

# **2022 IEEE 5th International Electrical and Energy Conference (CIEEC 2022)**

**Nanjing, China  
27-29 May 2022**

**Pages 1-606**



**IEEE Catalog Number: CFP22L26-POD  
ISBN: 978-1-6654-1105-9**

**Copyright © 2022 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP22L26-POD
ISBN (Print-On-Demand):	978-1-6654-1105-9
ISBN (Online):	978-1-6654-1104-2

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

# Table of Contents

0001-4	<b>Power Market Regulation: Review and Prospect</b> <i>Bo Gao,Xuwen Liu,Jiang Yu,Tian Ming</i>	1
0002-5	<b>Bidding Behavior Analysis in Joint Electricity and Carbon Market by Hybrid Experimental Learning</b> <i>Jianmin Ye,Yarong Hu,Jinjie Liu,Wenxuan Liu,Gaoqi Liang</i>	7
0003-6	<b>A Response Potential Evaluation Method of Inverter Air Conditioner Clusters Considering User Willingness</b> <i>Chaoliang Wang,Xiong Li,Songsong Chen,Ciwei Gao,Tao Chen</i>	13
0004-7	<b>Cost Effective Distributed Load Frequency Control with Imperfect Measurements</b> <i>Zhiliang Liu,Dong Chen,Chen Zhao,Ran Zhang</i>	19
0005-8	<b>Out or Home? Scrip System for User Commitment on Peak Shaving and Frequency Regulation</b> <i>Chen Zhao,Zhiliang Liu,Dong Chen,Ran Zhang</i>	24
0006-11	<b>Exergy Efficiency Evaluation Method for Integrated Energy System Considering Primary Energy Permeability</b> <i>Yongjie Zhong</i>	30
0007-12	<b>Multi-objective Fuzzy Optimal Scheduling for Multi-energy Flow System Considering Off-design Characteristics</b> <i>Yongjie Zhong</i>	35
0008-13	<b>Coordinating Multitype Frequency Response Resources of New Energy Power System in Unit Commitment</b> <i>Zheng Li,Cheng Yan,Wenbo Li,Xinyao Zhu,Dajiang Wang,Xingyang Wu</i>	41
0009-18	<b>A Refined Economic and Environmental Benefits Evaluation Methodology for Distributed Rooftop Photovoltaic Stations</b> <i>Shengran Chen,Xuheng Luo,Li Zhao,Yi Lei,Haibo Li,Ruizhe Wang</i>	47
0010-21	<b>A DDQN-based Energy-Efficient Resource Allocation Scheme for Low-Latency V2V communication</b> <i>Juanjuan Miao,Xinyue Chai,Xiaoqin Song,Tiechen Song</i>	53
0011-23	<b>PSCADEMTDC Based Arc Model Simulation Method for Single-pole Grounding Fault</b> <i>Junchao Zheng,Jinjiao Lin,Xiangping Kong,Jiaying Ning</i>	59
0012-24	<b>A Method for Remaining Useful Life Prediction of Transformer Based on the Long Short-Term Memory Networks</b> <i>Xuntao Shi,Ran Hu,Mingyu Ou,Lei Yu,Qingpai Ke,Weiwei Wu,Kairan Li</i>	64

0013-25	<b>Design and Development of Smart Terminal Self-Sensing Module</b> <i>Qigui Yao,Xiangqun Wang,Xiaojian Zhang,Zhuo Lv,Mingyan Li,Zheng Zhang</i>	70
0014-26	<b>Operation optimization of section III of distance protection based on DC information</b> <i>Haiyu Zhang,Jinghan He,Wei Li</i>	76
0015-27	<b>A Self-healing Power Cable Sheathing Material</b> <i>Lei Peng,Musong Lin,Qiang Fu</i>	80
0016-28	<b>Small Amounts of Transformer Oil Leakage Fluorescence Detection Using Image Processing</b> <i>Xu-Xu Li,Xiao-Jiang Liu,Xiao-Min Ma,Wen-Hai Zhang,Xiao-Mei Yang</i>	86
0017-29	<b>Research on Multi-Objective Planning Method of New Energy Field Station Convergence Network Based on Co-evolution Algorithm</b> <i>Jiheng Jiang,Zongxiang Lu,Jingyi Zhang,Danyang Yao,Shuai Wang,Haibo Li,Keteng Jiang,Qi Liu</i>	92
0018-31	<b>Summary of Hydrogen Industry Development and Application Prospect: The Case of China</b> <i>Yongjie Zhong</i>	98
0019-33	<b>Power Grid Engineering Data Knowledge Retrieval and Graph Construction Technology</b> <i>Jia Zhou,Longfang Li,Yang Bai</i>	104
0020-36	<b>Optimal Aggressive Level-based Offering Method for Hybrid PV Plants</b> <i>Xiaoge Huang,Zhenhuan Ding,Zhao Liu,Ziang Zhang</i>	109
0021-37	<b>Operation Region Determination Method for MMC-HVDC System</b> <i>Wei Lin,Yi Lin</i>	115
0022-38	<b>Safety Management in Substation Project Construction Based on Advanced Internet of Things and Smart Sensors Technologies</b> <i>Lvquan Chen,Jingrui Tang,Xiaotian Lu</i>	121
0023-39	<b>Synergic Optimizing Energy-Water System in Hot Spring Resort Based on General Flow Analysis</b> <i>Zishuo Huang,Junjie Xiong</i>	127
0024-40	<b>Farm Energy System Optimization Considering Cost Variation In Demand and Production Side</b> <i>Haijing Liu,Junjie Xiong</i>	132
0025-42	<b>An Improved Control Strategy Based On Sliding Mode Observer for Sensorless PMSM Drives</b> <i>Jun Sun,Mingxing Gu,Menxi Xie,Yong Yang,Mingdi Fan</i>	137

0026-44	<b>Degradation of Pesticide Residues in Apples by Dielectric Barrier Discharge Plasma Device</b>	143
	<i>Jie Yu,Xingquan Wang,Linsen Yuan</i>	
0027-45	<b>Design-Oriented Transient Stability Analysis of Virtual Synchronous Generators Under Mode-Switching FRT Control</b>	147
	<i>Chao Shen,Wei Gu,Wei Liu</i>	
0028-46	<b>Impedance-Based Stability Analysis of LCC-HVDC Connected to Weak Grid Considering Frequency Coupling Characteristic</b>	153
	<i>Xi Wang,Peng Shi,Yiming Liu,Heng Nian,Zhen Chen,Gang Chen</i>	
0029-47	<b>Comparative Analysis of Different Connection Schemes for Power balance Machine in Power Plant System</b>	157
	<i>Zhaohui Yang,Huadong Wei,Yang Shang</i>	
0031-49	<b>Coordinated Distribution Reconfiguration with Maintenance Scheduling Considering Electric Vehicles Charging Uncertainty</b>	168
	<i>Jing Wang,Fangtao Di,Haidong Meng,Meng Meng,Xiao Luo,Yifei Wang</i>	
0032-50	<b>Resilient Distribution Reconfiguration Considering Voltage Deviation and Sub-network Scale Homogenization</b>	174
	<i>Jiansheng Yao,Guangnan Shi,Wei Ru,Tong Zhu,Yifei Wang</i>	
0033-51	<b>A New On-Line Location Method of Inter-Turn Short-Circuit Fault in Hydro-Generator Rotor Winding Based on the Harmonic Phase of Unbalanced Current</b>	180
	<i>Tiandao He,Liangliang Hao,Jianlin Chen</i>	
0034-53	<b>Research on MMC Improved Sub-module Topology with Capacitor Voltage Self-balancing</b>	186
	<i>Yiqi Liu,Zhaoyu Duan,Mingfei Ban,Zhenjie Li</i>	
0035-55	<b>Power Quality Disturbance Identification Method Based on Improved GSA-SVM Algorithm</b>	191
	<i>Xiaohua Chen,Zhiping Wang,Mingzhi Hong,Xunxiang Zhang,Furong Huang,Shengyu Chen,Zhonghai Sun,Hao Fang</i>	
0036-60	<b>A Stator Design of Traveling-Wave Ultrasonic Micromotor</b>	197
	<i>Jinxuan Xie,Tong Zhou,Haojiang Tang,Yan Su,Yan Zhou,Hao Wang</i>	
0037-62	<b>Stability Analysis Based on Parameter Sensitivity for Large-Scale Renewable Energy Bases Considering Frequency Coupling Characteristic</b>	202
	<i>Yongcan Wang,Xi Wang,Haipan Li,Heng Nian,Zhen Chen,Gang Chen</i>	

0038-63	<b>HVAC Scheduling for Demand Response in a Distributed CCHP System Considering Latent Loads</b>	208
	<i>Junguang Lin, Yamin Zhou, Shenyi Zhao, Fan Wu, Ganghua Qin, Zitao Yu, Menglian Zheng</i>	
0039-65	<b>An NSGA-III Based PV's Capacity Optimization Method Considering the Load's Long Term Variation</b>	214
	<i>Xingang Yang, Yang Du, Pei Sun, Lei Su, Lijuan Chao, Yuan Liu</i>	
0040-66	<b>Line-Side Converter for DC Voltage Matching Based on Multiplexing of Transformer Windings in Multisystem Locomotives</b>	220
	<i>Lingshuai Kong, Jiazhu Xu, Jinwen Xiang, Nihan Tong</i>	
0041-67	<b>Research on Parameter Identification Method of Asynchronous Motor Considering Load Characteristics</b>	226
	<i>Yisen Sun, Zhongjian Kang, Jiakuan Liu</i>	
0042-70	<b>Analysis on Energy Conservation Effects of Hubei Power Grid in 2020</b>	232
	<i>Wenna Wang, Defu Cai, Haiguang Liu, Rusi Chen, Qiao Chen, Chang Liu</i>	
0043-71	<b>Evaluation Method of Distributed Photovoltaic Carrying Capacity in Distribution Network Based on Voltage Sensitivity Ranking</b>	238
	<i>Haozheng Yu, Ke Li, Xinzhi Guo, Shaoli Quan, Hanjie Zhao, Xingxu Zhu, Cuiping Li, Wenchao Zhu, Jiaqi Yan, Kunqi Gao</i>	
0044-72	<b>Influence of Different Metal Materials on the Gas Production Characteristics of Insulating Oil</b>	244
	<i>Xiaoyu Zhao, Yilin Wang, Huanchao Cheng, Qing Xu, Chenyu Gao, Jian Hao</i>	
0045-73	<b>Finite Element Study on Electric Field Distortion and Maxwell Stress Distribution Characteristics of XLPE Insulation Considering Water tree under Different Conditions</b>	249
	<i>Jiaming Liang, Shiyong Hou, Fan Yang</i>	
0046-75	<b>Evaluation Method of Distributed Photovoltaic Admission Capability Based on Voltage Sensitivity and Multi-Scenario Power Flow Simulation</b>	257
	<i>Xiaowen Huangfu, Qiuyan Li, Yan Ding, Yong Guo, Hanjie Zhao, Cuiping Li, Dapeng Sun, Dongbo Wang, Xiangchen Hou, Jiangchuan Fan</i>	
0047-77	<b>State Estimation Of Electric-gas Network</b>	263
	<i>Fujue Wang, Zhi Wu, Suyang Zhou, Xiaogang Chen</i>	
0049-81	<b>Research on 220kV Spare Power Automatic Switching Equipment Standardized Application of Local functions Based on Real-Time Simulation</b>	274
	<i>Huang Zhida, Wu Wencong, Cai Haiqing, Zhu Yihua, Huang Libin, Chang Dongxu</i>	

0050-82	<b>Cloud and Electricity Portfolio Optimization for Internet Data Centers under Uncertainties</b>	281
	<i>Yanxu Zhang, Caishan Guo, Chunchao Hu, Yu Cai</i>	
0051-83	<b>Orderly Charging Control Strategy of Electric Vehicles Based on Optimal Power Allocation</b>	286
	<i>Lei Guo, Shenshen Zhuo, Ying Zhang, Wanli Zhai, Jieshi Shen, Changchun Cai</i>	
0052-84	<b>A Cooperative Scheduling Strategy of Renewable Energy and Electric Vehicle Considering Reactive Power Response</b>	291
	<i>Jun Li, Yuanyuan Li, Yuqi Wang, Ziyu Zhang, Xiaosheng Zhang, Tao Ding</i>	
0053-85	<b>A Two-Stage Stochastic Dispatch for Combined Heat and Power System Considering Flexible Carbon Capture Device under Source and Network Coordination</b>	297
	<i>Song Gao, Kuan Lu, Yuqi Wang, Xiaosheng Zhang, Ziyu Zhang, Tao Ding</i>	
0054-86	<b>Electromagnetic Transient Modeling and Verification of DFIG Unit and Wind Farm Based on RTLAB</b>	302
	<i>Xing Zhang, Guoqing He, Yang Li, Ni Zhen, Guanghui Li, Junhua Ma, Jianhua Bi</i>	
0055-87	<b>Impact of the Scale of Microgrids and the Capacity of Rooftop Photovoltaics on the System Energy Self-Sufficiency Indicator</b>	308
	<i>Jianchao Liu, Jinrui Tang, Gangheng Ge, Honghui Yang, Zilong Zhao</i>	
0056-89	<b>Analysis on Abnormality of 220kV Metal Oxide Lightning Arrester</b>	314
	<i>Yanan Wang, Lina Geng, Dehan Jiang, Yiling Ma</i>	
0057-90	<b>Research on Power Frequency Electric Field of 750 kV Four-Circuit on the Same Tower</b>	318
	<i>Zhongju Yang, Hao Yang, Liugang Li, Fan Yang</i>	
0058-91	<b>Short-Circuit Current Mechanism in Three-Core Submarine Cable for Offshore Wind Power Transmission System Under Grid Faults</b>	323
	<i>Xiaohe Wang, Gui Yin, Chunxiang Fu, Zhaohui Shi, Hongke Li</i>	
0059-92	<b>Coordinated Operation Strategy of Multi-energy Flow System with 5G Base Station Participating in Comprehensive Demand Response</b>	329
	<i>Meng Yang, Xinyu Feng, Hujun Li, Zhenli Deng, Fangzhao Deng, Lijuan Chen</i>	
0060-95	<b>Offshore Wind Power Grid-connected Technology Based on Self-starting System</b>	335
	<i>Liang Wang, Yanan Liu, Jiawei Cao, Ran Ding, Jian Yu, Chun Yang, Xi Chen, Xi Wu</i>	
0061-98	<b>Fault Location Method of Distribution Network Based on Improved Adaptive Genetic Algorithm</b>	341
	<i>Rui Liu, Jun Xia, Mingmei He, Gang Wang, Yu Peng, Jun Ren, Yao Long, Siyu Qiu, Dongfeng Yu</i>	
0062-99	<b>A Remedial Method Based on Field-Oriented Control for Five-Phase PMSM Under Single-Phase Open-Circuit Fault</b>	347
	<i>Jianhua Li, Bochao Du, Tianxu Zhao, Yuan Cheng, Shumei Cui</i>	

0063-100	<b>Simulation and Measurement of Vibration Characteristics of Magnetic-valve Controllable Reactor</b>	353
	<i>Jiajun Lin, Yiming Zheng, Chen Li, Zhi Yang, Xueliang Fan,</i>	
0064-101	<b>Core Modal Analysis and Noise Suppression Method of Magnetic-valve Controllable Reactor</b>	358
	<i>Jiajun Lin, Yiming Zheng, Xianjun Shao, Lingfeng Jin, Shaohe Wang, Xiaoxin Chen, Shaoan Wang</i>	
0065-104	<b>Mechanism Analysis of Subsequent Commutation Failure Considering PLL Dynamics in LCC-HVDC Systems</b>	362
	<i>Minghui Ban, Meng Zhan</i>	
0066-105	<b>Asymmetric Feedforward Compensation for 3-Phase Coupled Buck-Boost Converter</b>	368
	<i>Han Fu, Shanxu Duan, Tao Cai, Junyang Bao, Xiaokui Liu</i>	
0067-108	<b>Research Progress of Ionic Liquids for CO<sub>2</sub> Capture</b>	374
	<i>Lei Peng, Qiang Fu, Musong Lin, Zaikun Wu, Zhihua Xu, Tianrong Zhu</i>	
0068-109	<b>A Novel Dynamic Energy Model and Damping Evaluation Method of DFIG Grid-connected System</b>	379
	<i>Xiaoqiang Xiang, Dong Zhao</i>	
0069-110	<b>Effect of Pulse Polarity and Dielectric Configuration on the Spatio-Temporal Evolution Characteristics of Methane Pulsed Dielectric Barrier Discharge Plasma</b>	385
	<i>Lijun Zong, Xiaoxiao Chen, Tong Chen, Peng Liu, Jun Du, Jie Pan, Shaohua Qin</i>	
0070-111	<b>Full Scale Test Study on Sag Characteristics of Augmented Capacity Conductors for Transmission Line</b>	391
	<i>Bin Li, Lei Liu, Tang Li, Guoli Wang, Tianwei Li, Enwen Li</i>	
0071-112	<b>Research on Phase Change Cooling Technology of Vehicle Traction Converter Module</b>	397
	<i>Wei Hao, Biao Chen, Huitao Li, Guangkun Lian, Jiayi Yuan</i>	
0072-113	<b>Optimal Operation Strategy of Low-Carbon Integrated Energy System Considering Power to Gas and Carbon Capture Technology</b>	404
	<i>Chen Fu, Mingxing Guo, Panpan Liu, Ruanqing Mo</i>	
0073-114	<b>Sliding Mode Control Strategy of Grid-Connected Inverter under Unbalanced Grid Voltage</b>	410
	<i>Yuanyuan Wu, Guangchen Liu, Guowei Chen, Qiang Yao, Jianwei Zhang, Guizhen Tian</i>	
0074-115	<b>Segmental PWM Variable Duty Cycle Control of Switched Reluctance Motor Based on Current Chopping</b>	417
	<i>Wu Yuliang, Huang Chaozhi, Cao Wensheng, Lixiangdai Lixiang</i>	
0075-116	<b>Adaptive Torque Sharing Function Control Strategy of Switched Reluctance Motor Based On Neural Network</b>	423
	<i>Cao Wensheng, Huang Chaozhi, Wu Yuliang, Xie Wei</i>	



0076-117	<b>Open-Circuit Magnetic Field and Cogging Torque of Spoke-Type Permanent-Magnet Machine with Different Pole Shape</b>	429
	<i>Yu Zhou,Ke Liu,Xiaobao Yang,Hong Miao,Chengbi Zeng</i>	
0077-118	<b>Safety Boundary Analysis for Lithium-Ion Batteries Via Overcharge-To-Thermal Runaway</b>	433
	<i>Yi Cui,Zhanglong Yu,Dong Shi,Fengling Yun,Yichen Hu,Xiaohua Zhang,Wenqing Hua,Shiqiang Gao,Sheng Fang,Yanyan Fang</i>	
0078-120	<b>Thermal Conductivity and Dielectric Properties of Epoxy Composites Co-doped with BN with Different Morphology</b>	439
	<i>Xubin Wang,Jiaxue Wu,Tiandong Zhang,Qingguo Chi</i>	
0079-121	<b>Research on Predictive Control Method of an Induction Machine Fed by a Matrix Converter</b>	443
	<i>Ling Mao,Ken Chen,Haihua Li,Xiaoling Chen</i>	
0080-122	<b>A Test Methodology To Verify Reactive Power Support Ability of Wind Turbines</b>	449
	<i>Haibo Li,Yi Lei,Yinding Geng,Haitao He,Qingjun Niu,Ke Wag,Yansheng Wu</i>	
0081-124	<b>Research on interactive Operation and Maintenance Service mode of electric vehicles</b>	455
	<i>Binbin Zang,Hui Gao</i>	
0082-125	<b>Neutral Point Voltage Drift Suppression Method of Large Hydro Generator Based on Active Compensation</b>	461
	<i>Long Zhou,Shuye Ding,Ling Liu</i>	
0083-126	<b>Accurate Calculation Method of Rectifier Load and Time-Domain Analysis in PS/S Current-Fed WPT System</b>	466
	<i>Feng Fan,Qingbin Chen,Jinshuai Wang,Wei Chen</i>	
0084-127	<b>A New Three-Phase L-Type Double Active Bridge Buck-Boost Converter</b>	471
	<i>Fang Liu,Ziqun Wu,Haodong Wang,Hao Li,Yang Zhao,Chunyang Ling</i>	
0085-128	<b>Suppression Mechanism and Strategy of Commutation Failure in Hybrid Dual-infeed HVDC System</b>	477
	<i>Zhuqing Li,Chongru Liu,Qi Hao</i>	
0086-129	<b>A New Method of Active Power Filter Using Dead Beat Control and Repeated Control</b>	484
	<i>Jing Lin,Minjie Yang</i>	
0087-132	<b>Design and Implementation of Monitoring and Management System for Battery Energy Storage</b>	489
	<i>Zhong Xue,Bei Dong</i>	
0088-133	<b>Repetitive Control-Based Torque Ripple Reduction Method for SRM Drive</b>	494
	<i>Yiyang Wu,Shuanghong Wang,Longchun Li,Miao He,Cheng Zhong</i>	

