

Arif I Sarwat

List of Publications by Year in descending order

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171
papers

3,722
citations

218677

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h-index

189892

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all docs

171
docs citations

171
times ranked

3424
citing authors

#	ARTICLE	IF	CITATIONS
1	Algorithmic Formulation for Network Resilience Enhancement by Optimal DER Hosting and Placement. IEEE Access, 2022, 10, 23477-23488.	4.2	11
2	Development of a Mixed Inductive and Capacitive Wireless Power Transfer to Improve Misalignment Performance for Charging Electric Vehicles. , 2022, , .		3
3	Optimal Design of IPT Bipolar Power Pad for Roadway-Powered EV Charging Systems. Canadian Journal of Electrical and Computer Engineering, 2021, 44, 350-355.	2.0	14
4	Impact Analysis of Cyber Attacks on Smart Grid: A Review and Case Study. Energy, Environment, and Sustainability, 2021, , 31-51.	1.0	8
5	Comparison Analysis of Bipolar and Double D-shape Configurations in Inductive Power Transfer Electric Vehicle Chargers. , 2021, , .		4
6	A Novel Algorithm for Concurrent Charge & Discharge of a Non-Monolithic Battery Energy Storage System. , 2021, , .		0
7	False Data Injection Impact Analysis In AI-Based Smart Grid. , 2021, , .		20
8	Voltage Regulation of Photovoltaic System with varying Loads. , 2021, , .		0
9	Cyber Physical Systems Applications with a Case Study of Intelligent Dispatch of PV. , 2021, , .		3
10	A low-complexity FS-MPDPDC with extended voltage set for grid-connected converters. IET Energy Systems Integration, 2021, 3, 413-425.	1.8	1
11	Optimal Volt-VAR and Volt-Watt Droop Settings of Smart Inverters. , 2021, , .		7
12	A Binary Search Algorithm based Optimal Sizing of Photovoltaic and Energy Storage Systems. , 2021, , .		2
13	Parametric Optimization and Multi-Physics analysis of Medium Frequency Transformers for Solid State Transformer Applications. , 2021, , .		1
14	Smart Inverters' Functionalities and their Impacts on Distribution Feeders at High Photovoltaic Penetration. , 2021, , .		5
15	Detection of False Data Injection of PV Production. , 2021, , .		9
16	Fuzzy Decision Making Assisted Model Predictive Direct Power Controller for a Grid-Interlinking Converter of a Battery Energy Storage System. , 2021, , .		2
17	A Survey of Machine Learning-based Cyber-physical Attack Generation, Detection, and Mitigation in Smart-Grid. , 2021, , .		6
18	Pareto Optimal Smart Inverter Curve Selection for High Photovoltaic Penetration. , 2021, , .		5

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19	Fast Charging Li-Ion Battery Capacity Fade Prognostic Modeling Using Correlated Parameters' Decomposition and Recurrent Wavelet Neural Network. , 2021, , .		6
20	Optimal Design of Bipolar Power Pad for Dynamic Inductive EV Charging System Application. , 2021, , .		0
21	Voltage-Controlled Series Resonant DC-DC Converter for Solid State Transformer Applications. , 2021, , .		5
22	Multiphysics-based Design Optimization of Medium Frequency Transformer with Experimental Validation. , 2021, , .		0
23	Step-size Optimization of New Straight Line approximation-based MPPT Algorithm for Photovoltaic Systems. , 2021, , .		2
24	An Accurate Online Parameter Estimation Technique for Inductive Electric Vehicle Charging Systems. , 2021, , .		1
25	Parasitic Parameter Analysis of High Frequency Transformer for Series Resonant Converter with Experimental Validation. , 2021, , .		2
26	AC-AC Matrix Converter Using Lookup-Based PWM for Inductive Power Transfer Systems. , 2021, , .		2
27	Investigation of Cell Voltage Buffer Manipulation Attack in a Battery Management System using Unsupervised Learning Technique. , 2021, , .		3
28	A Survey on Cybersecurity Challenges, Detection, and Mitigation Techniques for the Smart Grid. Energies, 2021, 14, 5894.	3.1	52
29	Multiphysics and Multiobjective Design Optimization of High-Frequency Transformers for Solid-State Transformer Applications. IEEE Transactions on Industry Applications, 2021, 57, 1014-1023.	4.9	27
30	Unified Univariate-Neural Network Models for Lithium-Ion Battery State-of-Charge Forecasting Using Minimized Akaike Information Criterion Algorithm. IEEE Access, 2021, 9, 39154-39170.	4.2	29
31	Virtual Inertia-Based Multipower Level Controller for Inductive Electric Vehicle Charging Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 7369-7382.	5.4	12
32	Performance Analysis of Commercial Passive Balancing Battery Management System Operation Using a Hardware-in-the-Loop Testbed. Energies, 2021, 14, 8037.	3.1	12
33	Overview of Technical Specifications for Grid-Connected Microgrid Battery Energy Storage Systems. IEEE Access, 2021, 9, 163554-163593.	4.2	27
34	Particle Swarm Optimization-based PID Controller Design for DC-DC Buck Converter. , 2021, , .		9
35	A Survey on Modality Characteristics, Performance Evaluation Metrics, and Security for Traditional and Wearable Biometric Systems. ACM Computing Surveys, 2020, 52, 1-36.	23.0	30
36	Resilient Control Design for Load Frequency Control System Under False Data Injection Attacks. IEEE Transactions on Industrial Electronics, 2020, 67, 7951-7962.	7.9	113

