , 2019, , .		0
176	Non-unit Protection Strategies for DC Power Systems. Power Systems, 2020, , 243-270.	0.5	0
177	Modeling and Control of Generation System for DC Grid Applications. Power Systems, 2020, , 83-122.	0.5	0
178	Introduction to DC Grid. Power Systems, 2020, , 1-37.	0.5	0
179	Components and Architectures of DC Grid for Various Applications. Power Systems, 2020, , 39-81.	0.5	0
180	Introduction to Directional Protection and Communication Assisted Protection Systems. Power Systems, 2020, , 271-302.	0.5	0

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181	Fault Isolation in DC Grids. Power Systems, 2020, , 303-324.	0.5	0
182	Zero Iteration Model Predictive Control for Hybrid Energy Storage System with Dual Batteries. , 2020, , .		0
183	Detection Method Based on Median Mode Decomposition in Multi-terminal DC System. , 2020, , .		0
184	Modelling of Electric Vehicle Charging and Discharging Profile to Mimic Real life Scenario at Charging Stations. , 2020, , .		0
185	Optimizing the overall performance of forced extraction systems: A multi-objective framework. Building and Environment, 2022, , 109214.	6.9	0
186	Transient analysis in multi-terminal voltage source converter based direct current system: Median mode decomposition. International Journal of Electrical Power and Energy Systems, 2022, 142, 108323.	5.5	0