0089-134	<b>Solar Cell Parameter Identification Based on Opposition-Based Chaotic Whale Optimization Algorithm</b>	500
	<i>Xingyu Shi,Zhendong Yin,Li Wang,Heqi Liang,Zimo Wang,</i>	
0090-135	<b>Dynamic Access Control Architecture of Distribution Master Station Based on Extended Trust Evaluation</b>	506
	<i>Chao-Qun Kang,Er-Xia Li,Yu-Ling Li,Li Wang,Yun-Shan Liu,Zi-Long Han</i>	
0091-136	<b>Current and Light Emission Characteristics of Unstable Leader under Positive Voltage in Long Air Gap</b>	511
	<i>Yuyang Zhang,Juyuan Su,Xiaoqing Wang,Wenrong Li,Hao Chen,Lu Qu</i>	
0092-137	<b>Simulation Study on Evolution Characteristics of Discharge Channel after Air Gap Breakdown</b>	515
	<i>Yangliang Zheng,Junyuan Su,Yuyang Zhang,Yuqin Liao,Yueguang Yang,Lu Qu</i>	
0093-140	<b>Low-carbon Economic Dispatch of Integrated Energy System Considering P2G and Carbon Trading Mechanism</b>	519
	<i>Yun Li,Jiazhu Xu,Min Wu,Linjun Zeng,Nihan Tong</i>	
0094-141	<b>Characteristics of Circulating Current in Main Feeding Cable armor of Common Ground Electrode</b>	525
	<i>Maoheng Jing,Shangmao Hu,Wenhao Lu,Gang Liu,Lei Jia,Yi Zhang,Xiaoxing Wei,Hansheng Cai</i>	
0095-143	<b>Fast Simulation Research on Photovoltaic Inverter based on Converter Average Value Model</b>	529
	<i>Sheng Lu,Hanwen Wang,Yong Yu,Weidong Ni</i>	
0096-144	<b>Frequency Control Approach of Sending-end Power Grid of Hybrid Cascaded HVDC System with Active Support of Wind Power</b>	534
	<i>Yi Tong,Hao Li,Chengyong Zhao,Xiufang Jia,Zhibing Wang</i>	
0097-145	<b>Mitigation Strategy of Sub/Supersynchronous Oscillation of PMSG Based on Additional Active Disturbance Rejection Controller</b>	541
	<i>Siwen Jiang,Chongru Liu,Jianze Li</i>	
0098-146	<b>Research on Management Method of System of Records in Power Industry</b>	549
	<i>Wei Che,Mingsheng Xu,Shaowei Ling</i>	
0099-147	<b>A Switched Capacitor DC-DC Boost Converter With High Voltage Gain</b>	554
	<i>Jie Xu,Xiaosan Ma</i>	
0100-148	<b>Study on Auxiliary Colorant for Laser Cleaning RTV Coating</b>	560
	<i>Yujia Gong,Qianqian Li,Tian Yuan,Gang Wu,Guotai Yang,Hu Zhang</i>	
0101-149	<b>Modeling and Simulation of “Portugal-Spain” Cross-border Electricity-Gas Coupling System</b>	566
	<i>Dandan Wang,Yalou Li,Fei Zhao,Fang Li</i>	

0102-150	<b>An Integrated Direct-Drive Wave Power Generation System with Hybrid Battery/Supercapacitor Energy Storage Based on Nine-Switch Converter</b>	572
	<i>Ruiyang Ma,Lei Huang,Lai Wei,Xiaoyu Zhang,Peiwen Tan</i>	
0103-151	<b>Review of the Development of Hubei Power Grid during the 13th Five-Year Plan Period and Prospect of the 14th Five-Year Plan</b>	578
	<i>Wenna Wang,Defu Cai,Haiguang Liu,Rusi Chen,Qiao Chen,Chang Liu</i>	
0104-153	<b>Analytical Calculation of Electromagnetic Performance in Dual-winding Bearingless Flux-Switching Permanent Magnet Machines Considering Rotor Eccentricity</b>	584
	<i>Zhengshan Cui,Yangzhong Zhou,Xin Wu,Jing Zhang</i>	
0105-154	<b>Inverse Time Differential Current Protection for Microgrid</b>	590
	<i>Jian Li,Xiaopeng Zhang,Wei Yao,Jiangong Xu,Xiaoliang Shi,Fei Ren</i>	
0106-155	<b>Energy Flow and Carbon Emission Flow Analysis for the Integrated Energy Station</b>	596
	<i>Yan Li,Decheng Wang,Qun Zhang,Xueping Pan,Yi Xu,Xiaorong Sun</i>	
0107-156	<b>A Novel Robust Dispatch Strategy Exploiting Operational Flexibility of HVDC</b>	602
	<i>Ziqing Ding</i>	
0108-158	<b>Robust Model Predictive Current Control for SPMSM Drives</b>	607
	<i>Xiaoguang Zhang,Ziwei Wang</i>	
0109-159	<b>Bidding Strategy of Electricity Retailers Based on Joint Optimization of Energy Market and Ancillary Services Market</b>	612
	<i>Xinyi Xie,Liming Ying,Guiqi Zhu,Shusheng Tian,Kaisheng Lin</i>	
0110-161	<b>Research on Collaborative Innovation of Energy Storage Industry Based on the Tripartite Evolutionary Game</b>	618
	<i>Guiqi Zhu,Liming Ying,Shusheng Tian,Xinyi Xie</i>	
0111-162	<b>SOC estimation of lithium battery with weighted multi-innovation adaptive Kalman filter algorithm</b>	624
	<i>Jieyu Xu,Dongqing Wang,Meng Jiao</i>	
0112-163	<b>Fault-isolation method for smart DC distribution networks with multiple types of converters</b>	630
	<i>Zhihui Dai,Shanshan Liu,Jian Zhao,Tong Wu,Xueyan Liu</i>	
0113-164	<b>Research on SVM-DTC Control Strategy of PMSM Based on Super-Twisting Sliding Mode Active Disturbance Rejection Control</b>	636
	<i>Zhihong Hu,Han Gao,Haiming Du,Mingjie Fan</i>	
0114-165	<b>A Novel Input-Parallel Output-Series High Gain DC-DC Boost Converter with Voltage-doubler Cell</b>	641
	<i>Qiao Zhang,Xuefeng Hu,Han Xu,Zhenhai Yu</i>	

0115-167	<b>Design and Analysis of Rotating Cold Mass Support of Superconducting Wind Turbine Generator</b>	647
	<i>Qi Xiong,Bin Zhang,Sisi Peng</i>	
0116-168	<b>An Improved BP Neural Network Method for Wind Power Prediction</b>	653
	<i>Zhonghao Li,Ping Ma,Xin Wang,Jieyu Xu,Xiaodong Wan</i>	
0117-170	<b>A Distributed Method to Evaluate Total Energy Supply Capability of Integrated Power Distribution and Natural Gas System</b>	659
	<i>Qirun Sun,Zhi Wu,Wei Gu,Yuping Lu,Xuan Yang</i>	
0118-171	<b>A Two-Tier Demand Response Scheduling Strategy Based on Users' Equipment Level</b>	665
	<i>Songsong Chen,Taorong Gong,Lei Li,Chaoliang Wang</i>	
0119-172	<b>Study on Electromagnetic Force Characteristics of Asymmetric 8-Figure Coils in EDS System</b>	671
	<i>Yukang Gao,Rong Wei,Jin Wang,Qiongxuan Ge,Yanxi Zheng</i>	
0121-174	<b>A Low Cost Real-Time Power Quality Measurement Method and Its Implementation</b>	684
	<i>Congcong Li,Xuezhong Fan,Hongxia Zhu,Li Cao,Pingxin Wang,Chao Yu,Xiang Zhang</i>	
0122-175	<b>Influence of Waterway Blockage Fault on Temperature Distribution of Stator Transposition Winding</b>	689
	<i>Xu Bian,Shijie Bao</i>	
0123-176	<b>Electromagnetic Design of a 50 Mvar Superconducting Synchronous Condenser by Using of MgB<sub>2</sub> Wire</b>	695
	<i>Yan Li,Darui He,Xiao Han,Qiong Wang</i>	
0124-177	<b>Thermal Stability Analysis of 2G High Temperature Superconducting (HTS) Tapes under DC Shock</b>	703
	<i>Darui He,Yan Li,Qiu Wang,Jiaqi Zheng,Fangyuan Tian,Yifei Fan,Chengjie Cao</i>	
0125-178	<b>Electromagnetic Design of Excitation Winding of 10MW Superconducting Wind Generator</b>	711
	<i>Yan Li,Darui He,Xiao Han,Qiong Wang</i>	
0126-182	<b>A Switching Control Method Based on Three-vector MPC</b>	717
	<i>Xiaoguang Zhang, Ji Li</i>	
0127-183	<b>Model Predictive Control for Open Winding PMSM with Variable Dead-Zone Time</b>	722
	<i>Xiaoguang Zhang,Chenguang Zhang</i>	

0128-184	<b>Transient Voltage Stability Assessment Of High Proportion Wind Power Transmission End Power Grid</b>	727
	<i>Wang Changjiang,Li Shuguang,Zhong Shicheng,Fan Wei,Duan Fangwei</i>	
0129-185	<b>Life Cycle Assessment-based Carbon Emission Analysis for the Integrated Energy Station</b>	732
	<i>Decheng Wang,Yan Li,Qun Zhang,Xueping Pan,Qijie Xu,Xiaorong Sun</i>	
0130-188	<b>Four-segment Deadbeat Control for PMSM Drive with Dead-time Compensation</b>	738
	<i>Xiaoguang Zhang,Xu Gao</i>	
0131-190	<b>A Permanent Magnet Synchronous Linear Motor ADRC Position Control Algorithm Research</b>	742
	<i>Rongtao Zeng,Jinghong Zhao,Chuibing Huang,Anming Ding,</i>	
0132-191	<b>Analysis of Power Quality Disturbance Based on Improved HHT and BPSO-SVM</b>	748
	<i>Jiakai Wang,Lei Yu,Hongwei Liu</i>	
0133-192	<b>Analysis of Minimum Switching Current for Zero Voltage Switching of DAB Converters Applied in Energy Storage System</b>	754
	<i>Jinzhe Bai,Fei Xu,Zheng Dong,Zhen Li,Zhenbin Zhang</i>	
0135-194	<b>Full-Characteristic Power Flow of Wind Power System with Consideration of Generator Set Frequency Variation</b>	766
	<i>Yaozu Yuan,Mingdong Wang</i>	
0136-195	<b>Cogging Torque Reduction in a Transverse-flux Flux-reversal Permanent Magnet Motor</b>	770
	<i>Xiaobao Yang,Bo Luo,Yu Zhou,Baoquan Kou,Hong Miao</i>	
0137-196	<b>A Multi-parameter Condition Monitoring Method for IGBT Bond Wire</b>	776
	<i>Yangbo Li,Haodong Fu,Qi Li,Chunming Tu,Biao Xiao,Fan Xiao,Ping Liu,Bing Gao,Jiwu Lu</i>	
0138-197	<b>Experimental Study of Plasma Anti-Icing Over An Airfoil Based on Two Different Electrode Layouts</b>	782
	<i>Like Xie,Mei Lin,Huimin Song</i>	
0139-198	<b>Research on Approximate Fault Current Expression in Hybrid Multi-terminal HVDC Network During DC-Side Fault</b>	787
	<i>Tao Li,Yongli Li</i>	
0140-199	<b>Influence of Oxygen Content, Gas Flow Rate and Temperature on Detection of Dissolved H<sub>2</sub> in Oil Using Semiconductor Resistance Sensor</b>	792
	<i>Kang Li,Shuai Yuan,Guangzhen Wang,Dehui Fu,Zongjia Qiu,Tunan Chen</i>	

0141-200	<b>Failure Mechanism Analysis of Bond Wire of High Power IGBT under Different Load Current</b>	798
	<i>Haodong Fu, Yangbo Li, Qi Li, Chunming Tu, Biao Xiao, Fan Xiao, Ping Liu, Bing Gao, Jiwu Lu</i>	
0142-201	<b>Switch Duty Cycle Based Model Predictive Control for Hybrid-Inverter Driven Open-Winding PMSM System</b>	804
	<i>Wei Huang Ke, Chen Zhao, Dan Sun</i>	
0143-204	<b>Multi-level Staircase Signal Based Quadrature Phase Detection for Fundamental Power Angle Acquisition of BIPT Systems</b>	809
	<i>Shuran Jia, Shanxu Duan</i>	
0144-206	<b>High Frequency Resonance Mechanism Analysis of LCL Types Grid-connected Inverter without Damping</b>	816
	<i>Yifeng Ouyang, Dan Sun, Fuguang Wen, Yu Zou</i>	
0145-207	<b>Risk Blocking Strategies for Urban Power Grids Considering Social-Informational-Physical Risks</b>	821
	<i>Chao Zhu, Zhesheng Hu, Lei Wang, Ke Sun, Chengjin Ye, Shiqiang Guo, Zifei Wang, Licheng Wang</i>	
0146-208	<b>Robust Model Predictive Current Control for PMSM Control System</b>	826
	<i>Xiaoguang Zhang, Zheng Liu</i>	
0147-210	<b>Carbon-aware Integrated Energy System Operation with Demand Response</b>	832
	<i>Linwei Sang, Yinliang Xu, Wai Kin Victor Chan, Zixuan Wei</i>	
0148-211	<b>Application Scenarios and Analysis of NB-IoT Communication in Substation and Power Internet of Things</b>	838
	<i>Junyi Yin, Zihan Gan, Yuan Gao, Guodong Meng, Yonghong Cheng</i>	
0149-212	<b>Research on Lightning Protection and Grounding Safety Evaluation of Base Station Shared Power Tower</b>	843
	<i>Huan Huang, Yan Hong Xiao, Bin Li, Lei Liu, Siwu Yu, Xianyin Mao, Chi Peng, Hao Du</i>	
0150-213	<b>Electromagnetic-thermal Coupling Model of 500kJ HTS Energy Storage Magnet</b>	849
	<i>Jinhui Xie, Sisi Peng, Xiaojun Niu, Hong Xu, Jun Zheng</i>	
0151-214	<b>Study on Corona Discharge Characteristics of Soil under Pulse High Voltage</b>	853
	<i>Xiaoqian Pi, Chi Li, Maoping Ran, Chuan Li, Yong Yang</i>	
0152-215	<b>Simulation Analysis of Pantograph Catenary Arc Motion Characteristics During High-speed Train Running</b>	858
	<i>Han Zeng, Xuwei Chen, Fangming Deng</i>	
0153-216	<b>Study on Flashover Characteristics of Vehicle Train Roof Insulator Under Off-Line Overvoltage of Bow Mesh Based on HANKE Model</b>	863
	<i>Han Zeng, Yupeng Gong, Yanjin Zhu</i>	

0154-217	<b>Design and Development of High-Speed and High-Power Drive Motor for Heavy Commercial Vehicle</b> <i>Weifeng Kong, Wenchao Wu, Shengtao Huang</i>	869
0155-218	<b>Optimizing Method of Measuring Point Position of Transformer Core Vibration Sensor</b> <i>Yuesong Liu, Xingguang Ma, Ping Ju, Zhaoyang Kang, Ran Zhu, Qingquan Li</i>	875
0156-220	<b>Transformer Mechanical Condition Assessment Method Based on Improved Grey Similarity Correlation</b> <i>Ping Ju, Hongru Zhang, Yuesong Liu, Qingquan Li</i>	880
0157-224	<b>Improved VSG Control Strategy for Wind Turbines Connected to Non-Synchronized Grid Under Commutation Failure</b> <i>Xiao Jin, Heng Nian, Chen Zhao, Zhuan Zhou</i>	885
0158-225	<b>Nonlinear Dynamic Analysis of the PCC Buck Converter with MR Parallel Load</b> <i>Zhen Kuang, Qiuhua Fan, Wenlei Li, Dongqing Wang</i>	890
0159-226	<b>Stochastic Optimization Scheme of Power Cost in Intelligent Community with Energy Storage</b> <i>Xin Wang, Zhonghao Li, Lingang Li</i>	896
0160-227	<b>Genetic Algorithms Based LSSVM for EEG Fatigue Multi-Classification</b> <i>Yuxiang Li, Dongqing Wang, Meng Jiao</i>	901
0161-228	<b>Hybrid Scheduling Strategy Based on New Energy Consumption and Optimal Operation Cost</b> <i>Qingsong Zhao, Junbo Yao, Hailiang Wang, Chuyuan Yang, Liping Fan, Anquan Yang, Hui Ma</i>	906
0162-229	<b>Research on Load Control Strategy of Aggregate Water Heater Based on Artificial Immune Algorithm</b> <i>Yingchun Peng, Ning Zhang, Xiaoan Feng, Bing Qi</i>	912
0163-230	<b>Data Valuation in Electricity Transactions with Uncertainty Considering Risk Preferences</b> <i>Bohong Wang, Tian Xia, Qinglai Guo, Luo Xu, Hongbin Sun</i>	917
0164-231	<b>A Novel Hybrid Transfer Learning Approach for Small-Sample High-Voltage Circuit Breaker Fault Diagnosis On-site</b> <i>Yanxin Wang, Jing Yan, Jianhua Wang, Yingsan Geng</i>	922
0165-232	<b>Research on Green Construction Evaluation of Power Grid Construction Under the Background of Dual Carbon</b> <i>Qingxiang Huang, Ping Chen, Li Zhou, Hongyan Zhang, Zengguang Huang, Yang Wang</i>	928
0166-233	<b>Adaptive Restart Strategy of Flexible DC Grid Suitable for Double-Terminal MMC</b> <i>Lin Su, Ke Jiang, Zhao Zhang, Changsheng Pei, Bingtian Zhang, Jun Mei</i>	934

0167-234	<b>Research on Calculation of Ship Magnetic Field Based on Recursive Iterative Algorithm</b>	939
	<i>Junji Gao,Xuelian Zhu,Pengzhong Wang</i>	
0168-235	<b>Research on the Relationship between Building Energy-saving Performance and Building Spacing in Regions with Hot Summer and Cold Winter</b>	945
	<i>Xiaoman Cui,Zhi Wu,Fujue Wang</i>	
0169-236	<b>Electrical Topology and Control of Four-wheel Hub Motor Pure Electric Vehicle</b>	951
	<i>Bo Guo,Hui Wang,Tao Zhang,Yifei Wang</i>	
0170-238	<b>Chaos Analysis and Control of SEPIC Converter with the Memristor Load</b>	957
	<i>Zhen Li,Dongqing Wang</i>	
0171-239	<b>Comparative Study on the Performance of High-Speed IPM Motor with Single-layer PM for Electric Spindle</b>	963
	<i>Shaoren Dai,Jiangtao Yang,Hongjun Liu,Hang Chen,Yaojing Feng,Shoudao Huang</i>	
0172-240	<b>Research on fault diagnosis and fault tolerant control of PMSM current sensor</b>	969
	<i>Xiaobing Niu,Shangbo Li,Xin Zhou</i>	
0173-241	<b>Point Potential Modulation Strategy for Three-Level Pwm Rectifiers in Unbalanced Grid</b>	976
	<i>Xiaobing Niu,Zhiqiang He,Xin Zhou</i>	
0174-243	<b>Highly Efficient Three Level Sparse NPC Inverter for Ultra-High-Speed PMSM</b>	983
	<i>Aleksandr Sheianov,Xi Xiao</i>	
0175-244	<b>Model Predictive Control for SPMSM Control System with Parameter Robustness Improvement</b>	990
	<i>Xiaoguang Zhang,Ziwei Wang</i>	
0176-245	<b>Predictive Optimal Control of Grid-connected Photovoltaics to Support System Frequency</b>	996
	<i>Zhi Lu,Xiaohui Wang,Xu Tian,Shibin Wang,Guihong Zhang,Qichao Chen</i>	
0177-246	<b>Analysis on Levitation Force Characteristics of Axial-Flux Hybrid-Excitation Generator for Offshore Vertical Axis Maglev Wind Turbine</b>	1002
	<i>Jiming Chen,Qiang Zhang,Jing Liu,Yong Li,Chongwang Xu,Jingnan Zhu</i>	
0178-250	<b>Analysis and Test of Insulation Terminal Defects in Electrical Strength Test of Model Cable</b>	1007
	<i>Xiao Han,Xiongjun Liu,Hongjie Di,Junguo Gao,Tingliang Li</i>	
0179-251	<b>An Improved GWO Technique Integrated with P&amp;O Algorithm for Photovoltaic System Considering Different Conditions in the Irradiance</b>	1013
	<i>Manliang Wang,Bingtuan Gao</i>	
0180-252	<b>Load Scheduling and Flexibility Quantification of Residential Users</b>	1019
	<i>Lin Lin,Feng Yan,Xuecen Zhang,Xinyu Hu,Jianan Wang,Jingjuan Pan,Xinnan Cao</i>	