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37	A Multidimensional Holistic Framework for the Security of Distributed Energy and Control Systems. IEEE Systems Journal, 2020, 14, 17-27.	4.6	15
38	Reviewâ€™Machine Learning Techniques in Wireless Sensor Network Based Precision Agriculture. Journal of the Electrochemical Society, 2020, 167, 037522.	2.9	140
39	Design and Implementation of Estimating Algorithm for Foreign Object Location in Wireless Charging EV Systems. , 2020, , .		2
40	Multi-Level Power Controller Design for Dynamic Wireless Electric Vehicle Charging Systems. , 2020, , .		6
41	A Hybrid Approach for Weather-based Power Interruption Forecasting using Multilayer Perceptrons and Parametric Models. , 2020, , .		0
42	Adapting big data standards, maturity models to smart grid distributed generation: critical review. IET Smart Grid, 2020, 3, 508-519.	2.2	15
43	A Novel Module Independent Straight Line-Based Fast Maximum Power Point Tracking Algorithm for Photovoltaic Systems. Energies, 2020, 13, 3233.	3.1	12
44	Food, Energy and Water (FEW) Nexus Modeling Framework. Advances in Intelligent Systems and Computing, 2020, , 346-364.	0.6	3
45	Evaluation of Missing Data Imputation Methods for an Enhanced Distributed PV Generation Prediction. Advances in Intelligent Systems and Computing, 2020, , 590-609.	0.6	8
46	A ZigBee Based Architecture for Public Safety Communication in Hurricane Scenario. Advances in Intelligent Systems and Computing, 2020, , 493-510.	0.6	1
47	Investigation of False Data Injection Attacks on Smart Inverter Settings. , 2020, , .		11
48	Simulation-Based Analysis of Equalization Algorithms on Active Balancing Battery Topologies for Electric Vehicles. Advances in Intelligent Systems and Computing, 2020, , 708-728.	0.6	9
49	Multi-layer Perceptron based Photovoltaic Forecasting for Rooftop PV Applications in Smart Grid. , 2020, , .		14
50	Soft-switching, Self-tuning and Optimization Technique for Solid State Transformers Based on Direct AC-AC Matrix Converter Topology. , 2020, , .		2
51	High-Penetration Grid-Tied Photovoltaics: Analysis of Power Quality and Feeder Voltage Profile. IEEE Industry Applications Magazine, 2019, 25, 83-94.	0.4	22
52	Synthesizing Energy Consumption Data Using a Mixture Density Network Integrated with Long Short Term Memory. , 2019, , .		9
53	A Novel Technique for Discrimination of Foreign Object from Misalignment in Wireless Charging Systems. , 2019, , .		5
54	A Multi-Step Predictive Model to Estimate Li-Ion State of Charge for Higher C-Rates. , 2019, , .		13

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55	Foreign Object Detection in Inductive Charging Systems Based on Primary Side Measurements. IEEE Transactions on Industry Applications, 2019, 55, 6466-6475.	4.9	44
56	Virtual Inertia Control of Inductive Electric Charging System Using a Power Transfer Controller. , 2019, , .		8
57	Fleet Aggregation of Photovoltaic Systems: A Survey and Case Study. , 2019, , .		14
58	FACTS Approach to Address Cybersecurity Issues in Electric Vehicle Battery Systems. , 2019, , .		24
59	Prediction of Li-Ion Battery State of Charge Using Multilayer Perceptron and Long Short-Term Memory Models. , 2019, , .		42
60	An ARIMA-NARX Model to Predict Li-Ion State of Charge for Unknown Charge/Discharge Rates. , 2019, , .		4
61	Cluster-based Module to Manage Smart Grid Data for an Enhanced Situation Awareness: A Case Study. , 2019, , .		3
62	Photovoltaic Fleet Aggregation and High Penetration: A Feeder Test Case. , 2019, , .		1
63	Bidirectional AC/DC Converter Topologies: A Review. , 2019, , .		10
64	Battery Module Performance Analysis under Varying Interconnection Topology for Electric Vehicles. , 2019, , .		11
65	Study of Smart Grid Protection Challenges with High Photovoltaic Penetration. , 2019, , .		14
66	Hybrid data-driven model method to improve generation estimation and performance assessment of grid-tied PV: a case study. IET Renewable Power Generation, 2019, 13, 2480-2490.	3.1	13
67	Physics-Based Design Optimization of High Frequency Transformers for Solid State Transformer Applications. , 2019, , .		13
68	Case study on the effects of partial solar eclipse on distributed PV systems and management areas. IET Smart Grid, 2019, 2, 477-490.	2.2	19
69	Online power quality disturbance detection by support vector machine in smart meter. Journal of Modern Power Systems and Clean Energy, 2019, 7, 1328-1339.	5.4	41
70	Survey on synchrophasor data quality and cybersecurity challenges, and evaluation of their interdependencies. Journal of Modern Power Systems and Clean Energy, 2019, 7, 449-467.	5.4	69
71	A Spectrum Sharing based Metering Infrastructure for Smart Grid Utilizing LTE and WiFi. Advances in Science, Technology and Engineering Systems, 2019, 4, 70-77.	0.5	8
72	A Multi-Objective Voltage Optimization Technique in Distribution Feeders with High Photovoltaic Penetration. Advances in Science, Technology and Engineering Systems, 2019, 4, 377-385.	0.5	3

#	ARTICLE	IF	CITATIONS
73	Future Directions to the Application of Distributed Fog Computing in Smart Grid Systems. , 2019, , 2186-2212.		3
74	A Power-Frequency Controller With Resonance Frequency Tracking Capability for Inductive Power Transfer Systems. IEEE Transactions on Industry Applications, 2018, 54, 1773-1783.	4.9	34
75	Toward a Smart City of Interdependent Critical Infrastructure Networks. Studies in Systems, Decision and Control, 2018, , 21-45.	1.0	15
76	A Model Predictive Power Control Approach for a Three-Phase Single-Stage Grid-Tied PV Module-Integrated Converter. IEEE Transactions on Industry Applications, 2018, 54, 1823-1831.	4.9	16
77	Single-Phase Soft-Switched AC-AC Matrix Converter With Power Controller for Bidirectional Inductive Power Transfer Systems. IEEE Transactions on Industry Applications, 2018, 54, 3760-3770.	4.9	54
78	Stochastic Games for Power Grid Protection Against Coordinated Cyber-Physical Attacks. IEEE Transactions on Smart Grid, 2018, 9, 684-694.	9.0	106
79	Reactive Power Compensation Game Under Prospect-Theoretic Framing Effects. IEEE Transactions on Smart Grid, 2018, 9, 4181-4193.	9.0	18
80	Optimal design of hybrid wind/photovoltaic electrolyzer for maximum hydrogen production using imperialist competitive algorithm. Journal of Modern Power Systems and Clean Energy, 2018, 6, 40-49.	5.4	30
81	Optimal Smart Inverters Volt-VAR Curve Selection with a Multi-Objective Volt-VAR Optimization using Evolutionary Algorithm Approach. , 2018, , .		49
82	Power Quality Monitoring of a 1.1 MW Photovoltaic Power Plant. , 2018, , .		1
83	A Multi-Objective Optimization Technique for Volt-Var Control with High PV Penetration using Genetic Algorithm. , 2018, , .		25
84	A Tri-Modular Framework to Minimize Smart Grid Cyber-Attack Cognitive Gap in Utility Control Centers. , 2018, , .		6
85	Real-Time Control of a Doubly Fed Induction Machine for Variable Speed Constant Frequency Wind Power System Through Laboratory Test Rig. , 2018, , .		1
86	IoT Sensor Network Approach for Smart Farming: An Application in Food, Energy and Water System. , 2018, , .		23
87	A Sensorless Conductive Foreign Object Detection for Inductive Electric Vehicle Charging Systems Based on Resonance Frequency Deviation. , 2018, , .		14
88	A Tri-Modular Human-on-the-Loop Framework for Intelligent Smart Grid Cyber-Attack Visualization. , 2018, , .		11
89	Reverse Power Flow Protection in Grid Connected PV Systems. , 2018, , .		21
90	Flicker Estimation Associated with PV Integrated Distribution Network. , 2018, , .		26