0181-253	<b>AC Side Impedance Modeling Method of Multi-level Converter Considering Complete Control Structure</b>	1025
	<i>Qunqiao Wang, Chongru Liu, Hanxing Lin</i>	
0182-254	<b>Optimization Method Based on Load Forecasting for Three-phase Imbalance Mitigation in Low-voltage Distribution Network</b>	1032
	<i>Chenxu Shao, Chao Feng, Xuecen Zhang, Hongwei Tang, Jin Liu</i>	
0183-255	<b>Suppressing Secondary Magnetic Field Radiation for IPT System Using Dual Detuned Receiving Loops</b>	1038
	<i>Ying Luo, Yi Song, Chenyan Zhu, Ruikun Mai</i>	
0184-256	<b>Wind Power Smoothing Based on Time-Frequency Analysis of Wind Power Fluctuations</b>	1044
	<i>Xianjun Qi, Fuhua Zhang, Peng Wang, Xiwei Zheng, Yuting Hua</i>	
0185-257	<b>Market Clearing of Integrated Electricity and Heat Systems Considering Uncertainty</b>	1052
	<i>Xinmin Jia, Feng Xing, Yonggang Pang, Yanfei Zhang, Kangping Xu, Nan Jia, Cheng Wang</i>	
0186-258	<b>Abnormal Signal Analysis of GIS Voltage Transformer Based on Ultrasonic Detection</b>	1058
	<i>Zhicheng Lei, Chao Yuan, Xuancheng Huang, Haijun Chu, Quan Liu, Pengzhi Yan, Mumu Wu</i>	
0187-260	<b>Self-optimizing Control Strategy of Conduction Angle for Doubly Salient Electromagnetic Generator to Minimize Excitation Current</b>	1063
	<i>Yang Xu, Bo Zhou, Kaimiao Wang, Lei Xiong</i>	
0188-261	<b>Influence of Antenna on Radio Interference Test on Power Transmission Engineering</b>	1069
	<i>Bin Li, Lei Liu, Huan Huang, Guoli Wang, Tianwei Li, Enwen Li</i>	
0189-262	<b>Study of Dissociation Characteristic of SF6/N2 Mixture Under Corona Discharge with Pin-to-Plate Electrode</b>	1074
	<i>Zihao Yang, Linyuan Ren, Zichen Deng, Yanan Wang, Dingge Yang, Yanhua Han, Jingfeng Wu</i>	
0190-263	<b>Construction of a PV-driven Plasma Nitrogen Fixation Test Platform and Its Application Prospect in Agricultural Production</b>	1080
	<i>Qiyu Zheng, Peng Huo, Qinglong Bao, Liying Li, Yilin Miao, Weina Zhu, Lidi Wang</i>	
0191-264	<b>Bearing Fault Diagnosis Method Based on Transfer Ensemble Learning</b>	1084
	<i>Peien Luo, Zhonggang Yin, Yanqing Zhang, Dongsheng Yuan, Hui Yang</i>	
0192-265	<b>Research on Technical Line Loss Reduction of Distribution Network with SVG in the Case of Using Underground Cable</b>	1090
	<i>Jianing Xu, Haoming Liu, Tingting Gu, Jian Wang</i>	
0193-266	<b>Feasibility Analysis of Applying Carbon Fiber Composite Conductor in Medium and Heavy Icing Area</b>	1096
	<i>Shuangyan Shu, Weizhuo Chen, Lianhang Fang, Ruihai Li, Yongli Liao, Bo Gong</i>	

0194-267	<b>Control Strategy of Three-port DC Converter based on Energy Balance</b> <i>Yongtao Liang, Dong Jiang, Wei Sun, Hui Liu</i>	1101
0195-268	<b>Optimal Arrangement of the Acoustic Monitoring Measurement Points for Transformer Winding Conditions</b> <i>Wenjian Yu, Longqi Cong, Chi Xiao, Weidong Zhang, Jun Hou, Hong Wang, Chenlei Liu</i>	1107
0196-269	<b>Signal-Phase Virtual Synchronous Generator Control Strategy for Energy Storage Converters</b> <i>Yang Tan, Li Zhang, Tianrui Ma, Qi Liu</i>	1113
0197-271	<b>Research on feature extraction and fault diagnosis of mechanical vibration and sound signal of Disconnecter</b> <i>Zhenming Zhang, Houdi Xia, Shi Cao, Chenlei Liu</i>	1119
0198-272	<b>The Torque Elimination Control Strategy for Integrated Charging System of Electric Vehicle with Dual-Battery</b> <i>Yiwei Wang, Jiadan Wei, Lei Guo</i>	1125
0199-273	<b>Compatibility Study of Eco-Friendly Insulating Dielectric C5-PFK-CO<sub>2</sub> with Silver Material</b> <i>Qiang Yao, Long Li, Baojia Deng, Ying Zhang, Ke Li, Yalong Li, Song Xiao, Qing Yang</i>	1131
0200-274	<b>Intelligent Video Analysis Platform Based on Edge Artificial Intelligence Technology in Power Industry</b> <i>Da Fu, Xiaoran Zhao, Pengfei Yu</i>	1135
0201-275	<b>Implementation Scheme and Feasibility Analysis of Intensification of Maintenance and Inspection for Offshore Wind Power in Guangdong Province</b> <i>Yong Yao, Zhichao Wu, Shizhu Li, Jinchao Liu, Xiang Tang, Zhen Zhang</i>	1139
0202-278	<b>Two-Dimensional Free Positioning Wireless Charging System Based on Tilted Long-Track Transmitting Coil Array</b> <i>Yiming Zhang, Yuanchao Wu, Wenbin Pan, Hui Wang, Zhiwei Shen, Xin Li</i>	1145
0203-279	<b>Electric Vehicle Wireless Power Transfer System Employing Reconfigurable Topology for Misalignment Tolerance</b> <i>Yiming Zhang, Wenbin Pan, Hui Wang, Zhiwei Shen, Yuanchao Wu</i>	1150
0204-280	<b>Harmonic Suppression Strategies and Seamless Transfer Control between Grid-Connected and Islanding Modes in Renewable Energy System for Hydrogen Production</b> <i>Tao Sun, Ziwei Yu, Dan Sun, Heng Nian, Tianqi Xia</i>	1155
0205-281	<b>MPC Active and Reactive Coordinated Voltage Control Considering Adjustment Cost</b> <i>Chen Luo, Ziran Jin, Hongbin Wu</i>	1161

0206-282	<b>Optimal Planning of Prospective Power Supply Structure Considering Demand Response and Dynamic Generation Cost</b>	1167
	<i>Yichao Zou,Linyao Zhang,Zhenda Hu,Zhangsui Lin,Lin Liu,Weiwei Lin,Xianan Huang,Juhua Hong</i>	
0207-283	<b>Parameter Robustness Analysis and Optimization Design of Clc High Frequency Isolation Circuit Applied To Power Electronic Transformer</b>	1172
	<i>Sida Liu,Yunfei Xu,Guoliang Zhao,Yunbo Long</i>	
0208-284	<b>Comparative Analysis of Vibration Signal of Converter Transformer and AC Power Transformer</b>	1180
	<i>Zhicheng Pan,Jun Deng</i>	
0209-285	<b>Analysis of Self-excited Voltage Building of High-low Voltage Dual Stator-winding Induction Generator Considering Mutual Leakage Inductance</b>	1185
	<i>Kun Wang,Xinzhen Wu</i>	
0211-287	<b>Key Equipment Status Assessment in Distribution Network Based on Heterogeneous Information Fusion</b>	1196
	<i>Xiao Yang,Qingsong Luo,Hankun Hu,Shuang Li,Le Yin</i>	
0212-288	<b>Research on the Integrated Fault Detection Method of Primary and Secondary Fusion Intelligent Switchgear</b>	1201
	<i>Xiuru Wang,Xin Qian,Hanwen Wang,Wangqing Mao,Xuan Ge,Zhiwei Lin</i>	
0213-290	<b>An investigation on Grouding System of AC Single-core Submarine Cable Baesd on Multi-conductor Analysis Theory</b>	1205
	<i>Lifeng Qiu,Zhendong Du,Wenjun Zhou,Xiaofan Huang,Xing Xu,Xiangrong Chen</i>	
0214-292	<b>Structure and Capacity Configuration of Substation Microgrid with Hydrogen Energy Storage</b>	1210
	<i>Qiuyao Xiao,Kun Yang,Zhengxiang Song,Chenyu Wu</i>	
0215-293	<b>Microgrid Pre-dispatch Considering Battery Low-temperature Characteristics</b>	1216
	<i>Jiayun Ding,Zaijun Wu,Qinran Hu</i>	
0216-294	<b>Fuzzy Adaptive Power Control of Frequency Regulation of PV and Energy Storage System</b>	1222
	<i>Zhongwen Li,Long Wu,Zhiping Cheng,Dongqiang Jia</i>	
0217-295	<b>Short-term Load Forecast Using Improved Long-short Term Memory Network</b>	1228
	<i>Xiaoquan Chu,Yunpeng Gao,Yu Qiu,Mingxuan Li,Hang Fan,Mengjie Shi,Chaoliang Wang,Ruoyun Hu</i>	
0218-296	<b>Research on Multi-Modal Integrated Access of Intelligent Switch</b>	1234
	<i>Xiuru Wang,Xin Qian,Hanwen Wang,Yingtao Ru</i>	

0219-297	<b>Research on Self-adaptive Network Partitioning Algorithm for Electromagnetic Transient Parallel Simulation of Power System</b>	1238
	<i>Luwei Shi,Zhi Rui,Hongchao Liu,Zheng Yan,Jie Dang,Ying Wang</i>	
0220-298	<b>Improved Current-type LC Parallel Resonant Converter Based on Energy Storage Application and Frequency Regulation Characteristics</b>	1244
	<i>Fu Li,Guoju Zhang,Wei Pei,Xu Liu,Mengchao Yang,Yunyi Wu</i>	
0221-301	<b>Control of Permanent-Magnet Synchronous Motor Based on Linear Hall Device</b>	1252
	<i>Xiangdong Liu,Lufan Deng,Yuan He,Jing Zhao</i>	
0223-303	<b>Day-ahead optimal dispatch of regional power grid based on electric vehicle participation in peak shaving pricing strategy</b>	1265
	<i>Hongli Liu,Xuxia Li,Kaikai Wang,Jingyu Zhang,Qiang Li</i>	
0224-304	<b>Motor Bearing Remaining Life Prediction Based on Unsupervised Learning</b>	1271
	<i>Haowen Wang,Wei Sun</i>	
0225-305	<b>Digital Transformation of Hydropower Stations: Technical Route, Maturity Evaluation and Content Planning</b>	1277
	<i>Juguang Ren,Li Zhang,Li Jin,Jinyu He,Yang Gao</i>	
0226-306	<b>Three-Voltage Vector Model Predictive Torque Control Strategy for Open-Winding PMSM Under Variable DC Bus Voltage Condition</b>	1283
	<i>Jiayang Xu, Jiadan Wei, Wenjie Tao</i>	
0227-307	<b>Design of Thermal Power Mechanism and management analysis of Thermal Power Enterprise in Yunnan Power Market</b>	1289
	<i>Xuan Yang,Huaxiang Cai,Yuhui Xing,Bangcan Wang,Maolin Zhang</i>	
0228-310	<b>Summary and Prospect of Technology Development of MVDC and LVDC Distribution Technology</b>	1294
	<i>Dong Zhao,Shigong Jiang,Danlei Hu,Yunfei Wang,Xianing Jin,Chongbo Sun</i>	
0229-312	<b>A New Technique for Detecting Partial Discharge of Micro Electrical Tree Defect</b>	1301
	<i>Zongheng Zhang,Shusheng Zheng,Ju Kong,Xiaohu Yan,Yan Zhao,Shiyong Wu</i>	
0230-314	<b>XGBoost-based Evaluation of the Dosing State of the Converter Valve Cooling System</b>	1307
	<i>Maohui He,Xuan Feng,Zhihe Wang,Haoran Jiang,Kai Deng</i>	
0231-315	<b>Sensorless Control Strategy of Nine-phase PMSM Based on Piecewise Combination of Open-loop and Sliding Mode Observer</b>	1311
	<i>Zhenyu Wang,Xinzhen Wu,Haifeng Wang</i>	

0232-316	<b>Analytical Calculation and Experimental Measurement of Dq Inductance of Permanent Magnet Synchronous Motor</b>	1317
	<i>Menglin Zhang,Xinzhen Wu</i>	
0233-317	<b>Parameter Adaptive Adjustment Super Twisting Sliding Mode Observer Based on Complex Coefficient Filter for PMSM Sensorless Drive</b>	1323
	<i>Yifei Zheng,Kai Yang</i>	
0234-318	<b>A High-precision Oscillator with Fast Start-up</b>	1329
	<i>Dongyan Zhao,Yubo Wang,Jin Shao,Zhen Fu,Luo Wang,Yali Shao,Kelu Hua,Hanling Li,Jing Zhou,Linxin Jiang</i>	
0235-319	<b>A Voltage Level Shifter with Fast Level Translation Speed</b>	1333
	<i>Dongyan Zhao,Yubo Wang,Yanning Chen,Zhen Fu,Luo Wang,Yali Shao,Kelu Hua,Hanling Li,Jing Zhou,Yifeng Peng</i>	
0236-320	<b>CMTI Improvement Circuit for Digital Isolator</b>	1337
	<i>Dongyan Zhao,Yubo Wang,Yanning Chen,Shao Jin,Luo Wang,Yali Shao,Kelu Hua,Hanling Li,Jing Zhou,Jingbo Zeng</i>	
0237-322	<b>Robust Control of U-shape Single-phase Permanent Magnet Synchronous Motor</b>	1341
	<i>Jundong Wang,Fei Peng,Yunkai Huang,Sheng Wang</i>	
0238-323	<b>Cable Insulation Defect Diagnosis Based on Harmonic Characteristic Label</b>	1347
	<i>Qingzhu Wan,Xuejun Jin,Xingfu Yuan</i>	
0239-324	<b>Economic Dispatch of Multi-Agent Network Systems Based on Distributed Finite-Step Consensus Algorithm</b>	1353
	<i>Xiaopeng Wu,Ping He,Jie Dong</i>	
0240-325	<b>Fast Reactive Power Control Technology of Photovoltaic Inverter</b>	1358
	<i>Yang Li,Jianhua Bi,Yue Zhang,Rui Li,Zhiwei Wu</i>	
0241-327	<b>A Neutral Point Voltage Control Strategy for NPC Three-level Converter Based on Reference Voltage Decomposition Method</b>	1364
	<i>Lianglong Peng,Lei Wang,Zhen Xie,Biyun Wang</i>	
0243-330	<b>AC-DC Bidirectional Fault Ride-through Control Strategy of Flexible DC Distribution Network Based on MMC Active Current Limiting</b>	1381
	<i>Lin Su,Anxin Yan,Mengxue He,Yalin Ma,Mei Jun,Sen Zhang</i>	
0244-331	<b>A Distributed Load Curtailment Model for Extreme Event-Affected Transmission and Distribution System</b>	1387
	<i>Lizhou Jiang,Ju Ma,Tao Long,Yaojing Tang,Zhaohong Bie,Zili Guo,Lieqian Gong,Yang Zheng</i>	

0245-332	<b>Dynamic Risk Reserve Quantification and Economic Analysis of Its Cooperative Dispatching Among Multi-DERs in a VPP</b>	1393
	<i>Xingyu Yan, Ciwei Gao, Tao Chen, Chaoliang Wang, Lei Li, Wei Liu</i>	
0246-333	<b>Hierarchical and Distributed Optimal Scheduling of Virtual Power Plant Based on Alternating Direction Multiplier Method</b>	1399
	<i>Xiaorui Guo</i>	
0247-334	<b>An Identification Method for Dominant Mode of Low Frequency Oscillation in Power System</b>	1404
	<i>Xiangming Dong, Feng Luo, Congwen Wu, Song He</i>	
0248-335	<b>SF6 Leak Alarm Monitoring Technology for LoRa-based Gas Insulated Switchgear</b>	1410
	<i>Ying Zhang, Hao Mu, Chujie Feng, Mingwei Wang</i>	
0249-336	<b>Dynamic State Estimation for The Low-Carbon Integrated Electricity-Heat-Gas System</b>	1415
	<i>Yuan Yao, Yinliang Xu, Wai Kin(Victor) Chan, Yu Zeng</i>	
0250-337	<b>Calculation of Short-Circuit Current of Doubly-Fed Variable-Speed Pumped Storage Unit</b>	1421
	<i>Tao Dai, Linjun Shi, Wenjie Lao, Shibin Bai, Ling Zhu, Xifang Huang</i>	
0251-338	<b>Online DGA Sensor Calibration Using GANN and Data Augmentation</b>	1426
	<i>Hong Cai Chen, Yang Zhang, Min Chen</i>	
0252-339	<b>State Estimation for Power System Based on Graph Neural Network</b>	1431
	<i>Wu Zhaoyu, Wang Qi</i>	
0253-340	<b>Distributed State Estimation of Distribution Network with Adaptive Partition</b>	1437
	<i>Yonggui Tan, Ye Tian, Gang Chen, Hefei Wang</i>	
0254-341	<b>The Partial Discharge Characteristics of PI Film Modified by Nano-Al<sub>2</sub>O<sub>3</sub> in LN</b>	1443
	<i>Daosheng Liu, Liang Zhang, Guanggang Wang</i>	
0255-344	<b>Cooperation-based DMPC Controller for Two-area Interconnected Power Grid with BESS</b>	1447
	<i>Baocheng Fan, Shilin Liu, Chuanting Zhao</i>	
0256-345	<b>Analytical Optimization of Surface-Inset Machines With Eccentric Three-Piece Halbach Magnets</b>	1454
	<i>Youyuan Ni, Kang Chen, Zhiwei Qiu</i>	
0257-346	<b>Research on Voltage Stability and Control of DFIG Based on Power Limit Trajectory</b>	1460
	<i>Zhou Lan, Mingjiu Pan, Yuntian Lou, Xiaofei Wang, Kai Yang, Ke Sun</i>	
0258-349	<b>A Primary Frequency Control Strategy for the Hybrid PV-CSP System</b>	1465
	<i>Zhaoheng Wang, Keman Lin, Mingyao Lin, Canmin Wang, Xinrui Wang</i>	

0259-350	<b>LADRC-based DC Bus Voltage Control for Single-phase Boost PFC</b>	1471
	<i>Xinlei Liu, Li Zhang, Qi Liu</i>	
0260-351	<b>Reactor Combination Optimization Method in Submarine Cable Withstand Voltage Test</b>	1477
	<i>Yang Yuxin, Liu Yucheng</i>	
0261-354	<b>A Synchronization Stability Enhancement Control Method for 100% Converter-based System Based on An Improved Kuramoto Model</b>	1483
	<i>Yan Zou, Zhen Wang, Zhicheng Li, Jiali Xiong, Chaoping Deng, Qiang Cai</i>	
0262-355	<b>Design and Optimization Analysis of Double-Stator Bearingless Flux Switching Permanent Magnet Motor</b>	1489
	<i>Liang Tongwei, Zhou Yangzhong</i>	
0263-356	<b>Microgrid Formation Strategy of Distribution System Considering Regional Power Exchange Constraints</b>	1495
	<i>Dong Wang, Zhenglei Zhu, Bo Ding, Xin Dai, Hao Li, Wei Wei</i>	
0264-358	<b>Techno-Economic Comparison of Vortex-Type and Chimney-Type Solar Updraft Power-Desalination Integrated Systems</b>	1500
	<i>Lu Zuo, Tian Zhou, Ling Ding, Bo Qu, Chang Xu, Yunting Ge</i>	
0265-359	<b>Control Strategy for Grid Integration of Flywheel Energy Storage System</b>	1506
	<i>Jingjing Wang, Liangzhong Yao, Siyang Liao, Bo Xie, Jian Xu, Beilin Mao</i>	
0266-364	<b>Comparison and Investigation of Outer-Rotor Flux-Modulated Permanent Magnet Motor With Different Pole Ratios and Rotor Poles</b>	1512
	<i>Wei Shen, Zixuan Xiang, Xiaoyong Zhu, Li Quan, Tengguang Wang, Yun Pu</i>	
0267-365	<b>Input Admittance Modeling and Stability Analysis of DFIG under Different Modes</b>	1518
	<i>Biyun Wang, Zhen Xie, Lianglong Peng</i>	
0268-367	<b>Engineering Application of Millisecond Precision Load Control System</b>	1524
	<i>Hao Wang, Yuqi Tan, Rui Tuo</i>	
0269-368	<b>Transient Power Sharing Control Algorithm between Virtual Synchronous Generator and Diesel Generator in Isolated Microgrid</b>	1529
	<i>Chun Li, Fan Ma, Qi Hu, Xiaoliang Hao, Runlong Xiao</i>	
0270-369	<b>Parallel Load Restoration of Distribution Network Via a Shortest-path-based Grid Partitioning Approach</b>	1534
	<i>Sunyang Zhou, Haoming Liu, Zhongqi Guo, Jian Wang</i>	
0271-370	<b>Optimal Configuration of Smoothing Reactors and Current Limiting Reactors in LCC-MMC HVDC Network</b>	1540
	<i>Yuchen Zhu, Yongli Li</i>	

0272-371	<b>Potential Assessment Method of Integrated Demand Response and Its Utilization in Park Operation</b>	1545
	<i>Kai Chen,Haoming Liu,Yukun Gao,Jian Wang</i>	
0273-372	<b>Research on Low Temperature Characteristics and Application of Temperature Sensor in Alpine Region</b>	1551
	<i>Cheng Chen,Yu Feng,Shengwei Cai,Hui Li,Jiangbo Chen,Jin Yin</i>	
0274-373	<b>Research on High Voltage and High Power Density Power Supply Technology for Space</b>	1557
	<i>Wei Xu,Haijun Fu,Gaofeng Shi,Hongyan Li</i>	
0275-374	<b>Comparison and Improvement of Key Feature Selection Methods for Intelligent Assessment of Transient Power Angle Stability</b>	1563
	<i>Yin Zhang,Taishan Xu,Xiancheng Ren,Yanhong Bao,Feng Wu,Jinlong Zhang</i>	
0276-375	<b>Research on Intelligent Evaluation Model of Transient Stability Based on k-Means Grouping</b>	1569
	<i>Xiancheng Ren,Yin Zhang,Feng Wu,Huling Yuan,Jinlong Zhang,Haijun Chang</i>	
0277-376	<b>An IGBT Driver Protection Method Applied to NPC Three-Level Topology</b>	1575
	<i>Kailong Chen,Fuguang Wen</i>	
0278-379	<b>Development of a Portable SF6/N2 Mixed Gas Charging Device for On-site Modification of Gas Insulated Current Transformer</b>	1583
	<i>Yanan Wang,Zihao Yang,Linyuan Ren,Zichen Deng,Weidong Ding,Dingge Yang,Yanhua Han,Jingfeng Wu</i>	
0279-380	<b>Active Current-Limiting Control Based DC Fault Ride-Through of Full-Bridge MMC</b>	1588
	<i>Ye Zhang,Lei Huang,Jian Qiu,Wenfeng Yao,Wei Liu,Dongyang Cai</i>	
0280-381	<b>The Spot Market Clearing Simulation Research of Guangdong Power Grid Incorporating Demand Response Resource</b>	1594
	<i>Chong Tang,Baorong Zhou,Jiangnan Li,Wenmeng Zhao,Lanfen Cheng</i>	
0281-383	<b>Real-time Simulation Hardware-in-the-loop Test Platform for DC Integrated Power System Containing a Large Number of Switches</b>	1600
	<i>Xiaoliang Hao,Lijun Fu,Fan Ma,Chun Li</i>	
0282-384	<b>Research on Project Duration Prediction Based on Multiple Linear Regression</b>	1606
	<i>Yong Pan,Songtao Chen,Tian Ma,Jun Gao,Cheng Wang,Xiaofan Liu,Peng He</i>	
0283-385	<b>Research on Project Duration Prediction Based on Artificial Neural Network</b>	1613
	<i>Wei Wu,Lei Fang,Tian Ma,Yongqian Yang,Weiguo Zhao,Peng Yu,Chengyu Wang</i>	
0284-386	<b>Study on the Electric Water Shock Effects in the Bursting Energy Tests on the Capacitor Case</b>	1619
	<i>Qianglin Zuo,Qiaoshu Lei,Shuhong Wang</i>	



0285-387	<b>Transient DC Bias Elimination of Dual Active Bridge Based on Minimum RMS Current</b>	1626
	<i>Ziwei Liu,Zhaolong Sun,Baolong Liu</i>	
0286-388	<b>Research on LC Series Resonant High Voltage Capacitor Charging Power Supply</b>	1631
	<i>He Zhao,Xuehua Wang,Yue Zheng,Hongfa Ding,Chuan Yao</i>	
0287-389	<b>Torque Estimation Base on Quasi-Direct Drive Actuators</b>	1637
	<i>Hao Xiang,Kui Xiang,Yun Fang,Muye Pang,Biwei Tang,Jing Luo,Guorong Zhu</i>	
0288-390	<b>Physical Design of a Compact High-energy Electron Source Applied to On-site Non-destructive Testing</b>	1643
	<i>Junyang Li,Tongning Hu,Hongjie Xu,Jun Yang</i>	
0289-391	<b>IoT Terminal Recognition Method Based on Linear Discriminant Spectral Analysis</b>	1648
	<i>Weihua Cheng,Chao Xu,Mingyuan Zhang,Shen Ji</i>	
0290-392	<b>Design and Application of Self-adaptive Withstand Voltage Test Electrode for Insulation Blanket based on Machine Vision</b>	1654
	<i>Lin Nie,Rou Chen,Ying Xu,Yuqing Wang,Fei Liu</i>	
0291-393	<b>Experimental Study on Electrical Characteristics of Iced Glass Suspension Ground Wire Insulator</b>	1660
	<i>Lingzi Zhou,Zhenpeng Tang,Chengzhi Ma,Hai Zheng,Fangzheng Cheng,Zichen Liu,Fanghui Yin,Liming Wang</i>	
0292-394	<b>Key Technology of Integrated Power Generation System containing Wind/Solar/Hydro/Thermal and Energy Storage</b>	1665
	<i>Zhengjia Zhao,Hailong Zhang,Gang Du,Wei Xu</i>	
0293-396	<b>Influence of Fiber Particles on DC Breakdown Characteristics of Transformer Oil</b>	1671
	<i>Guozhi Zhang,Weiyang Yan,Xiaoxing Zhang</i>	
0294-400	<b>Linearized Frequency Deviation Based Frequency-Constrained Unit Commitment with Support from Wind Farm</b>	1679
	<i>Kun Li,Dong Liu,Pan Gu,Weidong Qiu,Jiakun Fang,Xiaomeng Ai</i>	
0295-401	<b>Switch State Optimization of Doubly Salient Electromagnetic Motor Based on Torque Closed-loop Control</b>	1686
	<i>Jingcheng Huang,Bo Zhou,Lei Xiong</i>	
0296-403	<b>Research on Position Sensorless Control of Doubly Salient Electromagnetic Generator Based on Phase Flux</b>	1692
	<i>Minghui Zhang,Bo Zhou,Xiaodong Yu</i>	
0297-404	<b>Data-driven Energy Consumption Prediction of Electric Bus on a Given Route</b>	1698
	<i>Li Jinhui,Li Zhihan,Zhuang Weichao,He Zhangcheng,Fu Jiachen</i>	

0298-405	<b>Research on the Impact of Graphite Fiber Attached Insulator</b>	1704
	<i>Pei Cao, Yiping Ji, Min Ding, Leiyu Ni, Yongji Ma, Lijun Jin</i>	
0299-406	<b>The Deterioration Mechanism of Underground Grounding Body under Impulse Current</b>	1710
	<i>Xiaofei Xia, Bo Feng, Yi Su, Xiajin Rao, Yufeng Lu</i>	
0300-407	<b>A Bidirectional Solid-State Power Controller for 270V HVDC Aviation Power Supply System</b>	1715
	<i>Yuqing Fei, Fan Pu, Yao Li, Yuyang Liu, Yufei Tao, Weilin Li</i>	
0301-408	<b>Research on Modeling and Simulation of Medium Voltage Shipboard Power System</b>	1721
	<i>Zixiao Xu, Hongwei Zhao, Linke He, Weilin Li</i>	
0302-410	<b>Analysis of Influencing Factors of Discrete Equipment Action in Converter Station Considering DC Control Mode</b>	1727
	<i>Xianwen Hu, Wei Yan, Wei Cui, Xinling Wang</i>	
0303-411	<b>Research Progress of Integrated Solar Chimney Power Plant System coupled with Low-Temperature Heat Source</b>	1733
	<i>Lu Zuo, Ziyang Yan, Bo Qu, Chang Xu, Yuan Zheng, Yunting Ge</i>	
0304-413	<b>Identification and Correction Method of Bad Data of Renewable Energy Plants with Deep Learning</b>	1739
	<i>Weiwu Qi, Jun Zhang, Wei Ru, Qiang Fan, Fengming Zhang, Zhen Liu, Haoming Liu</i>	
0305-414	<b>Real-time Grid Impedance Identification for Synchronization Stability Control in Grid-following Converter</b>	1745
	<i>Liang Cheng, Hua Ye, Ting Wang, Xin Dong, Yanran Li</i>	
0306-415	<b>Performance Quantization and Comparative Assessment of Three Differential Power Processing Converters</b>	1751
	<i>Xue Wang, Huiqing Wen, Yinxiao Zhu</i>	
0307-416	<b>Investigation and Design of Fast Front Marx Generator Trigger</b>	1757
	<i>Yifan Wang, Wei Jia, Zhiqiang Chen, Fan Guo, Ling Shi, Hongshun Liu</i>	
0308-417	<b>Research on the Influence of Slot-Pole Combination on the Performance of Quadruped Robot Joint Motor</b>	1762
	<i>Yuke Cao, Guorong Zhu, Xingting Ren, Jianghua Lu, Muye Pang, Kui Xiang</i>	
0309-419	<b>Research on Data Mining Modeling Technology of Charging Fault Characteristics Based on BP Neural Network</b>	1768
	<i>Xiangyu Bao, Hui Gao</i>	
0310-420	<b>Breakdown Properties of Solid-Solid Interface between Epoxy Resin and Silicone Rubber under Vertical Stress</b>	1773
	<i>Zhaoliang Xing, Shaowei Guo, Huize Cui, Fei Li, Lingyu Yang, Pengxin Li, Daomin Min</i>	

0311-421	<b>Performance Score and Equivalent Ratio of Reserve Resources</b>	1777
	<i>Jing Zhou,Xiaorui Guo,Ziling Zou,Huahua Wu,Ying Wang</i>	
0312-422	<b>Research on Efficiency Optimization of Wireless Power Transfer System Using a Quasi-Z-source Converter</b>	1783
	<i>Bolong Wei,Shuai Dong,Yuebo Chen,Baichuan Zhang,Hongwei Ma,Chunbo Zhu</i>	
0313-423	<b>Spectrum Sensing Based on WaveNet for Cognitive Radio with Multiple Parallel Signal Sequences Analysis</b>	1789
	<i>Lu Wang,Yuting Li,Hao Jia,Bowen Hong,Yaping Deng</i>	
0314-424	<b>Research on the Influencing Factors of Guano Flashover of TYPE I Composite Insulator on Overhead Transmission Line</b>	1795
	<i>Hong Wu,Bo Niu,Jin Peng Hao,Kai Yang</i>	
0315-426	<b>Modeling and Reduction of conducted common mode EMI in a-single-switch forward converter</b>	1801
	<i>Changchuan Peng,Wei Chen</i>	
0316-427	<b>A Load Share Circuit without Current Sensing</b>	1806
	<i>Xuhao Zhu,Renjie Hu</i>	
0318-429	<b>The Influence of Pre-swirling Parameters on the Performance of Solar Vortex Power-desalination Integrated System</b>	1815
	<i>Lu Zuo,Ziyang Yan,Pengzhan Dai,Yu Chen,Shi Chen,Yunting Ge</i>	
0319-430	<b>Study on the Influence of Windproof Cylinder on the Performance of Solar Vortex Power-desalination Integrated System</b>	1821
	<i>Lu Zuo,Ziyang Yan,Tian Zhou,Siheng Liu,Yuan Zheng,Yunting Ge</i>	
0320-432	<b>Analysis and Design of Wireless Power Transfer System for Robot Joints</b>	1826
	<i>Xiaotong Li,Wenjing Yue,Guorong Zhu,Jianghua Lu,Muye Pang,Kui Xiang</i>	
0321-433	<b>An Improved Position and Speed Estimation Scheme for Permanent Magnet Synchronous Motor with Low-cost Hall Sensors</b>	1831
	<i>Hanbing Dan,Suicheng Zeng,Yonglu Liu,Yao Sun,Mei Su</i>	
0322-434	<b>Independent Voltage Regulation Method of Multi-frequency Multiple-Receiver WPT Systems</b>	1837
	<i>Chen Qi,Sheng Huang,Haomin Lv,Xiyu Chen</i>	
0323-436	<b>Study on the Quantitative Analysis Method of Polydimethylsiloxane of High Temperature Vulcanized Silicone Rubber</b>	1843
	<i>Wenting Liu,Yonghao Fang,Yu Fan,Xiaolu Lv,Chuyan Zhang,Yu Deng</i>	

- 0324-437 **A Sinusoidal Current Control Method for SPMSM Considering Uneven Demagnetization Fault** 1848  
*Zekai Lyu, Lijian Wu, Haolan Zhan, Yidong Du*
- 0325-438 **Passivity-Based Harmonic Suppression Method of LCL-Type Inverter Output Current in Weak Grid** 1853  
*Te Peng, Qiqi Li, Qinshu Lu, Shanxu Duan*
- 0326-440 **An Optimal Control Scheme to Suppress the Current Zero-Crossing Distortion in Critical Mode Single-Phase Inverter** 1859  
*Kunqi Han, Zhongshu Zheng, Li Zhang*
- 0327-441 **Sensorless Control of Segmented Long Stator PMLSM Based on Inductance Disturbance Compensation** 1865  
*Shijiong Zhou, Yaohua Li, Liming Shi*
- 0328-442 **Study on Dielectric Model for Capacitance-Based Nondestructive Testing of Water Content in Concrete** 1870  
*Ziang Duanmu, Zhanlong Zhang, Yang Song, Jun Deng*
- 0329-444 **Research on GSSA Model of Wireless Power Transfer System Using a quasi Z-source Converter** 1876  
*Yuebo Chen, Shuai Dong, Bolong Wei, Baichuan Zhang, Hongwei Ma, Chunbo Zhu*
- 0330-445 **Hybrid Modulation Strategy of Deep Low Carrier Ratio in Full Wind Speed for Direct-Drive Permanent Magnet Wind Power Generation System** 1882  
*Yang Zhang, Mai Xu, Wenjing Yi, Sicheng Li, Bing Luo, Tingting Wang*
- 0331-446 **Measurement of NO<sub>2</sub>- penetration concentration in surface microdischarge treated model tissue, based on image processing technology** 1890  
*Bingkai Wang, Yuqi Wang, Zilan Xiong*
- 0332-449 **WAPI Network for Novel Intelligent Services of Substations in Smart Grid Application: Analysis and Overview** 1895  
*Li Wang, Liming Chen, Siliang Suo, Weizhi Ren*
- 0333-450 **A Method for Detecting a Novel Stealthy Profit-Oriented Cyber Attack** 1902  
*Ruotong Wang, Yongfeng Mao, Chunyu Chen, Mingjian Cui, Kaifeng Zhang*
- 0334-451 **Multi-model aggregation method for non-intrusive load monitoring based on stacking** 1907  
*Weiwei Miao, Zeng Zeng, Changzhi Teng, Rui Zhang, Shihao Li, Sibao Bi, He Zhang, Lihui Wang*
- 0335-452 **Electrothermally-Aware Multi-objective Modular Design: A Case Study on Series-Parallel Plug-in Hybrid Electric Vehicles** 1912  
*Kailong Liu, Ji Li, Chong Zhu, Tao Chen, Kang Li, Quan Zhou, Hongming Xu*
- 0336-454 **High Gain Inductive Power Transfer System Design Based on the S/SP Topology** 1918  
*Jinhao Chen, Jiantao Zhang, Yong Li, Chunbo Zhu*

- 0337-455 **Deadbeat Active Disturbance Rejection Controller for the Current Control of Electric Drives in the Presence of Two-step Delay** 1924  
*Benxiang Zhang, Yuefei Zuo, Li Quan, Xiaoyong Zhu*
- 0338-456 **Analysis and Adjust of Temperature Drift in Current Measurement Based on Hall Sensor** 1929  
*Dejie Wei, Jianwen Wu, Kunyu Wang, Ruang Chen*
- 0339-457 **Rotor Position Estimation of Three-stage Synchronous Machine Based on Quadrature Signal** 1935  
*Junhao Yu, Jiadan Wei, Junjie Wang*
- 0340-458 **Non-Intrusive Load Decomposition Based on Graph Convolutional Network** 1941  
*Jie Yuan, Ya Juan Qiu, Li Hui Wang, Yu Liu*
- 0341-460 **Analysis of Charging Load Acceptance Capacity of Electric Vehicles in Residential Distribution Network** 1945  
*Guoming Liu, Hui Yu, Zhixing Lv, Kai Kang, Hu Li, Jing Zhang*
- 0342-462 **Research on the Statistical Characteristics of the Discharge Inception Electric Field Strength of Gap Defect in Insulation pressboard Based on Three-parameter Weibull Model** 1951  
*Yijia Li, Chengyu Zhang, Xinru Yu, Junping Zhao*
- 0343-464 **Parameter Calculation Method of Large Thrust Short Primary Linear Induction Motor** 1956  
*Huang Chuibing, Li Wei, Sun Zhaolong, Xu Jin, Mao Yinhao, Jia Guangyong, Zeng Rongtao, Ding Anmin*
- 0344-465 **A Preliminary Study on Automatic Detection Technology of Stability Control System Driven by Knowledge Graph** 1962  
*Wen Bo, Li Hengxuan, Zhang Junhao*
- 0345-466 **Temporary Frequency Response of a Doubly-Fed Induction Generator** 1968  
*Xiaoming Yang, Xinwei Li, Dejian Yang, Gan-Gui Yan*
- 0347-468 **Six-Phase Cylindrical Linear Induction Motor with High-Frequency Vibration Suppression and Experimental Study** 1976  
*Ding Anmin, Huang Chuibing, Sun Zhaolong, Xu Jin, Zeng Rongtao, Mao Yinhao, Jia Guangyong, Luo Heng*
- 0348-469 **A New Preliminary Design Method of Switched Reluctance Motor To Ensure the Acceleration Time of High-Speed and Large-Inertia Flywheel Rotor** 1982  
*Ning Tao, Kexun Yu, Yukang Ding, Jiasong Wang, Xianfei Xie*

- 0349-470 **LCC/MMC Coordinated Control Strategy Applied to DC Distribution Network** 1988  
*Mingming Shi,Ruihuang Liu,Chenyu Zhang,Yubin Pang,Xiaohui Qu,Wu Chen*
- 0350-471 **Research on Active Damping of Grid-side Inductor Voltage Feedback with Bandpass Filter and Lead Correction** 1994  
*Wei Wang,Zheng Wei,Mingming Li,Huafeng Xiao*
- 0351-473 **Influence of O<sub>2</sub> on Partial Discharge Decomposition Properties of C5F10O/N<sub>2</sub>/O<sub>2</sub> Gas Mixture** 2000  
*Long Li,Qiang Yao,Ying Zhang,Shiling Zhang,Huaxia Yang,Pu Han,Song Xiao,Qing Yang,*
- 0352-474 **Quantum Annealing Computing for Grid Partition In Large-Scale Power Systems** 2004  
*Dawei Wang,Kedi Zheng,Qixin Chen,Zhu Li,Shuo Liu,*
- 0353-475 **Nonintrusive Load Disaggregation Method Based on Graph Signal Processing** 2010  
*Yu Liu,Jing Wang,Lihui Wang*
- 0354-476 **Pollution Flashover Prediction of Insulators Based on Combined Probability Density of Infrared Image Temperature and Leakage Current** 2014  
*Kai Gao,Haoyang Tian,Maxin Ren,Jianming He,Haifeng Jin,Lijun Jin*
- 0356-478 **Application Analysis of LoRa Technology in Substations** 2024  
*Yulei Jiang,Liang Wang,Yueying Hao,Xin Xu,Mingzhi Geng*
- 0357-479 **Design and Analysis of a Large-Thrust and Small-Deformation Double-Sided Linear Switched Reluctance Motor** 2029  
*Hong Jia Liang,Su Dan Huang,Guang Zhong Cao,Tao Liang*
- 0358-480 **A Review of Research on Portrait Technology of Power Equipment** 2035  
*Yisong Zhu,Ling Ju,Jin Wang,Zhenyang Liu,Juheng Wang,Kun Dong,Jianfeng Zhao*
- 0359-481 **A Fault Detection and Location Technique for Inverter-Dominated Islanding Microgrids** 2041  
*Fangyuan Chang,Hongbo Sun,Shunsuke Kawano,Daniel Nikovski,Shoichi Kitamura,Wencong Su*
- 0361-483 **Fast Computation Methods for Constructing Data-Driven Linear Power Flow Model** 2053  
*Yitong Liu,Zhengshuo Li*
- 0362-484 **A Weighted Deep Learning Model with Sampling Strategy for Unbalanced Bearing Condition Assessment** 2058  
*Yilin Chen,Xudong Song*