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91	A Survey of Protocol-Level Challenges and Solutions for Distributed Energy Resource Cyber-Physical Security. <i>Energies</i> , 2018, 11, 2360.	3.1	37
92	A Three-Phase AC-AC Matrix Converter with Simplified Bidirectional Power Control for Inductive Power Transfer Systems. , 2018, , .		8
93	LTE and Wiâ€²Fi Coexistence in Unlicensed Spectrum with Application to Smart Grid: A Review. , 2018, , .		8
94	A Study of EV BMS Cyber Security Based on Neural Network SOC Prediction. , 2018, , .		7
95	Time-Dependent Multi-Physics Analysis of Inductive Power Transfer Systems. , 2018, , .		17
96	Review of Cyber-Physical Attacks and Counter Defense Mechanisms for Advanced Metering Infrastructure in Smart Grid. , 2018, , .		24
97	Future Challenges and Mitigation Methods for High Photovoltaic Penetration: A Survey. <i>Energies</i> , 2018, 11, 1782.	3.1	116
98	A Survey on Low Latency Towards 5G: RAN, Core Network and Caching Solutions. <i>IEEE Communications Surveys and Tutorials</i> , 2018, 20, 3098-3130.	39.4	619
99	Life cycle prediction of Sealed Lead Acid batteries based on a Weibull model. <i>Journal of Energy Storage</i> , 2018, 18, 467-475.	8.1	21
100	Trends and Future Directions of Research for Smart Grid IoT Sensor Networks. , 2018, , 45-61.		11
101	A Review on Control Strategies for Integration of Electric Vehicles with Power Systems. , 2018, , .		5
102	A review on cyber security issues and mitigation methods in smart grid systems. , 2017, , .		25
103	Design and Analysis of a Higher Order Power Filter for Grid-Connected Renewable Energy Systems. <i>IEEE Transactions on Industry Applications</i> , 2017, 53, 4149-4161.	4.9	22
104	Self-Tuning Variable Frequency Controller for Inductive Electric Vehicle Charging With Multiple Power Levels. <i>IEEE Transactions on Transportation Electrification</i> , 2017, 3, 488-495.	7.8	30
105	Overview of technical specifications for grid-connected photovoltaic systems. <i>Energy Conversion and Management</i> , 2017, 152, 312-327.	9.2	72
106	Renewable energy supported microgrid in rural electrification of Sub-Saharan Africa. , 2017, , .		28
107	Modeling discharge characteristics for predicting battery remaining life. , 2017, , .		4
108	Effective magnetic shielding in electric arc furnace transformers using interphase wall shunts. , 2017, , .		2