- 0363-485 **Anti-Icing Performance and Mechanism of Hydrophobic Cycloaliphatic Epoxy Resin Modified by Polysiloxane** 2064  
*Yuhao Liu, Li Yin, Min Xie, Liming Wang*
- 0364-487 **Application of Internet + Digital Technology in the Integrated Management of Feasibility Study and Design of UHV Transmission Line Project** 2069  
*Lan Guan, Yang Yu, Benliang Li, Lei Tian, Xianxin Li, Wenrui Wu*
- 0365-489 **Checking and Preventing Measures of Short-Circuit Current Breaking Level of 220kV Circuit Breaker** 2074  
*Xin Li, Ning Xiao, Peilong Chen, Zhu Chen, Shijian Zhu*
- 0366-490 **Analysis of Multiple Influencing Factors of Low-Carbon Energy Consumption of Urban Users Based on DEMATEL** 2079  
*Li Yin, Junjie Sheng, Yanan Ji, Danbo Li*
- 0368-492 **Design of 6.78 MHz Magnetic Resonant Coupling Omnidirectional Wireless Power Transfer Based on Class E<sup>2</sup> Conversion** 2092  
*Pengyang Zhao, Junping He, Sheng Lian, Lingling Cao*
- 0369-493 **Microwave Reflection Characteristics of Flake-Shaped Fe<sub>50</sub> Ni<sub>50</sub> /paraffine Composites with Various Volume Concentration** 2098  
*Boping Su, Jianqiang Wei*
- 0370-494 **Stability Analysis of Load Frequency Control Based on Age-of-Information** 2103  
*Dan Jiao, Chengrong Lin, Kaigui Xie, Bo Hu, Changzheng Shao, Shengpu Gao*
- 0371-496 **Electricity Meter Detection and Recognition Algorithm Based on Mixed Feature Perception Neural Network and Classification Fitting Pointer** 2109  
*Tao Zhang, Zhewen Tian, Yilin Wang*
- 0372-497 **Power Loss-Oriented Transmission Network Expansion Planning Considering Pyramidal Approximation Power Flow and N-1 Contingency** 2115  
*Xiaohong Liu, Yunming Wang, Yuansen Liu, Bo Zhou, Xiaomeng Ai, Jiakun Fang*
- 0373-499 **Research on Non-intrusive Load Monitoring Algorithm Based on Filtering and CRF** 2121  
*Xingsheng Liu, Jin Wang, Zhenyang Liu, Miaojie Hua, Yanchun Mao, Kun Dong, Jianfeng Zhao*
- 0374-500 **Study on Breakdown Characteristics of Transformer Oil under Negative Oscillation Lightning Impulse Voltage** 2128  
*Zhiqin Ma, Linglong Cai, Yuhui Jin, Jiangnan Liu, Xian Yang*
- 0375-501 **Design and Application of an Argon-fed 1 A-class Plasma Bridge Neutralizer** 2134  
*Linyuan Ren, Yanan Wang, Zihao Yang, Weidong Ding*

0376-503	<b>A Weighting Factor Semi-Online Tuning Method based on Correlation Look-up Table for Model Predictive Torque Control on PMSM of EV</b>	2138
	<i>Yao Wei, Dongliang Ke, Hanhong Qi, Fengxiang Wang</i>	
0377-504	<b>Full-Speed Sensorless Control Strategy for Permanent Magnet Synchronous Motor</b>	2145
	<i>Le Zhang, Jiadan Wei, Yiwei Wang</i>	
0378-505	<b>Bidirectional DC-DC Resonant Converter With Wide Input and Output Voltage Range</b>	2150
	<i>Shanshou Li, Jun Chu, Wei Ye, Qiansheng Fang</i>	
0379-506	<b>Experimental on Corona performance of Double Pendulum Damper for UHV Transmission Line</b>	2158
	<i>Shanshan Quan, Lei Peng, Jiejie Deng, Zhiwei Zhou, Ling Jiang, Guangyu Yuan</i>	
0380-507	<b>Transient Modeling and Simulation of Grid-forming Inverter-Driven by Dispatchable Virtual Oscillator</b>	2163
	<i>Yijiang Han, Hua Ye, Wei Pei, Yan Huang, Jiawang Xiong, Yingpeng Hao</i>	
0381-508	<b>Frequency Regulation Strategies of BESS and Doubly-fed Variable Speed Pumped Storage Unit Under Multiple Operating Conditions</b>	2169
	<i>Bin Sun, Feng Wu, Keman Lin, Yang Li, Zizhao Wang, Hanchen Liu,</i>	
0382-509	<b>Source-load Coordinated Optimal Scheduling in Stochastic Unit Commitment Considered Electrolytic Aluminum Load and Wind Power Uncertainty</b>	2175
	<i>Jialing Liu, Ke Wang, Zhuo Su, Yuang Feng, Chenglong Wang, Xiaomeng Ai,</i>	
0383-510	<b>Fault Cause Analysis of Elbow Cable Joint of 10kV Pole-Type Transformer caused by Grounding Non-standard</b>	2180
	<i>Ruoxi Liu, Yue Wang, Tian Chen, Yukun Niu,,</i>	
0384-512	<b>Study on the Power Loss of Ground Wire in Parallel Transmission Lines Under Different Phase Sequence</b>	2186
	<i>Taoning Jiang, Longzhi Xie, Peng Sun, Lijing Li, Yuhang Li</i>	
0385-513	<b>A Comparing Study on Assessment Mechanism for Renewable Energy Bidding Deviation in Spot Trading</b>	2192
	<i>Hao Wang, Li Zhang, Yixin Guo</i>	
0386-514	<b>Interaction Between PMSG Based Wind Farm and VSC-HVDC System in ACC Timescale</b>	2197
	<i>Wentao Sun, Quanquan Wang, Hui Cai, Wenjia Zhang, Wanchun Qi, Sixuan Xu, Feifei Zhao</i>	
0387-515	<b>Fuzzy Comprehensive Evaluation of the Health of Electric Vehicle Charging Equipment Based on Combination Weighting of Game Theory</b>	2202
	<i>Chunjie Shi, Liangliang Chen, Zhenya Ji</i>	
0388-516	<b>Research on Key Technologies of Digital Twins System in Distribution Networks</b>	2208
	<i>Ling Zhou, Chang Kun Yang, Tiancheng Liu, Cong Li</i>	



0389-517	<b>Evaluation Method of Renewable Energy Accommodation Capacity Based on Time Series Production Simulation</b>	2214
	<i>Yang Yan,Hao Li,Xinyi Wang,Dongsheng Zhu</i>	
0390-519	<b>Synergistic Expansion Planning Method for Multi-Vector Energy System and Its Application on Europe-North Africa Trans-Mediterranean Interconnection</b>	2220
	<i>Han Jiang,Chen Jin,Tao Huang,Jia-Wei Wu,Wei Wu</i>	
0391-520	<b>Suppression Strategy of Subsynchronous Oscillation Caused by Grid-connected Direct-drive Fan</b>	2226
	<i>Tong Zhou,Jun Li,Shubo Hu,Zhengnan Gao,Hui Sun,Jinsong Liu</i>	
0392-521	<b>Energy Efficiency Evaluation of Multi-Energy Microgrid Based on Entropy-Independence-G1 Method</b>	2232
	<i>Yijin Li,Wenzhe Ma,Zhihui Zhang,Geng Niu,Ming Wu,Ying Weng</i>	
0393-522	<b>Dual Coupled-inductors based Bidirectional DC-DC Converter</b>	2238
	<i>Chong Zhang,Donghu Li,Yushun Zhao,Xiaogang Ding,Dongsheng Yu</i>	
0394-523	<b>Research on Improved Double Loop Control of Three-phase Inverters with Output LC Filter</b>	2244
	<i>Jianqiang Shi,Shuang Li,Ningning Zhao,Qiushi Niu,Mengxi Xu</i>	
0395-524	<b>Dynamic Modeling of Model Route for PV in Power System with Integrated Energy</b>	2250
	<i>Fu Shen,Shiwei Li,Bing Xia,Jing Yang,Jieshan Shan,Zilong Cai,Zhiwen Yang,Guangbing Yang</i>	
0396-527	<b>Winding Condition Monitoring of Power Transformers Based on the Optimized TQWT</b>	2256
	<i>Shan Wang,Guochao Qian,Wei ju Dai,Zhihu Hong,Fenghua Wang,Deliang Cheng</i>	
0397-529	<b>Experimental Analysis of Internal Damp of Gapless Zinc Oxide Arrester</b>	2261
	<i>Shenghui Wang,Shuaitao Mao,Qi Ou,Qizhe Zhang</i>	
0398-530	<b>Research on Dynamic Error of Digital Input Electricity Meters for Energy Internet</b>	2266
	<i>Yiqin Jiang,Jing Meng,Jingfen Bai,Xitong Xu,Yubo Yang</i>	
0400-534	<b>Study on Multi-Timescale Cascading Failure in Multi-Infeed HVDC Systems</b>	2277
	<i>Kaige Song,Zhenjian Xie,Chen Li,Qichao Chen,Fei Wang,Xiaohui Wang</i>	
0401-535	<b>A Deep Reinforcement Learning Voltage Control Method for Distribution Network</b>	2283
	<i>Peishuai Li, Jiawei Shen, Minghui Yin, Zaijun Wu, Yong Zhang</i>	

0402-536	<b>Angular Dependence of Critical Currents for HTS Tapes in Wide Temperature Range and Large Magnetic Fields</b>	2289
	<i>Jianfa Wu, Yaxiong Tan, Xin Li, Shushan Luo, Mengyang Zhang, Yindun Hei</i>	
0403-537	<b>Research on identification of occasional UHF PD in UHV GIS based on K-Means</b>	2293
	<i>Yuan Xu, Yanpeng Gong, Fei Du, Shuai Yuan, Jinpeng Jiang, Ning Yang, Mingxin Shao</i>	
0404-538	<b>Dual-Redundancy Permanent Magnet Synchronous Motors Phase-to-Phase Short Circuit Fault Diagnosis</b>	2297
	<i>Jingyi Pan, Qixun Zhou, Pei Wang, Pingan Ma, Fan Liu</i>	
0405-539	<b>Coupled Problem of Transient Voltage/Angle Stability in Paralleled Synchronous and Virtual Synchronous Generators with Dynamic Loads</b>	2303
	<i>Huijie Cheng, Zhikang Shuai, Yelun Peng, Wen Huang, Z. John Shen</i>	
0406-541	<b>Electric Field Simulation Analysis of Typical Defects of 220kV Molded Joints of Polypropylene Cable</b>	2309
	<i>Yunpeng Zhan, Shuai Hou, Mingli Fu, Xiaolin Li, Kexin Chen, Chang Liu, Jun Chen</i>	
0407-542	<b>A Brief Review of Digital Twin in Electric Power Industry</b>	2314
	<i>Yunfang Fu, Yunkai Huang, Feng Hou, Kunpeng Li</i>	
0408-543	<b>Comparison of installation process and electric field distribution of prefabricated and molded 35kV Polypropylene cable joint</b>	2319
	<i>Jun Chen, Shuai Hou, Yunpeng Zhan, Mingli Fu, Xiaolin Li, Chang Liu, Kexin Chen</i>	
0409-544	<b>Comparative Study of Four-Phase Flux Modulated Doubly-Salient Reluctance Motors With Different Winding Polarity Configurations</b>	2325
	<i>Zhiyue Yu, Chun Gan, Kai Ni, Ronghai Qu</i>	
0410-545	<b>Two-layer Progressive Hedging-Benders Decomposition Algorithm for Stochastic Unit Commitment</b>	2331
	<i>Ye Tian, Zhengshuo Li</i>	
0411-546	<b>Double-layered Active Power Control for the Wind Farm Based on MPC and Fuzzy C-means Clustering</b>	2337
	<i>Ran Ding, Rui Mei, Ya ' Nan Liu, Liang Wang, Chun Yang, Jian Yu, Jiawei Cao, Ya ' Nan Zhang</i>	
0412-547	<b>Perspectives on the Use of Advanced Nuclear Energy Systems for New Energy Vehicles</b>	2343
	<i>Jiamin Cao, Sheng Chen</i>	
0413-548	<b>Intraday PV-storage Power Reporting Model Considering Temporal Correlation of Forecast Error</b>	2349
	<i>Shujun Liu, Bo Wang, Weihuan Zhuang, Weiran Zhao</i>	
0414-549	<b>Design and Analysis of a Novel Flux-Intensifying Flux-Controlled Permanent Magnet Motor</b>	2355
	<i>Wenrui Wang, Xiping Liu, Dabin Liu, Siting Zhu</i>	

0415-550	<b>Compression and Restoration Identification Method of Wide-band Oscillation Data Based on Autoencoder</b>	2360
	<i>Hui Cai,Hui Huang,Zhuyi Peng,Haijun Chang,Xingning Han,Zhaowei Li</i>	
0416-551	<b>Online Learning Enabled Hierarchical Distributionally Robust Model Predictive Control of Green-Hydrogen Microgrids under Uncertainties</b>	2366
	<i>Chao Ning,Longyan Li</i>	
0417-553	<b>Object Detection of UAV Power Line Inspection Images Based on Federated Learning</b>	2372
	<i>Keyu Liu,Linlin Zhong</i>	
0418-554	<b>Optimal Siting and Sizing of Distributed Generation Based on Chaotic Particle Swarm Optimization</b>	2378
	<i>Wen Gan,Renzhong Li,Longxiang Sun,Weikang Gu,Chenyu Xiong,Haoming Liu</i>	
0419-555	<b>Research on Wind-Solar-Thermal-Storage Configuration Schemes of DC Near-field Based on Time Sequential Simulation</b>	2383
	<i>Zhibin Yan,Linrun Guo,Chi Li,Shuai Wang,Zhencheng Sang</i>	
0420-557	<b>Transient Interaction Characteristics and FRT Control of DFIG-Based Wind Farm Connected to Receiving-End Power Grid</b>	2389
	<i>Yingquan Lu,Huiyu Zhang,Qingmei Su,Luyang Wu,Ting Huang,Yeting Han</i>	
0421-558	<b>Common-mode Voltage Suppression and Synchronous Modulation Strategy for Double Dual-three-phase Induction Motor</b>	2395
	<i>Yafei Ma,Dong Jiang,Zhenjun Lin,Yongjiang Liu</i>	
0422-560	<b>Fault-Tolerant Model Predictive Control for NPC Three-level Virtual Synchronous Generator with AC Current Sensors Fault</b>	2401
	<i>Nan Jin,Zhiwen Hou,Huan Xie,Leilei Guo</i>	
0423-561	<b>A Quantification Method of Promoting VRE Accommodation by Pumped Storage Power Plant</b>	2407
	<i>Dianhai Liu,Jufang Pan,Hui Zhang,Kaicheng Wang,Fangyuan Pan,Jing Zhu</i>	
0424-563	<b>Voltage Control of Single-Phase Inverter Based on Compound SRFPI and LADRC</b>	2412
	<i>Haoda Li,Kai Zhu,Liaoyuan Lin</i>	
0425-565	<b>Simulation of Interpolated Heat Dissipation Structures Using Fins and Water-cooling for Solid Medium Frequency Transformer</b>	2418
	<i>Diqin Ma,Weiwang Wang,Jiefeng He,Shengtao Li</i>	
0426-566	<b>Self-Adaptive Balance Control Strategy of Cascaded H-Bridge Multilevel Power Conversion System of Battery Energy Storage</b>	2424
	<i>Xiaowei Zhang,Shoubin Sun,Jinghua Zhou,Yinan Hong,Tianyu Wang</i>	

0428-573	<b>Oscillation Mechanism Analysis of AGC Dynamics Based on Damping Torque Analysis Theory</b>	2434
	<i>Tao Zhou, Jie Sun, Huifang Li, Yinjie Li, Haoran Tang, Liufu Chen</i>	
0429-574	<b>Design of DC Arc Fault Online Detectors in Photovoltaic Systems Based on Neural Network</b>	2442
	<i>Qinshu Lu, Shanxu Duan, Qiqi Li, Te Peng, Junchen Yan</i>	
0430-576	<b>Control Parameters Optimization of Photovoltaic Grid-Connected System Based on Sensitivity Analysis</b>	2448
	<i>Xinyu Lu, Junliang Liu, Xiong Du, Hanlin Xia, Mincai Yang</i>	
0431-578	<b>Mathematical Model of 12/14 Hybrid Stator Pole Type Bearingless Switched Reluctance Motor Based on Maxwell Stress Tensor Method</b>	2452
	<i>Zhenyao Xu, Cheng Huang, Siyang Yu, Huijun Wang, Tiehang Yi, Zhihua Zhang</i>	
0432-579	<b>An Open-circuit Fault Diagnosis based on Virtual Current Coefficients for Power Converter of Doubly Salient Electro-Magnetic Motor</b>	2458
	<i>Weiqian Chen, Bo Zhou, Yijun Zhang</i>	
0433-581	<b>A Distributed Photovoltaic Power Transaction Mode Based on Blockchain Technology</b>	2464
	<i>Hanyu Zhao, Dong Zhao, Hui Feng, Xuesong Zhou, Yujie Wu</i>	
0434-582	<b>Short-term Load Forecasting for Industrial Users Based on Transformer-LSTM Hybrid Model.</b>	2470
	<i>Yuhao Chen, Yuanyuan Wang, Xiaohan Liu, Jingjie Huang</i>	
0435-584	<b>Terminal Sliding-Mode Observer for PMSM with Resistance Identification</b>	2476
	<i>Minghao Zhou, Dong Wang, William Cai, Wei Xu, Yong Feng, Ying Chi</i>	
0436-585	<b>Design and Control Method for a Novel One-Control-Three Type of TSC for Power Distribution Network with Distributed PV system</b>	2482
	<i>Feng Xiao, Xinchao Liu, Weixin Zhu, Guangyi Li, Huanhong Yang, Wei Jiao</i>	
0437-586	<b>Design of Ultra-High Speed Flux Switching Permanent Magnet Machine with Amorphous Alloy Core</b>	2488
	<i>Jiayue Zhou, Jiantao Wang, Mingrui Tang, Xi Xiao</i>	
0438-587	<b>An Unmanned Aerial Vehicle Wireless Charging System Using a Novel Coupling Structure</b>	2494
	<i>Haiyu Liu, Xiyu Chen</i>	
0439-590	<b>Corona Discharge of Practical Operated Transmission AC Lines</b>	2500
	<i>Yuze Jiang, Mengqi Zhang, Ruobing Zhang</i>	

0440-591	<b>Variation of Surface roughness and Corona Characteristics of Transmission Lines in Shandong Power Grid</b> <i>Yuze Jiang, Mengqi Zhang, Ruobing Zhang</i>	2503
0441-593	<b>Fast DC Optimal Power Flow Based on Deep Convolutional Neural Network</b> <i>Huayi Wu, Zhao Xu</i>	2508
0442-594	<b>Research on the Security Analysis of Integrated Electricity and Gas Systems based on the Vulnerability Index</b> <i>Xingtiao Tian, Yaowen Zhang, Xiaojie Lin, Wei Zhong, Yi Zhou, Feiyun Cong</i>	2513
0443-595	<b>PD Characteristics and Defect Type Recognition of "rapidly-developing" Fault in Oil-Pressboard Insulation</b> <i>Yunjian Wu, Dalin Ding, Fujin Cai, Rui Fang, Peng Gao, Xiaoxing Zhang</i>	2520
0445-598	<b>Analysis and Comparison of Inductor Current Characteristics for Non-Inverting Buck-Boost Converter With Four-Mode Modulation</b> <i>Yuning Bai, Zhengbin Zhu, Zhi Yang, Sideng Hu</i>	2534
0446-599	<b>A Multi-Objective Optimization Method for Multi-Energy Flow Coupling System Considering Environmental Protection</b> <i>Xuanjun Zong, Yue Yuan, Junbin Ling, Hongwei Zhou, Sheng Zou, Han Wu</i>	2541
0447-604	<b>Design and Analysis of High Reliability Fault Tolerant Permanent Magnet Steering Motor</b> <i>Xuefeng Jiang, Hongbo Liu, Siyuan Wang, Zixian Zhang, Kai Ma</i>	2546
0448-606	<b>Economical Configuration of Shared Energy Storage for Industrial Consumers and Profit Allocation Based on Cooperative Game</b> <i>Yihan Liu, Qingshan Xu, Yuheng Liu, Honghua Xu</i>	2552
0449-607	<b>A Dynamic Simulation Platform for Testing The Performance of Power Quality Management Devices in Distribution Networks</b> <i>Huaidong Min, Wei Hu, Fan Yang, Zhichun Yang, Yang Lei, Shi Luo</i>	2558
0450-609	<b>A Day-ahead Scheduling Strategy for Electric Vehicles Based on Converted Economical Objective</b> <i>Chenhui Bai, Jiarui Wang, Jiewen Deng, Yu Liu, Yi Wang</i>	2565
0451-611	<b>Non-intrusive Load Perception and Flexibility Evaluation for Electric Vehicle Charging Station: A Deep Learning Based Approach</b> <i>Jiarui Wang, Jiewen Deng, Yu Liu, Yi Wang</i>	2570
0452-613	<b>Electric Vehicle Identification and Demand Response Capability Assessment Based on Non-Intrusive Monitoring</b> <i>Jiewen Deng, Jiarui Wang, Yu Liu, Wang Yi</i>	2576