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109	A distributed intelligent framework for electricity theft detection using benford's law and stackelberg game. , 2017, , .		20
110	A novel multi-time-scale modeling for electric power demand forecasting: From short-term to medium-term horizon. Electric Power Systems Research, 2017, 142, 58-73.	3.6	187
111	Reduction of Stray Loss in Power Transformers Using Horizontal Magnetic Wall Shunts. IEEE Transactions on Magnetics, 2017, 53, 1-7.	2.1	43
112	LAA-LTE and WiFi based smart grid metering infrastructure in 3.5 GHz band. , 2017, , .		6
113	An efficient MQTT framework for control and protection of networked cyber-physical systems. , 2017, , .		7
114	Power quality and voltage profile analyses of high penetration grid-tied photovoltaics: A case study. , 2017, , .		20
115	An intelligence-based state of charge prediction for VRLA batteries. , 2017, , .		3
116	Sensorless electric vehicle detection in inductive charging stations using self-tuning controllers. , 2017, , .		3
117	Self-tuned single-phase AC-AC converter for bidirectional inductive power transfer systems. , 2017, , .		6
118	A gossip algorithm based clock synchronization scheme for smart grid applications. , 2017, , .		11
119	Soft-switching self-tuning H-bridge converter for inductive power transfer systems. , 2017, , .		5
120	Roadmap to prepare distribution grid-tied photovoltaic site data for performance monitoring. , 2017, , .		16
121	Optimal Operation of Combined Photovoltaic Electrolyzer Systems. Energies, 2016, 9, 332.	3.1	12
122	CBRS Spectrum Sharing between LTE-U and WiFi: A Multiarmed Bandit Approach. Mobile Information Systems, 2016, 2016, 1-12.	0.6	16
123	Securing Metering Infrastructure of Smart Grid: A Machine Learning and Localization Based Key Management Approach. Energies, 2016, 9, 691.	3.1	40
124	A modified higher order power filter for grid-connected renewable energy systems. , 2016, , .		4
125	Prioritized coordinated reactive power control of wind turbin involving STATCOM using multi-objective optimization. , 2016, , .		2
126	A self-tuning variable frequency control for multi-level contactless Electric Vehicle charger. , 2016, , .		7

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127	A simplified power control approach with reliable axis decoupling capability for three-phase current source inverter. , 2016, , .		3
128	Multiobjective optimization in combinatorial wind farms system integration and resistive SFCL using analytical hierarchy process. Renewable Energy, 2016, 94, 366-382.	8.9	15
129	Single-Stage Three-Phase AC-AC Matrix Converter for Inductive Power Transfer Systems. IEEE Transactions on Industrial Electronics, 2016, 63, 6613-6622.	7.9	60
130	A Location Based Key Management System for Advanced Metering Infrastructure of Smart Grid. , 2016, , .		15
131	Vulnerabilities in two-area Automatic Generation Control systems under cyberattack. , 2016, , .		12
132	Long term reliability analysis of components of photovoltaic system based on Markov process. , 2016, , .		4
133	Finite element based design optimization of magnetic structures for roadway inductive power transfer systems. , 2016, , .		18
134	A New Topology of Higher Order Power Filter for Single-Phase Grid-Tied Voltage-Source Inverters. IEEE Transactions on Industrial Electronics, 2016, 63, 7511-7522.	7.9	39
135	A review of cathode and anode materials for lithium-ion batteries. , 2016, , .		40
136	LAA-based LTE and ZigBee coexistence for unlicensed-band smart grid communications. , 2016, , .		18
137	A single-stage three-phase AC-AC converter for inductive power transfer systems. , 2016, , .		7
138	Multi-armed bandit for LTE-U and WiFi coexistence in unlicensed bands. , 2016, , .		25
139	A combinatorial approach for addressing intermittency and providing inertial response in a grid-connected photovoltaic system. , 2016, , .		17
140	Pareto optimization of circular power pads for contactless electric vehicle battery charger. , 2016, , .		17
141	Model predictive power control approach for three-phase single-stage grid-tied PV module-integrated converter. , 2016, , .		8
142	Risk assessment of coordinated cyber-physical attacks against power grids: A stochastic game approach. , 2016, , .		13
143	Multi-level optimization approach for directly coupled photovoltaic-electrolyser system. International Journal of Hydrogen Energy, 2016, 41, 11884-11894.	7.1	31
144	Performance evaluation of optimal photovoltaic-electrolyzer system with the purpose of maximum Hydrogen storage. , 2016, , .		8