0453-614	<b>An Instantaneous Torque Model and the Practical Calculation Method for Permanent Magnet Synchronous Machines</b>	2582
	<i>Yu Zou, Jianyun Chai, Haifeng Lu, Xudong Sun</i>	
0454-615	<b>Research on Temperature Response of Secondary Loop of District Heating System with XGBoost</b>	2588
	<i>Zhongbo Li, Encheng Feng, Jinfeng Xu, Chuansong Mei, Qing Zhao, Xiaojie Lin</i>	
0455-617	<b>Research on Response Surface Modeling Method of Permanent Magnet Synchronous Motor Based on Sequential Experimental Design</b>	2592
	<i>Peijuan Cui, Qingbo Guo, Hongxing Wu, Qianfan Zhang, Luman He</i>	
0456-618	<b>Control Strategy of Three-Phase t-Type Three-Level Converter with Reactive Power Compensation Function</b>	2598
	<i>Wei Zhong, Huajian Wu, Zhimin Wu, Chen Wei, Ting Lou, Hengliang Zhao</i>	
0457-620	<b>Bidirectional Half-Bridge Three-Level LLC Resonant Converter</b>	2604
	<i>Zhimin Wu, Ting Lou, Hengliang Zhao, Chen Wei, Huajian Wu, Jiajie Lou</i>	
0458-621	<b>Comprehensive Evaluation of Power Quality Based on Improved TOPSIS Method and Combination Weights</b>	2609
	<i>Yuheng Liu, Qingshan Xu, Yihan Liu, Bin Yang</i>	
0459-622	<b>Wind Power Scenario Generation Considering Wind Power Variations</b>	2615
	<i>Longpeng Ma, Chen Wu, Kaihui Nan, Wenjuan Niu, Chen Chen, Jian Tan, Yin Wu, Sheng Li, Lishen Wei, Xiaomeng Ai</i>	
0460-623	<b>Study on the Dynamic Characteristics of Plasma in the Post-arc Process of Vacuum Arc Interrupting</b>	2621
	<i>Liming Liu, Zhao Yuan, Lixue Chen, Shan Liu</i>	
0461-624	<b>Short-Term Wind Power Interval Prediction Based on GD-LSTM and Bootstrap Techniques</b>	2626
	<i>Wei Zhang, Hao Quan, Wenjie Zhang, Zixiong Li</i>	
0462-625	<b>Improved Comprehensive Inertial Control for ESS Participating Primary Frequency Regulation Based on Fuzzy Control</b>	2632
	<i>Tao Zhou, Yongjian Xiang, Bixing Ren, Yunhui Xu, Zhongjian Dai, Lei Zhang</i>	
0463-626	<b>An Analysis of Sheath Development of Cathode during the Instability Stage of Vacuum Arc</b>	2639
	<i>Jingjing Ye, Zhao Yuan, Kaijian Wu, Qilin Shi, Liming Liu, Shan Liu, Yuan Pan</i>	
0464-627	<b>Low Carbon Economic Dispatch of an Integrated Electricity-Heat-Gas Interconnected Energy System with Improved Stepped Carbon Trading</b>	2645
	<i>Guiyang Cui, Yonghui Sun, Xinye Du, Yi He, Pengpeng Wu, Wei Zhou</i>	
0465-628	<b>Fault-Tolerance Capability Comparison of Different Connection Types for Dual-Three Phase Motors</b>	2651
	<i>Jiuqing Cai, Rui Li, Peng Li, Song Shi</i>	

- 0466-629 **An optimal Variable-Frequency Asymmetrical-Phase-Shift Strategy for Wireless Power Transfer System** 2656  
*Haowen Chen, Changsong Chen, Shuran Jia, Mingyang Dong, Dongtong Han, Zhiwen Xu*
- 0467-630 **Group Equivalent Modeling and Analysis of Group Subsynchronous Oscillation of Direct-Drive Wind Turbine** 2661  
*Xuetao Dong, Yue Zhao, Wenchao Zhai, Zhenyang Wang, Kan Liu, Gangui Yan*
- 0468-631 **Research on An Opposed-Electrode GaAs Photoconductive Semiconductor Switch at 8  $\mu$  J Excitation** 2667  
*Chun Liu, Ming Xu, Xinyang Si, Rongrong Gao, Chengjie Wang, Jiahao Chang, Wenhao Wang, Wei Luo, Lin Zhang*
- 0469-632 **Energy Storage System Participates in Frequency Modulation Control and Capacity Balance Strategy of Power System** 2670  
*Zhenyang Wang, Wenchao Zhai, Gangui Yan, Yue Zhao, Youshi Cui, Xihao Jia*
- 0470-633 **A Grouping Strategy and Day-ahead Scheduling Method of Electric Vehicles for Peak Shaving** 2676  
*Tian Gao, Xueliang Huang, Zexin Yang, Haowei Wang, Xin Wen, Qi Zhao, Hongen Ding*
- 0471-635 **Adaptive Harmonic Detection of Active Power Filter based on Improved VMD** 2682  
*Wenjie Huang, Rongkun Wang, Yujia Zhuang, Zhixin Wang, Quankai Du*
- 0472-636 **Model Predictive Current Control for PMSM Drives With Calculation Delay Compensation** 2687  
*Yujia Zhuang, Quankai Du, Wenjie Huang, Zhixin Wang, Rongkun Wang*
- 0474-638 **An Importance Ranking Method of Distribution System Component based on Triangular Fuzzy Number** 2700  
*Dingmao Zhang, Ju Ma, Gengfeng Li, Yaojing Tang, Zhaohong Bie, Zili Guo, Lieqian Gong, Yang Zheng*
- 0475-639 **Complex Feedforward Compensation for Current Control of Ultra-High-Speed PMSM** 2705  
*Aleksandr Sheianov, Xi Xiao*
- 0476-641 **A Study on Model-Based Optimization of Multiple Energy Carriers in Integrated Energy Systems** 2713  
*Zhongbo Li, Nan Zhang, Haihong Wang, Jinfeng Xu, Chuansong Mei, Xiaojie Lin, Andrii Kravchenko*
- 0477-642 **The Vector Control Strategy And The Copper Loss Optimization Under Unity Power Factor Control of Sinusoidal Doubly Salient Electro-magnetic Machine** 2718  
*Huidong Peng, Bo Zhou, Xiaodong Yu*

0478-644	<b>Carbon Emissions Forecasting Based on Stacking Ensemble Learning</b>	2725
	<i>Qianmao Zhang, Ying Wang, Dongliang Qin, Kailin Zhao, Wanying Xie, Sheng Li, Lishen Wei, Xiaomeng Ai</i>	
0479-646	<b>A Bi-Level Multi-Objective Planning Method for Microgrid with Offshore Wind Power</b>	2731
	<i>Xinye Du, Yonghui Sun, Jianxi Wang, Yi He, Pengpeng Wu, Guiyang Cui</i>	
0480-648	<b>Regulation of pulse DC power on the Long lived reactive species concentration of AC excited plasma in liquid phase</b>	2737
	<i>Bucheng Peng, Zhiyu Li, Lanlan Nie, Xinpei Lu</i>	
0481-651	<b>Backlash Compensation using Backstepping Adaptive Control in Servo Transmission System</b>	2745
	<i>Hairong Ye, Bo Wang, Kai Liu, Wei Hua, Xin Wang</i>	
0482-652	<b>Online Topology Identification Method for MV and LV Distribution Network Based on GA-SVM</b>	2750
	<i>Can Huang, Bowen Zhu, Yingkui Ding</i>	
0483-653	<b>A Dynamic Aggregation Method for Virtual Energy Plants Considering Real-time Contribution</b>	2755
	<i>Xun Dou, Donglou Fan, Chen Wu, Guiyuan Xue</i>	
0484-654	<b>Topologies Differences of Series and Double-Sided LC of Interdigital Electrode Coupler for Capacitive Power Transfer</b>	2761
	<i>Renjie Zhang, Cang Liang, Huan Yuan, Aijun Yang, Xiaohua Wang, Mingzhe Rong</i>	
0485-655	<b>Module-Level Fault Diagnosis of Photovoltaic Array based on Wireless Sensor Networks and Inverter Activated I-V Scanning</b>	2766
	<i>Jingwei Zhang, Changqing Ai, Zijun Zheng, Kun Ding, Xihui Chen, Yongjie Liu, Ling Chen</i>	
0486-657	<b>Equivalent Modeling of Hybrid Modular Multilevel Converter Considering the Full Bridge Capacitor Voltage</b>	2772
	<i>Yixuan Wang, Dan Liu, Xiaoguang Wei, Lei Qi, Xinyin Wang, Zhiguang Lin</i>	
0487-658	<b>Integrated Generation and Transmission Planning with Carbon Emission Trading</b>	2778
	<i>Zhiwei Wang, Jiajie Fan, Xin Liu, Wenzhuo Wang, Rui Liu, Qiwen Zhang, Zheng Li, Cong Wang, Qianchang Chen</i>	
0488-659	<b>Neural Network-based Medium Frequency Transformer Electric Field Modeling and Sensitivity Analysis</b>	2784
	<i>Xuan Guo, Zedong Zheng, Chi Li, Yongdong Li, Fei Zhao</i>	
0489-660	<b>Sensorless Control of Permanent Magnet Synchronous Motor Based on Finite-Position-Set-Phase-Locked Loop</b>	2790
	<i>Yuelei Zheng, Yu Chang, Dan Liu, Huimin Wang, Yun Zuo, Xinglai Ge</i>	



0490-661	<b>A Five-Level Space Vector Modulation for Interleaved Vienna Rectifier With Reduced Harmonic Distortion and Line Current Ripple</b>	2796
	<i>Xiaokui Liu,Shanxu Duan,Xuan Song,Han Fu</i>	
0491-662	<b>Optimization of Thermal Storage Capacity of Solar Tower Power Considering Peak Regulation</b>	2802
	<i>Xiangyan Wang,Ning Chen,Weizhou Wang,Bangjie Hu,Pei Wang</i>	
0492-663	<b>The Installation of the Island Divertor Coils on the J – TEXT Tokamak</b>	2808
	<i>Haojie Chen,Bo Rao,Song Zhou,Yunfeng Liang,Yangbo Li,Zhengkang Ren,Feiyue Mao,Chuanxu Zhao,Shuhao Li,Nengchao Wang</i>	
0493-664	<b>Network-Storage Collaborative Planning Method for Low-Voltage AC and DC Flexible Interconnected Distribution System</b>	2812
	<i>Huiqiang Ji,He Yang,Lihu Jia,Hong Liu,Haolong Meng,Qizhe Li</i>	
0494-665	<b>Small-signal Modeling and Input Impedance of ISOP DC Transformer with Switched Resonant Branches for Self-Voltage Balancing</b>	2818
	<i>Haiyang Liu,Shumei Cui,Chuang Liu,Heyang Sun</i>	
0495-666	<b>A Virtual-Rectifier AC/AC Converter-Based Dynamic Voltage Restorer</b>	2824
	<i>Zhenyu Yang,Qiang Qian</i>	
0496-667	<b>Control Parameters Identification and Its Application to Transient Interaction Analysis of PMSG-Based Wind Farm Connected to Receiving-End Power Grid</b>	2830
	<i>Huiyu Zhang,Qingmei Su,Zhijie Zeng,Yinqiao Wang,Yeting Han,Jinyuan Fang</i>	
0497-669	<b>Plasma Preparation of Graphene Nanosheets for Energy Storage</b>	2836
	<i>Xiaofei Yuan,Rui Zhong,Ruoyu Hong,Ning Liu,Jian Chen,</i>	
0498-670	<b>Optimal Substation Planning Considering Demand Response and Energy Storage System Based on Mesh Distribution Networks Planning Framework</b>	2842
	<i>Ke Fei,Yunchen Sha,Chao Xu,Hao Guo,Yanhong Wang,Shida Zhang,Guocheng Hou,Hantong Cheng</i>	
0499-671	<b>Research on Separation Method of Partial Discharge Mixed Signal in Switchgear</b>	2848
	<i>Zhuo Wang,Xiang Zheng,Renfeng Wang</i>	
0500-672	<b>Flashover Strength Improvement in Vacuum Using Surface Microstructure of Printed Metal Wires</b>	2854
	<i>Yi-Tong Yao,Hai-Bao Mu,Shu Zhang,Yan-Lin Cheng,Fa-Lun Song,Guan-Jun Zhang</i>	
0501-673	<b>Magnetic-Structural Coupled Simulation of Power Transformer Winding Cumulative Effect</b>	2860
	<i>Xiaoqing Lin,Jun Liu,Feng Wang,Wenhao Ai,Zhongxiang Li,She Chen</i>	
0502-675	<b>Research on fiber optic temperature measurement and simulation of lightning arrester on the roof of a moving train</b>	2866
	<i>Qi Ou,Huaqi Liu,Shenghui Wang</i>	

0503-676	<b>Discussion on 5G Business Model in Power Industry</b> <i>Song Wang, Jiansong Qin, Xuanwei Qi, Zhikun Yan, Ming He, Yuting Liu</i>	2872
0504-677	<b>Study on Microcapsules for Self-healing System of Silicone Rubber Insulating Material</b> <i>Mingzhe Li, Ruiqi Shang, Yuhao Liu, Bin Cao, Liming Wang</i>	2876
0505-678	<b>Micromagnetic Simulation of Improved Nanocrystalline Alloy Model under kHz Magnetization</b> <i>Lingjun Dai, Liang Zou, Kaihang Guo, Li Zhang</i>	2881
0506-679	<b>Auxiliary Decision-making Method for Reactive Power Compensation Configuration of AC Grid-connected Offshore Wind Farm</b> <i>Yonggao Guan, Yi Tang</i>	2887
0507-680	<b>Virtual DC Machine Control Strategy for Stability Improvement in DC Microgrid with Constant Power Loads</b> <i>Zifa Liu, Yan Liu</i>	2893
0508-681	<b>Design of Low Power Transmission Tower Assembly Monitoring System</b> <i>Longbin Zhang, Bo Tang, Yue Wang, Zhiyu Shang</i>	2900
0509-682	<b>Load Recovery Strategy Based on Mobile Energy Storage Flexibility and Distribution Network Reconfiguration</b> <i>Chen Li, Yunli Wang, Rui Wang, Haiyang Liu, Xiaoli Tao, Hua Zhong, Peng Wang, Shiwei Xia</i>	2905
0510-684	<b>Fault Diagnosis of Contaminated Insulators Based on Heterologous Entropy Feature Fusion</b> <i>Kai Gao, Tianyi Wu, Zhengyong Hu, Jinyi Deng, Danrui Ma, Lijun Jin</i>	2911
0511-686	<b>Research on the Method of Enhancing the Hydrophobicity of Planar and Cylindrical-curved Ceramic by Atmospheric Pressure Plasma Jet</b> <i>Zhenbo Xu, Xinglei Cui, Yangyang Zhou, Zhi Fang</i>	2917
0512-687	<b>Research on Testing and Simulation Analysis of Overvoltage Waveform on the Roof of a Moving Train</b> <i>Shenghui Wang, Qi Ou, Shuaitao Mao, Qizhe Zhang</i>	2923
0513-688	<b>Improved Frequency Response Model for Power System with Photovoltaic Generation</b> <i>Hu Zhiyang, Cao Wu, Sha Jun, Qian Minhui</i>	2929
0514-689	<b>Balance Analysis Model of Provincial Power System Considering Co-generation Flexibility Improvement</b> <i>Jiawei Zhang, Sheng Ge, Yan Zhang, Zhong Zhang, Quan Lyu</i>	2934
0515-690	<b>Day Ahead Unit Commitment of Integrated Gas and Electric System Considering Pipeline Climbing</b> <i>Qiao Wang, Jiakun Fang, Shengshi Wang</i>	2940

0516-691	<b>Electrical Tree Performance of Epoxy Resin Used in Power Electronic Transformer under Bipolar Square Wave Voltage</b>	2946
	<i>Xiaopeng Zha, Kun Wang, Jianying Li</i>	
0517-692	<b>Research on Revenue Risk of Electricity Retailers Considering Demand Response</b>	2950
	<i>Qingli Hao, Sining Wang, Jian Zheng, Xiaomin Zhong, Junfang Zhang, Chun Xiao, Chao Zhang</i>	
0518-693	<b>Grid Carbon Footprint Tracking Algorithm Based on Electrical Profiling</b>	2956
	<i>Qin Lv, Xiang Ma, Panpan Liu, Yuanshi Zhang, Wei Tai, Jiandong Wo</i>	
0519-694	<b>Analysis of Transformer Oil Paper Insulation Discharge Signal Characteristics</b>	2961
	<i>Xinchao Zhang, Liang Zou, Xu Chen, Lingjun Dai</i>	
0520-695	<b>Hybrid Modeling Method for Thermal Analysis of Hairpin Winding Permanent Magnet Machine</b>	2965
	<i>Ling Ding, Yuan Cheng, Xiaowei Ju, Shumei Cui</i>	
0521-699	<b>Deep Search Based Carbon Footprint Analysis</b>	2970
	<i>Cunzhi Tong, Yiyuan Chen, Panpan Liu, Yuanshi Zhang, Wei Tai, Wenda Zhan</i>	
0522-700	<b>Suspended Particle Purification by Negative Corona Discharges of Multi-needle Electrode</b>	2974
	<i>Huifen Huang, Yuesheng Zheng, Tongtong He</i>	
0523-702	<b>Development of Precision Impulse Current Measuring Device</b>	2978
	<i>Zhaozhi Long, Wenting Li, Shaobo Liu, Feng Zhou, Jiawei Fan, Kangmin Hu, Wenxin Peng</i>	
0524-703	<b>A 90~150 kHz Dual-side Tuning Encrypted Wireless Power Transfer System Based on Steplessly Variable Switch-controlled Capacitor</b>	2984
	<i>Chen Qi, Han Miao, Xiyu Chen</i>	
0525-704	<b>Optimal design of metal particle trap in DC GIL</b>	2990
	<i>Huaqi Liu, Shenghui Wang, Qi Ou, Qiang Wang</i>	
0526-705	<b>Power Control Method for LCC-LCC Wireless Power Transmission Without Communication</b>	2996
	<i>Wanjing Li, Kai Ji, Zimin Shao, Bangyin Liu</i>	
0527-706	<b>Low Computational Estimated Position Error Compensation and Phase-locked Loop Normalization for PMSM Sensorless Control</b>	3002
	<i>Ruijia Zhang, Qinfeng Hu</i>	
0529-708	<b>A New Type of Current Transformer Shielding Structure Design Based on Quantum Measurement</b>	3015
	<i>Chen Tang, Xianlin Zhou, Haitao Yang</i>	

0530-712	<b>Research on Power Flow Optimization Control Strategy of AC-DC Hybrid Microgrid Based on Power Electronic Transformer</b>	3021
	<i>Ling Zhou,Tiancheng Liu,Cong Li,Changkun Yang</i>	
0531-713	<b>System Inertia Identification Based on PMU</b>	3027
	<i>Ling Zhou,Cong Li,Tiancheng Liu,Changkun Yang</i>	
0532-714	<b>An Optimal Configuration Method of Voltage Sag Monitoring Points Considering Monitoring Redundancy</b>	3033
	<i>Yun Wang,Xiaochuan Wei,Ran Chen</i>	
0533-715	<b>Backstepping Sliding Mode Control for Turntable Friction Compensation Using Stribeck Model and Extended State Observer</b>	3039
	<i>Xin Wang,Bo Wang,Hairong Ye,Kai Liu,Wei Hua</i>	
0534-716	<b>A Unified Constant Power Control Method for DC/DC Boost Converter</b>	3045
	<i>Wenquan Liu,Peng Cheng,Lujia Zhou,Limin Jia</i>	
0535-717	<b>Comparative Analysis of Coreless Multidisc Axial Flux Permanent Magnet Motors for Electric Propulsion System</b>	3051
	<i>Changchuang Huang,Baoquan Kou,Xiaokun Zhao</i>	
0536-719	<b>Towards a More Resilient Restoration Process : PMRM Based Transmission Network Reconfiguration Strategy</b>	3056
	<i>Shaoyan Li,Hanguang Zhao,Youhao Zhang,Xueping Gu</i>	
0537-720	<b>Electrical Metrology Based On Quantum Technology : A Review of Current Progress</b>	3062
	<i>Siyun Wang,Meimei Duan,Qing Xu,Zigang Lu,Guofang Xia,Dan Gong,Yongxian Yi,Jin Bao</i>	
0538-721	<b>Optimization and Evaluation of a Reverse-salient Permanent Magnet Synchronous Motor</b>	3068
	<i>Xiaokun Zhao,Baoquan Kou,Changchuang Huang</i>	
0539-722	<b>A Double-magnetic-Bridge Based Brushless Hybrid Excitation Synchronous Machine for Ship Propulsion</b>	3072
	<i>Jinya Chen,Kan Liu,Wei Hu,Yanghua Qu,Yangce Geng</i>	
0540-723	<b>Insurance Premium Setting Based on Power System Reliability Analysis</b>	3078
	<i>Fuqiang Zhao,Dingkang Liang,Yingqi Yang,Youxin Sang,Dawei Song,Xingwu Guo</i>	
0541-724	<b>A Robust Measurement-Based Error Signal based on Model Predictive Control for AGC system</b>	3084
	<i>Rui Chen,Deping Ke,Yuanzhang Sun,Jian Xu,Siyang Liao,Bo Wang,Zhe Zhang,Yuhui Wu</i>	
0542-725	<b>Static Voltage Stability Margin Evaluation Considering Stochastic Power Injection Based on Deep Reinforcement Learning Theory</b>	3089
	<i>Yi Yun Tian,Jun Yi Zhang,Wen Zhe Huang,Ceng Lin Ruan,Yi Chao Wu,Li Xia Sun</i>	

0543-726	<b>Detection of SF6 characteristic decomposition component H2S by cavity ring-down spectroscopy</b>	3095
	<i>Xue Lin,Heng Ma,Fangfang Wu,Shengyi Xie,Anhao Jiang,Chaohai Zhang</i>	
0544-727	<b>Analysis of Magnetization Process of Nanocrystalline Alloy Under Different External Conditions</b>	3099
	<i>Kaihang Guo,Liang Zou,Lingjun Dai,Li Zhang</i>	
0545-728	<b>Game-theoretic Model of Day-ahead Electricity Market Considering Penalties for Retailers' Bid Deviations</b>	3105
	<i>Xun Xie,Shaohua Zhang</i>	
0546-730	<b>Infrared Image Segmentation Method of Current Transformer Based on DeepLabv3+ Network</b>	3111
	<i>Tiancheng Zhao,Ying Yang,Jinhai Sang,Zhihao Xu, Jiashuai Li</i>	
0547-731	<b>Analysis on a Novel Eddy current - magnet track composite brake for high-speed train</b>	3116
	<i>Benzhen Guo,Desheng Li,Bin Wang</i>	
0548-732	<b>Heavy Rare Earth Doped Nd-Fe-B Permanent Magnetic Material Performance Enhancement Methods and Their Motor Applications Research</b>	3121
	<i>Xiaoyue Luo,Qingquan Qiu,Dong Zhang,Liwei Jing,Pu Huang,Shiqi Jia</i>	
0549-733	<b>Calculation of Renewable Energy Grid-Connected Potential</b>	3127
	<i>Hua Xie,Depeng Kong,Le Yang</i>	
0550-734	<b>Optimal Dispatching Strategy for Integrated Energy System with Electricity-Heat-Cold -Hydrogen</b>	3132
	<i>Hua Xie,Zhihong Xu,Wei Wang</i>	
0551-735	<b>Impact of Fault Ride-through Characteristics of Large-scale Distributed Photovoltaic Integration on Voltage in Receiving-end Grid</b>	3137
	<i>Hong Dai,Chen Hui Yan,Yi Chao Wu</i>	
0552-736	<b>A New Method for Cable AC Voltage Test of Insulation Based on Replacing Test Reactor Combination by Shunt Reactor</b>	3142
	<i>Can Guo,Hao Wu,Yanhua Han,Yong Sheng,Jing Wang,Jingfeng Wu,Tao Lin,Zhen Tan,Yongliang Dang</i>	
0553-737	<b>Influence of Hybrid Reactive Power Compensation on Interrupting Characteristics of Three-phase Grounding Fault</b>	3147
	<i>Jingjing Yang,Qingquan Li,Hongshun Liu</i>	
0554-739	<b>Torque Optimization of One High Specific Power Three-Phase FTPMM Based on FEM</b>	3153
	<i>Peijuan Cui,Xiaqing Pei,Zaiping Zheng,Qianfan Zhang,Luman He</i>	
0555-740	<b>A High Voltage Pulse Power Supply Based on Piezoelectric Transformer</b>	3158
	<i>Zixin Zhao,Li Zhuang,Ruobing Zhang</i>	

0556-741	<b>Effect of Electrode Structure on the Packing Material Surface Discharge Characteristics in Dielectric Barrier Discharge</b>	3164
	<i>Shengyi Xie, Xinhua Cai, Fangfang Wu, Xue Lin, Shengyu Hu, Min Zhu, Chaohai Zhang</i>	
0557-742	<b>Research on the Evaluation Framework of Renewable Energy Accommodation in Electricity Market</b>	3168
	<i>Chen Wu, Kaihui Nan, Jian Tan, Longpeng Ma, Wenjuan Niu, Guiyuan Xue, Chen Chen, Yixuan Lou, Lishen Wei, Xiaomeng Ai</i>	
0558-744	<b>Transformer Fault Diagnosis Based on Dissolved Gas Analysis in Oil and Ensemble Learning</b>	3174
	<i>Feng Ru, Lina Zhang, Xiaoqian Yang, Haoquan Zou, Yong Lu, Xianfeng Xu</i>	
0559-745	<b>YASA Axial Flux Machine with Non-Uniform Arrangement of Stator Segmented Modules for Reducing Harmonics of Back EMF</b>	3179
	<i>Xiaoguang Wang, Xiaofeng Li, Cheng Liu, Guoguang Zhang, Wei Xu</i>	
0560-746	<b>Reliability Evaluation of Wind-Storage Power Generation System Considering Fatigue Failure of Wind Turbine Gearbox</b>	3184
	<i>Yingqi Yang, Dingkang Liang, Fuqiang Zhao, Yibo Li, Shuo Yin, Meng Yang</i>	
0561-748	<b>Multi-agent Active Real-time Voltage Control at the Edge of Distribution Network Considering Prediction Uncertainty</b>	3190
	<i>Yu Jing, Gao Qiu, Youbo Liu</i>	
0562-750	<b>Electric Vehicle Charging Load Clustering and Load Forecasting Based on Long Short Term Memory Neural Network</b>	3196
	<i>Haowei Wang, Xueliang Huang, Shan Gao, Zexin Yang, Tian Gao, Qi Zhao, Hongen Ding</i>	
0563-751	<b>Flexibility Evaluation for Integrated Gas, Steam, and Electricity Systems of Steel Plants</b>	3201
	<i>Qiulin Wang, Xiandong Xu, Hongjie Jia</i>	
0564-752	<b>Research on Pantograph Condition Monitoring Based on Video Image</b>	3206
	<i>Wendi Ding, Jiangang Liu, Enlin Lv, Yongji Ma, Yongle Lin, Lijun Jin</i>	
0565-753	<b>Numerical simulation of output short-circuit capacitor discharge of intrinsically safe switching transistor converter</b>	3212
	<i>Dangshu Wang, Jiaan Yi, Zhuo Qiang, Yulong Guo, Jiatong Zhao, Yingying Shen, Siqin Liu</i>	
0566-754	<b>A Single-phase Ground Fault Location Method Based on Transient Resistance Estimation</b>	3218
	<i>Yun Wang, Xiaochuan Wei, Ran Chen</i>	
0567-755	<b>Conditional-Robust-Profit-Based Decision Model for Flexible Contract between Electricity Retailer and Customer</b>	3225
	<i>Dou Fan, Shaohua Zhang</i>	

0568-756	<b>Iron Loss Calculation Based on Loss Surface Hysteresis Model and Its Verification</b>	3231
	<i>Wei Li,Xing Fan,Yongle Sun,Lixun Zhu</i>	
0569-757	<b>A Triple-Voltage-Vector Model-Free Predictive Current Control Method for Voltage Source Inverters</b>	3236
	<i>Zheng Yin,Cungang Hu,Tao Rui,Zhuangzhuang Feng</i>	
0570-758	<b>Research on Pixel-Level Identification of Composite Insulator Defects Based on Threshold Segmentation</b>	3242
	<i>Youmin Li,Rui Huang,Qian Lin,Wendi Ding,Xiaokun Man,Yongji Ma,Lijun Jin</i>	
0571-759	<b>High-precision Digital Phase Discriminator Based on Adaptive Sampling</b>	3248
	<i>Hangchuan Lou,Shuang Song,Si Cheng,Hengyang Liu,Xianglong Wu,Wubin Kong</i>	
0572-762	<b>Multiple-Consecutive-Samples Based Approach of Frequency Estimation in Three-Phase Grid Under DC-offsets</b>	3253
	<i>Rui Fu,Linyuan Guo,Yunzhe Chen,Xu Wang,Long Zhao,Mingdi Fan,Yong Yang</i>	
0573-763	<b>Prediction of Conducted Disturbance in Drive System of Permanent Magnet Synchronous Motor</b>	3259
	<i>Qibin Zhou,Yabin Liu,Xiaoyan Bian,Ting Cao</i>	
0574-765	<b>Effects of Electric Field and Temperature on Interfacial Properties of Nano-SiO<sub>2</sub> Doped Silicone Rubber Composites: A Molecular-Dynamics Study</b>	3265
	<i>Guangzhi Guo,Juning Zhang,Junbo Deng,Guanjun Zhang</i>	
0575-767	<b>Bi-level Planning Method for Internet Data Center and Distribution Network Considering Demand Response</b>	3270
	<i>Yinyu Zhou,Bo Zeng</i>	
0576-769	<b>Research the Influences of the Thickness of Air Gap and Iron Core on the Vibration of the Shunt Reactor</b>	3276
	<i>Yanzhao Wang,Bing Zhou,Jingzhu Hu,Baoquan Wan,Lanrong Liu,Qili Lin</i>	
0577-770	<b>Research on the Knowledge Graph Construction Technology and its Power Grid Applications</b>	3283
	<i>Yuan Gu,Lucheng Hong,Zehua Chen,Yuchen Zhang,Minghe Wu,Ziheng Yan</i>	
0578-771	<b>Switch Fault Diagnosis and Location of NPC Three-level Inverter Based on Line Voltage Deviation</b>	3289
	<i>Baoshun Yang,Quan Chen,Jun Tao,Shule Hou,Lingling Zhao</i>	
0579-772	<b>Optimal Capacity Configuration Method for CHP Island Microgrid Considering Carbon Emission</b>	3294
	<i>Lei Yang,Lihang Zhao,Xinqi Chen,Zhebo Zhang,Linbo Xu,Huimian Zhao,Ying Yu,Mengfei Xiu,Yuhe Fu</i>	
0580-773	<b>Control and Stability Analysis of Multi-Parallel Single-Phase Electric Springs</b>	3300
	<i>Mengjiao Cao,Qingsong Wang,Fujin Deng,Ming Cheng,Giuseppe Buja</i>	

0581-774	<b>Design of Dynamic Wireless Power Supply System for Mine Monorail Crane</b> <i>Yongping Yin, Chunbo Zhu, Beibei Song, Yifan Gao</i>	3305
0582-775	<b>High-Reliability Dual-Buck Inverter Controller Design based on repetitive control</b> <i>Pingping Wen, Haiping Xu, Zengquan Yuan, Yajie Mu</i>	3310
0583-776	<b>Comparison and Analysis of Pickup of New Monorail-Based Wireless Power Transfer System</b> <i>Yongping Yin, Beibei Song, Chunbo Zhu, Yifan Gao, Shuai Dong</i>	3314
0584-779	<b>Investigation for the Degradation Mechanism of Avermectins Exposed To Non-Thermal Atmospheric Plasma</b> <i>Dong Naizhou, Zou Liang, Wang Xiaolong, Sun Ying</i>	3319
0585-780	<b>Security Analysis of Integrated Energy System under Complex Network</b> <i>Bingyan Xu, Lucheng Hong, Danyan Gu</i>	3325
0586-781	<b>Research on Ventilation and Noise Reduction of Indoor Substation Based on COMSOL Multiphysics (2022015497)</b> <i>Xiaochun Bai, Mingxin Geng, Siyu Liu, Bo Tang, Lv Wang, Jian Wu</i>	3330
0587-782	<b>Optimal Day-ahead Scheduling for Distributed Cleaning Heating System with Minimal Carbon Emissions</b> <i>Junhong Hao, Qun Chen, Shunjiang Wang, Kai Gao</i>	3336
0588-783	<b>Extended Load Flexibility of Industrial P2H Plants: A Process Constraint-Aware Scheduling Approach</b> <i>Yiwei Qiu, Buxiang Zhou, Tianlei Zang, Yi Zhou, Ruomei Qi, Jin Lin</i>	3344
0589-784	<b>Modeling and Simulation of a New Hybrid Transformer for Metro Traction Power Supply System</b> <i>Congzhuang Wang, Yunkai Huang, Feng Hou, Kunpeng Li</i>	3350
0590-785	<b>Study of Abnormal Electricity Consumption for "coal to electricity" Customers</b> <i>Zhengang Xie, Yushu Cheng, Anqi Chen, Xiangyuan Lv</i>	3356
0591-786	<b>Online Dynamic Parameter Estimation of an Alkaline Electrolysis System Based on Bayesian Inference</b> <i>Xiaoyan Qiu, Hang Zhang, Yiwei Qiu, Buxiang Zhou, Tianlei Zang, Ruomei Qi, Jin Lin, Jiepeng Wang</i>	3362
0592-787	<b>A Novel Support Vector Machine Multi-Classification Strategy for Power Transformer Fault Diagnosis</b> <i>Zehua Chen, Lucheng Hong, Yuan Gu, Minghe Wu, Ziheng Yan</i>	3368
0593-788	<b>Subsynchronous Oscillation Research of LCC-HVDC Receiving End System with Large-scale Renewable Power Generation</b> <i>Buyang Du, Jianhang Zhu, Jiabing Hu, Zeren Guo, Dejun Shao, Youping Xu, Mengxuan Shi</i>	3374



- 0594-789 **Line Overload Risk Assessment under Typical Operating Scenarios of Wind Power Grid-Connected System** 3380  
*Yu Chen, Wen Zhe Huang, Ceng Lin Ruan, Chen Hui Yan, Jun Yi Zhang, Li Xia Sun*
- 0595-792 **Synthesis of Carbon Quantum Dots by Gas-liquid Plasma Using Ethanol as Precursor** 3385  
*Jing Gao, Yaxuan Shi, Jiaye Wen, Aizhao Pan, Yuan Li, Guanjun Zhang*
- 0596-793 **Research on Integrated Calculation Method of Theoretical Line Loss of MV and LV Distribution Network Based on Adaboost Integrated Learning** 3390  
*Yu Lingang, Li Lei*
- 0598-795 **Research on Voltage Sag Amplitude Propagation Model and Lateral Propagation Characteristics** 3398  
*Bin Chen, Mingang Tan, Shaoqiu Zhang, Guanghui Tan*
- 0599-797 **Design of a Nonintrusive Current Sensor with Large Dynamic Range Based on Tunneling Magnetoresistive Devices** 3405  
*Sen Qian, Hui Deng, Chuan Chen, Hui Huang, Yun Liang, Jinghong Guo, Zhengyong Hu, Wenrong Si, Hongkang Wang, Yunjia Li*
- 0600-798 **Comparison of 2-Pole Slotted High-speed Motors with Toroidal and Tooth-coil Windings** 3410  
*Fan Xu, Tianran He, Ziqiang Zhu, Hong Bin, Di Wu, Liming Gong, Jintao Chen*
- 0601-799 **A Multiple Load CPT System with Independent-Load Output Voltage for Railway Applications** 3416  
*Zhulin Wang, Bo Luo, Yiming Zhang, Ruikun Mai*
- 0602-800 **Optimal Design of Hybrid Stator Pole Type Bearingless Switched Reluctance Motor with Simulated Annealing Particle Swarm Optimization Algorithm** 3422  
*Zhenyao Xu, Qingguo Yu, Yue Zhang, Huijun Wang, Tiehang Yi,*
- 0603-801 **Research on Levitation Control of Stepped Rotor Type 12/14 Bearingless SRM** 3428  
*Zhenyao Xu, Jinyang Fu, Huijun Wang, Tiehang Yi, Zhihua Zhang,*
- 0604-803 **A High-Efficiency Bidirectional LLC Resonant Converter Based on Current-Doubler Rectification Circuit** 3434  
*Mingyang Dong, Changsong Chen, Zhiwen Xu, Haowen Chen, Dongtong Han, Jingyue Zhang*
- 0605-804 **Analysis of the Temperature Reference Range for the Verification of Smart Energy Meter** 3439  
*Jingfen Bai, Jing Meng, Xitong Xu, Yiqin Jiang, Yubo Yang*
- 0606-805 **Research on the Characteristics of Corona Discharge Ionic Wind of Needle-To-Plate Electrode** 3445  
*Huan Chen, Shuai Yang, Chuan Li, Yong Yang*

0607-806	<b>A Bi-directional Multi-Path Push-Pull Converter</b>	3450
	<i>Fangyi Wei, Yan Li, Ye Tian, Bowu Cao, Junhao Zhang</i>	
0608-807	<b>Development of Polarization and Depolarization Current Testing Device for Crosslinked Polyethylene Cables</b>	3456
	<i>Yuhui Yu, Liuxia Li, Fuchang Lin</i>	
0609-808	<b>Development of Multi-Domain Design Tool for Medium Voltage High Frequency Power Transformers</b>	3462
	<i>Tianshu Liu, Chushan Li, Rui Lu</i>	
0610-809	<b>Dynamic Stability Analysis of Active Distribution Network Based on Recovery in Off-grid process</b>	3467
	<i>Yunting Zhang, Xinyan Fang, Xiao Zhang</i>	
0611-811	<b>Investigation on the Timing of Demagnetization for Variable Flux Memory Motor</b>	3473
	<i>Yan Jia, Ziqiang Zhu, Jianghua Feng, Shuying Guo, Yifeng Li, Liang Hu, Hui Yang</i>	
0612-812	<b>Implementation of an On-line Diagnosis Algorithm of PMSM Inter-turn Short Circuit Based on Search Coil and FPGA</b>	3479
	<i>Yuan Cheng, Yousu Sun, Bochao Du, Shumei Cui</i>	
0613-813	<b>Harmonic Suppression Strategy Of 12-Pulse Controlled Rectifier</b>	3485
	<i>Xiaoqing Ren, Damin Zhang, Shuanglian Yang, Jianxiong Chen, Zexiang Ding</i>	
0614-814	<b>Applicability Analysis of Multi-infeed Short Circuit Ratio in the Small-Signal Stability Analysis</b>	3491
	<i>Linan Qu, Yuhan Zhou, Hongying Zhang, Yi Hao, Huanhai Xin</i>	
0615-815	<b>A BEGS-SQP Method To Optimize the Droop Controller Parameters in Island Microgrid</b>	3497
	<i>Daiyu Xie, Xin Wei, Yuyang Hu, Xinling Chen, Binbin Chen</i>	
0616-816	<b>Research and Optimization of Block Schemes of Backup Power Switch-in equipment Using Bus-bar Differential Protection in 110kV Substations</b>	3503
	<i>Jing Li, Dongjie Sun, Junyi Ma, Tao Da, Chang Liu, Tongtong Sui, Dahai Tang</i>	
0617-818	<b>The Correlation Between Current Pulses and Dark Streamer in Vegetable Insulating Oil Under Lightning Impulse Voltage</b>	3510
	<i>Xiangrong Li, Jian Li, Feipeng Wang, Zhengyong Huang, Qiang Wang</i>	
0618-819	<b>Study on Space Charge Transport and Accumulation Characteristics of XLPE Cable During DC Operation</b>	3514
	<i>Yan Zhao, Shusheng Zheng, Dongchen Liu, Xiaohu Yan</i>	
0619-820	<b>Online Optimization Method of System Protection Setting Value Based on Transient Minimum Frequency Prediction Model</b>	3520
	<i>Rui Zhou, Zhaoyang Yan, Yuchen Dai, Yifeng Li</i>	

0620-823	<b>Simulation Research on Mechanical Performance of Converter Transformer On-load Tap-changer Based on Transient Dynamic Analysis</b>	3526
	<i>Jun Deng,Zhicheng Xie,Zhicheng Pan</i>	
0621-824	<b>Optimization of Switched Reluctance Motor Integrated Power Converter with Multiple Operating Modes</b>	3530
	<i>Huiqin Sun,Wanqing Zhang,Sifei Wang</i>	
0622-825	<b>A Fuzzy Feedforward Current Compensation Strategy for Permanent Magnet Linear Synchronous Motors</b>	3536
	<i>Peng Zhang,Ruihua Zhang,Hang Zhang,Jinquan Zhu</i>	
0623-826	<b>Load Restoration Strategy for Transmission Systems Considering the Time-dependent Cold Load Pickup</b>	3542
	<i>Jiang Ding,Lei Sun,Ming Ding,Lu Liu</i>	
0624-827	<b>The Collision Efficiency Between the Charging Droplets and Charging Aerosol Particles Considering the Image Force</b>	3547
	<i>Yuxin Lu,Haoqin Zhang,Yong Yang,Chuan Li</i>	
0625-829	<b>Wire/Cable Connection Method for ECSO Design Introduction and Estimation and Verification Software for Estimating Introduction Benefit</b>	3552
	<i>Daigo Yonetsu,Takeshi Yano,Kazuhisa Kameyama,Yoshifumi Higashikawa,Kazuhiko Masuo</i>	
0626-830	<b>Equivalent Ratio of Primary Frequency Regulation Resources Considering Multi-aspects of Frequency Profile</b>	3558
	<i>Hanxiang Wang,Ying Wang,Kaifeng Zhang</i>	
0627-832	<b>Influence Factors of Acoustic Fingerprint Detection of M-Type On-Load Tap Changer</b>	3564
	<i>Jiangang Bi,Yuan Xu,Yufeng Chen,Jinpeng Jiang, Jiabin Zhou,Fei Du,Jinchao Du</i>	
0628-833	<b>Study on Partial Discharge Information Entropy Characteristics in Oil-paper Insulation</b>	3569
	<i>Shuqi Li,Jingjing Yang,Qingquan Li,Ping Ju</i>	
0629-834	<b>Analysis on the Potential Supply And Demand of Flexible Resources in a Certain Regional System in China Under the Dual-Carbon Target</b>	3575
	<i>Fubo Cui,Jing Zhang,Yuou Hu,Linyan Wang</i>	
0630-835	<b>The Impact of Series Compensation Capacitor on the LCC-HVDC System Stability</b>	3583
	<i>Shuying Yang,Xiong Du,Bo Zhang</i>	
0631-836	<b>Demand Side Optimization of Integrated Energy System Based on Two-level Energy Station</b>	3589
	<i>Yang Yan,Dexin Meng,Kang Qian,Dongsheng Zhu,Jian Yuan</i>	
0632-837	<b>Anti-interference Method for Measuring Radiated Electromagnetic Waves of Circuit Breaker</b>	3595
	<i>Yanfei Su,Zhuoyan Chen,Bobo Zhan,Xin Liu,Wei Wang</i>	