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145	Evaluation of power transformer losses measurements methods under nonlinear load conditions. , 2016, , .		2
146	A comprehensive review of low-voltage-ride-through methods for fixed-speed wind power generators. Renewable and Sustainable Energy Reviews, 2016, 55, 823-839.	16.4	62
147	An algorithm for fast calculation of short circuit forces in high current busbars of electric arc furnace transformers based on method of images. Electric Power Systems Research, 2016, 136, 173-180.	3.6	12
148	Weather-based interruption prediction in the smart grid utilizing chronological data. Journal of Modern Power Systems and Clean Energy, 2016, 4, 308-315.	5.4	64
149	A Generic Framework for EEG-Based Biometric Authentication. , 2015, , .		12
150	Smart Grid reliability assessment utilizing Boolean Driven Markov Process and variable weather conditions. , 2015, , .		18
151	Defending mechanisms for protecting power systems against intelligent attacks. , 2015, , .		14
152	Reliability assessment of access point of advanced metering infrastructure based on Bellcore standards (Telecordia). , 2015, , .		5
153	Analysis of Carbon Tax as an Incentive Toward Building Sustainable Grid with Renewable Energy Utilization. , 2015, , .		8
154	Artificial neural network based Duty Cycle estimation for maximum Power Point tracking in Photovoltaic systems. , 2015, , .		27
155	Optimal analysis of resistive superconducting fault current limiters applied to a variable speed wind turbine system. , 2015, , .		6
156	PMU placement considering data uncertainty and redundancy. , 2015, , .		1
157	A survey on security assessment of metering infrastructure in Smart Grid systems. , 2015, , .		33
158	Evaluation of optimal dual axis concentrated photovoltaic thermal system with active ventilation using Frog Leap algorithm. Energy Conversion and Management, 2015, 105, 782-790.	9.2	25
159	Security Breach Possibility with RSS-Based Localization of Smart Meters Incorporating Maximum Likelihood Estimator. Advances in Intelligent Systems and Computing, 2015, , 133-139.	0.6	4
160	Active/Reactive Power Control of Three Phase Grid Connected Current Source Boost Inverter Using Particle Swarm Optimization. Advances in Intelligent Systems and Computing, 2015, , 141-146.	0.6	7
161	PLUG-IN ELECTRIC VEHICLE OWNER BEHAVIOUR STUDY USING FUZZY SYSTEMS. International Journal of Power and Energy Systems, 2015, 35, .	0.2	3
162	Penetration of Errors in Power Transformer Losses Measurements in Real Working Conditions. , 2015, , .		0

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163	Frequency band for HAN and NAN communication in Smart Grid. , 2014, , .		22
164	RSS based loop-free compass routing protocol for data communication in advanced metering infrastructure (AMI) of Smart Grid. , 2014, , .		20
165	Determination of the minimum-variance unbiased estimator for DC power-flow estimation. , 2014, , .		12
166	Time-delay analysis on grid-connected three-phase current source inverter based on SVPWM switching pattern. , 2014, , .		5
167	Asynchronous interconnection of large-scale photovoltaic plants: site selection considerations. International Journal of Sustainable Energy, 2014, 33, 273-283.	2.4	2
168	Optimal Reliability-based Placement of Plug-In Electric Vehicles in Smart Distribution Network. International Journal of Energy Science, 2014, 4, 43.	0.6	14
169	Combined Economic and Emission Dispatch Incorporating Renewable Energy Sources and Plug-In Hybrid Electric Vehicles. International Journal of Energy Science, 2014, 4, 60.	0.6	11
170	A Downsizing Strategy for Combinatorial PMSC Based Wind Turbine and Micro-SMES System Applied in Standalone DC Microgrid. International Journal of Energy Science, 2014, 4, 50.	0.6	2
171	Future Directions to the Application of Distributed Fog Computing in Smart Grid Systems. Advances in Computer and Electrical Engineering Book Series, 0, , 162-195.	0.3	3