0633-838	<b>Influence of Water Blocking Tape Parameters on the Electric Field Distribution of the High Voltage Cable Buffer Layer</b>	3600
	<i>Wenbo Zhu, Yanting Cheng, Jiasheng Huang, Baojun Hui, Shuai Hou, Bin Feng</i>	
0634-839	<b>Impedance Analysis of Buffer Layer of High Voltage XLPE Cables</b>	3604
	<i>Baojun Hui, Peng Zhao, Jiasheng Huang, Wenbo Zhu, Shuai Hou, Yifan Zhang</i>	
0635-840	<b>Few-shot Electric Equipment Classification via Mutual Learning of Transfer-learning Model</b>	3608
	<i>Bojun Zhou, Xinsong Zhang, Jiahao Zhao, Fengshen Zhao, Chunkai Yan, Yiming Xu, Juping Gu</i>	
0636-841	<b>A Modulation Scheme to Suppress Common-Mode Voltage of Four-Level Dual Inverter</b>	3613
	<i>Chuanhao Liu, Jiaxing Lei, Wei Hua, Hongyu Zhang, Yanna Xi, Shu Wang</i>	
0637-842	<b>Research on Topology Design and Configuration Optimization of Hybrid Energy Storage System</b>	3620
	<i>Zhicheng Wu, Junjie Zhu, Xingfa Sun, Yi Han, Jin Xu, Jingxin Yuan</i>	
0639-844	<b>Solution and Analysis of the Electromagnetic Scattering Field of the Substation Under the Radiation Of The 5g Base Station Antenna</b>	3631
	<i>Daokun Qi, Can Zhang, Xingfa Liu, Bo Tang</i>	
0640-845	<b>Optimal scheduling method for wind power-captive power plants</b>	3637
	<i>Haijun Liu, Chaochun Luo, Jingjie Huang, Hongming Yang, Jie Tang, Ting Leng</i>	
0641-847	<b>Simultaneous Detection of H<sub>2</sub>S and CO Based on Cantilever Enhanced Photoacoustic Spectroscopy</b>	3643
	<i>Jianping Liao, Meng Gao, Xiang Peng, Jinyu Pu, Zhifeng Liu, Chuanhui Cheng</i>	
0642-848	<b>Research on Influencing Factors and Changes of DC Current After Commutation Failure</b>	3649
	<i>Yue Wang, Tian Chen, Jun Wen</i>	
0643-849	<b>Research on Fault Detection and Location Method of Avionic Data Bus</b>	3654
	<i>WeiJia Chen, Li Wang, Shanshui Yang, Hongzhen Chen</i>	
0644-850	<b>Game Analysis of Multi-energy Market Considering Integrated Energy Suppliers with Wind Power</b>	3660
	<i>Bingnan Wu, Xian Wang, Shaohua Zhang</i>	

0646-852	<b>Research on Efficiency Optimization for the Induction Motor by Pole Changing Techniques</b>	3672
	<i>Xianzhen Sun, Tao Lei, Rongkang Zhao, Zicheng Liu</i>	
0647-853	<b>Stochastic Dynamic Programming based Energy Management of a Residential Cogeneration System</b>	3678
	<i>Xianlian Wang, Yisong Zhang, Zhigang Su, Li Sun</i>	
0648-855	<b>Research on Loss and Thermal Reliability for Neutral Point Clamped Three-level SVG</b>	3684
	<i>Shule Hou, Quan Chen, Jun Tao, Baoshun Yang, Quanjing Zhu</i>	
0649-856	<b>Comparative Study of Performance of High-Speed PM Machine with Different Materials</b>	3689
	<i>Hongli Xu, Yuntao Hua, Chen Wang, Zhuoran Zhang</i>	
0650-857	<b>A DC Leakage Current Detection Method Based on Proportional-Integral-Multimode Resonance Control</b>	3694
	<i>Mingming Shi, Huiyu Mui, Juntao Fei, Xuefeng Ge, Xiaolong Xiao, Fan Wu, Yi Pan</i>	
0651-858	<b>Losses Calculation in Distribution Networks Considering the Influence of Power Quality</b>	3700
	<i>Jiandong Duan, Fei Wang, Wenqiang Song, Shuai Fang</i>	
0652-859	<b>Fault Modeling and Traceability of Power Grid Dispatching Control System based on Data-driven method</b>	3706
	<i>Zhou Hang, Hu Xiaotong, Zhu Hongqin</i>	
0653-860	<b>Effect of Silicone Grease Coating on Space Charge Characteristics of XLPE/SIR Interface</b>	3712
	<i>Quanxu Jiang, Bonan Cui, Xia Wang, Kai Wu</i>	
0654-861	<b>Multi-Time Step Distribution System Recovery Method Based on Fault Information Acquisition After Natural Disasters</b>	3716
	<i>Sijia Tang, Chen Chen</i>	
0655-862	<b>A Type of Electric Spring Topology Based on a Kind of Modular Multilevel Converter</b>	3722
	<i>Yue Chen, Qingsong Wang, Fujin Deng, Ming Cheng, Giuseppe Buja</i>	
0656-863	<b>Offshore Wind Turbine Condition Assessment Method Based on GRU and Improved Fuzzy Comprehensive Evaluation</b>	3728
	<i>Zihao Zhou, Zhixin Fu, Junpeng Zhu, Yue Yuan</i>	
0657-864	<b>Influence of Phase Angle for Low-order Harmonics on Vibration of an Induction Traction Motor</b>	3736
	<i>Yangbo Kou, Fei Xiong</i>	

- 0658-865 **Adaptive Step-Size Relaxed Alternating Direction Method of Multipliers for Coordination Combined Cooling, Heating and Power Systems** 3741  
*Chang Yang,Zhengshuo Li*
- 0659-866 **A Novel Dual-layer Variable Flux Memory Machine with Asymmetric-PM Design** 3747  
*Wei Liu,Hui Yang,Heyun Lin*
- 0660-868 **Study on the Influence of Rotor Eccentricity on the Characteristics of Hybrid Stator Pole Bearingless Switched Reluctance Motor** 3753  
*Zhenyao Xu,Zhuhua Zhou,Hao Wang,Huijun Wang,Tiehang Yi,Zhizhua Zhang*
- 0661-870 **Optimal Configuration of Distributed Synchronous Condenser For High-Proportion Renewable Sending End Power Grid** 3759  
*Weitong Tian,Yujiang Li,Jinlin Gong,Ping Chen,Huadong Wei,Weidong Xu*
- 0662-871 **Study on Electrical Treeing Characteristics of ERIP under High Temperature with Combined AC-Positive DC Voltage** 3765  
*Gaoyi Shang,Yuhang Shao,Ming Chen,Xuandong Liu,*
- 0663-872 **Cantilever Enhanced PA Spectroscopy Detection for CO Decomposition in SF6 Equipment** 3769  
*Dibo Wang,Jianpin Liao,Ran Zhuo,Zhifeng Liu,Zhifeng Liu,Yongye Xu*
- 0664-873 **Research on Control Parameter Setting Method of AC Excitation System of Variable Speed Pumped Storage Unit** 3775  
*Yian Yan,Tao Wu,Huan Xie,Shanying Li,Miao Liu,Lili Liu,Chuan Qin*
- 0665-874 **Fast Estimation of Power Grid Operation State Based on Multi-source Data** 3781  
*Zhen Yuan,Junnan Chen,Minghui Yan,Xiaotong Xu*
- 0666-875 **A Stochastic Security-Constrained Unit Commitment Model Considering Uncertain Dynamic Capacity-Increase of Transmission Lines** 3787  
*Taishan Xu,Mengfu Tu,Yantao Zhang,Hongji Zhang,Ouzhu Han,Tao Ding*
- 0667-878 **Partial Discharge Decomposition Characteristics of C<sub>4</sub>F<sub>7</sub>N/CO<sub>2</sub> Gas Mixture at Different Reaction Temperature** 3793  
*Dianjie Tong,Qiulin Zhao,Shaoli Zhang,Cong Wang,Renjie Cao,Youping Tu,Zhong Zheng*
- 0668-879 **Study on Influence of Magnetic Properties of Ultrathin Unoriented Silicon Steel Sheet in Service** 3798  
*Ye Rong,Baozhi Liu,Guanglong Wang,Qingyi Kong,Zhendong Sun,Yanxia Li*
- 0669-880 **Two-stage Stochastic Unit Commitment for Systems With Renewable Energy Considering Demand-Side Resources and Carbon Emission Permits** 3806  
*Taishan Xu,Mengfu Tu,Yantao Zhang,Chang Ju,Ming Qu,Tao Ding*
- 0670-881 **An Energy Storage Test Power Supply Based on Fuzzy Quasi Proportional Resonance Control** 3813  
*Zhen Hao,Guangwei Liu,Xinsheng Ma,Danguo Xu,Wenzhe Zhang,Chengyang Yan,Lijun Wang*

0671-882	<b>Current Predictive Control Strategy of T-Type Grid-Tied Inverter Based on Sliding Mode Observer</b>	3818
	<i>Jie Wu, Wuchuang Fan, Dongren Dai, Mo Chen</i>	
0672-883	<b>Research on Power Smoothing Control Method of Impulse Load</b>	3823
	<i>Xiangqian Tong, Jun Yin, Ru Liang, Ye Cheng</i>	
0673-884	<b>Analysis of Transformer Audible Noise Based on Redundant Convolutional Encoder Decoder</b>	3828
	<i>Zhenzong Liang, Jingsong Li, Yushuai Qi, Linyu Li, Guofeng Li, Nianfeng Zheng, Zhongqing Wang</i>	
0674-885	<b>Comprehensive Evaluation for Combined Power Generation System of Wind-Photovoltaic and Hybrid Storage</b>	3834
	<i>Fang Ni, Chen Yuzhe, Wu Feng, Li Yang, Huang Weidong</i>	
0675-886	<b>Single Line-to-Ground Fault Section Location Method Based on the Phase Angle Difference of Measurement Admittances</b>	3840
	<i>Xuhui Wen, Guibin Zou, Chenghan Zhou, Lindong Zang, Qian Lin, Zitao Xu</i>	
0676-887	<b>A parametric modeling method for planar coil design in wireless power transfer</b>	3846
	<i>Jing Xiao, Liqun Yin, Haonan Xie, Renhao Huang, Dongdong Zhang, Thomas Wu</i>	
0677-888	<b>Research on Location Planning of Integrated Service Station of Integrated Energy System</b>	3852
	<i>Yongsheng He, Qian Zhou, Haoyu Wang, Yongchao Liu, Haibo Li, Keteng Jiang, Junhao Hou</i>	
0678-889	<b>A Three-Step Power Distribution Strategy for Microgrid Hybrid Energy Storage System Based on High-Order Sliding Mode Control</b>	3858
	<i>Jiangcheng Li, Hang Li, Feifei Bu</i>	
0679-890	<b>Fault Phase Selection Based on the Angle of Neutral Point Voltage for Asymmetric Distribution Network</b>	3863
	<i>Xuhui Wen, Guibin Zou, Chenghan Zhou, Lindong Zang, Qian Lin, Zitao Xu</i>	
0680-891	<b>A platform for investigating pulsed vacuum arc in micro-cathodic arc thruster</b>	3868
	<i>Zhi Wang, Ruoyu Han, Jinyue Geng</i>	
0681-892	<b>Research on Voltage Coordinated Control Strategy of Multi-port Energy Router</b>	3872
	<i>Pingkang Zheng, Tao Cai, Caihong Zhao, Qing Duan</i>	
0682-893	<b>Reconstruction of Model and Analysis of Electrical Machine Based on High-Strength Silicon Steel at Burst-Speed</b>	3880
	<i>Yulin Li, Anqi Wang, Hang Zhang, Ruilin Pei</i>	
0683-895	<b>Ablation of Aluminum Foil by Strong Pulsed Optical Radiation of Metallic Plasma Jet</b>	3886
	<i>Yuchen Cao, Ruoyu Han, Wei Yuan, Chen Li, Weibo Yao, Yongmin Zhang</i>	

0684-898	<b>The Pulsed Discharge within Bubbles in Dynamic PEF Treatment Chamber under Repetitive Pulses</b>	3890
	<i>Zhipeng Zhu,Guiquan Peng,Ruobing Zhang</i>	
0685-900	<b>Single Switch High Gain Boost-Cuk Integrated Converter</b>	3895
	<i>Zhenhai Yu,Xuefeng Hu,Bo Wen,Qiao Zhang</i>	
0686-901	<b>An Integrated Distribution Grid Protection System Using 5G URLLC</b>	3901
	<i>Arshad Iqbal,Wei Chen</i>	
0687-902	<b>Discussed of the Operation Range, Wave Compensation and Working Mode of Generalized Electric Spring</b>	3909
	<i>Xiaohu Wang,Yubin Duan,Yi Wei,Xinyuan Chen,Chaohui Zhao</i>	
0688-903	<b>Investigation on SiC MOSFET's Avalanche and Short-Circuit Failure Mechanism</b>	3916
	<i>Xianlong Zhao,Yifan Wu,Chi Li,Zedong Zheng,Tao Li,Xiaobin Liang</i>	
0689-904	<b>Bus Load Forecasting Method Based on DWT-SSA-Bi-LSTM Neural Network</b>	3922
	<i>Yicong Chen,Dahai Zhang,Yiru Shi,Kai Sun</i>	
0690-905	<b>A Unified Direct Control Strategy for MMC Based on Multi-terminal Flexible Interconnection System</b>	3928
	<i>Yuanyuan Wang,Chuyang Wang,Zhenyu Yang</i>	
0691-908	<b>Research on the Low Voltage Fault of Doubly-fed Variable Speed Pumped Storage</b>	3934
	<i>Yu Zhang,Jiahong Liu,Yutian Sun,Jinming Hu</i>	
0693-911	<b>Comparison of EMF Exposure Limits and Assessment for Electric Vehicle Wireless Power Transfer</b>	3944
	<i>Ni Li,Yanzhao Wang,Jiangong Zhang,Zheyuan Gan</i>	
0694-912	<b>Data Driven Assessment Algorithm of Wind Farm AGC System</b>	3949
	<i>Yangfan Zhang,Weixin Yang,Yu Wang,Jiaming Li,Zongxiang Lu,Ying Qiao</i>	
0696-914	<b>Digital Control Method of Synchronous Rectification for Bidirectional CLLLC Converter</b>	3960
	<i>Hao Xie,Lijun Hang,Zhimin Dan,Yuanbin He,Jingfei Gao</i>	
0697-915	<b>Open-Switch Fault Analysis and Detection Based on FCS-MPC for NPC Three-Level Grid-Tied Inverters</b>	3968
	<i>Nan Jin,Dongren Dai,Wuchuang Fan,Jie Wu</i>	
0698-916	<b>Thermal Field Study of Induction Rotary Transformer Based on Electric-thermal Coupling Theory</b>	3973
	<i>Hui Zhong,Yuheng Zuo</i>	



0699-918	<b>Research on Bus Voltage of Dual PWM Frequency Conversion System Based on Model Predictive Control</b>	3978
	<i>Shuo Han, Yongjun Zhang, Xiong Xiao, Haocheng Wang, Guoming Sung</i>	
0700-919	<b>AC Copper Loss Analytic Modle Considering for Multiple Hairpin Winding Configurations</b>	3984
	<i>Lei Chen, Weishi Cai, Tanci Chen, Feng Chai</i>	
0701-921	<b>Impact of Control Mode on Small-Signal Stability of Hybrid Cascaded UHVDC System</b>	3990
	<i>Yonejie He, Wang Xiang, Jinyu Wen, Jiapei Zhou, Chang Lin, Jingbo Zhao</i>	
0702-922	<b>Roubust <math>H^\infty</math> position servo control for PMSM</b>	3996
	<i>Ziyue Zhang, Zheng Wang</i>	
0703-923	<b>A Switched Tank Converter Integrated Buck-boost Converter with Partial Energy Transfer for Data Center Applications</b>	4001
	<i>Wei Li, Minglong Wang, Shangzhi Pan, Xiaoming Zha</i>	
0704-924	<b>Whole-system Potential and Benefit of Energy Storage by Vehicle-to-grid (V2G) under Carbon Neutrality Target in China</b>	4006
	<i>Yifan Wei, Kang Pang, Yudi Qin, Haiyan Huang, Xuebing Han, Languang Lu, Minggao Ouyang</i>	
0705-925	<b>Passivity-Based Instability Analysis and Suppression Method for Traction Network-Electric Train Interaction System</b>	4013
	<i>Dan Liu, Xinglai Ge, Chunxu Lin, Yuelei Zheng, Huiming Wang, Kexin Wang</i>	
0706-926	<b>Study on the Immersion Oil Cooling Method of Power Module</b>	4020
	<i>Fengtao Yang, Chaohui Liu, Tianyu Wu, Guidong Xiu, Jinliang Shen, Liman Xiong</i>	
0707-927	<b>Intraday Rolling Optimization of Flexible Interconnected Distribution Network Based on Adaptive Dynamic Update Strategy</b>	4026
	<i>Fei Dou, Hui Cai, Wenwen Wan, Xin Gao, Le Ge</i>	
0709-929	<b>Fault Diagnosis for Transformer Rectifier Unit on More-Electric Aircraft</b>	4039
	<i>Yi Xiang, Fei Liu, Zhaodi Li</i>	
0710-930	<b>Study of the Interfacial Electrical Tree Growth Characteristics under AC and DC Voltages</b>	4045
	<i>Yani Wang, Shuai Zhang, Pinshun Ren, Xingwu Yang, Chun Liu</i>	
0711-931	<b>Optimal-Parameters-Based Model Predictive Position Control of Planar Switched Reluctance Motors</b>	4050
	<i>Kang Qi, Su-Dan Huang, Guang-Zhong Cao, Chao Wu</i>	

0712-932	<b>Inductor Multiplexing Equalization Circuit with Fuzzy Controller for Lithium Battery Equalization</b>	4056
	<i>Aote Yuan,Tao Cai,Jia Xie</i>	
0713-933	<b>Delayed Complementation Control for Wind Turbines Participating in Primary Frequency Regulation</b>	4061
	<i>Yang Li,Zaiyu Chen,Qun Li,Minghui Yin,Yun Zou</i>	
0714-934	<b>A Forecasting Method for EV Charging Demand Considering Refined Division of Functional Areas</b>	4067
	<i>Li Cui,Hongquan Qu,Peiyuan Ju,Le Ge,Mingshen Wang</i>	
0715-935	<b>Study on Impulse Aging Characteristics of ZnO Var-Istor Based on equivalent Repeated Charge Transfer Capability</b>	4073
	<i>Jie Zhang,Yongxia Han,Licheng Li,Junwen Deng,Gang Liu</i>	
0716-936	<b>Charged Droplet Population Concentration Calculated by Equivalent Surface Tension</b>	4079
	<i>Ruohan Wu,Haoqin Zhang,Yong Yang,Chuan Li</i>	
0717-938	<b>An Electric Vehicle Cluster Model Considering Multiple Uncertainties and Response Costs</b>	4084
	<i>Mingshen Wang,Xiaodong Yuan,Wenfei Yi,Lei Gao,Zheng Zhang,Li Cui</i>	
0718-939	<b>An Coupling Vibration Suppression Method Based SDDC for PMSM Traction Drive System</b>	4090
	<i>Shuaishuai Wang,Yun Zuo,Huimin Wang,Xinglai Ge</i>	
0719-941	<b>Analysis and Design of Wireless Power and Information Synchronous Transmission System with Shared Coupling Channel</b>	4096
	<i>Yali Yang,Kai Ji,Bangyin Liu</i>	
0720-942	<b>Real-time Simulation of PMSG Based on FPGA</b>	4102
	<i>Yibo Shi,Chongru Liu</i>	
0721-944	<b>Coordinated Frequency Control of Interconnected Two-Area Power System With Electric Vehicle Aggregator</b>	4108
	<i>Mingshen Wang,Yi Yang,Fei Luo,Chenqing Wang,Haibin Wang,Li Cui</i>	
0723-947	<b>Power System Operation Mode Generalization and Stability Control Strategy Modification Based on Data-Driven Method</b>	4119
	<i>Huling Yuan,Panpan Liu,Wei Tai</i>	
0724-949	<b>Research on Multi-objective Configuration of Wind and Solar Storage Based on Cascade Utilization of Retired Batteries</b>	4125
	<i>Chenhong Zheng,Mengzhe Liu,Minquan Ye,Shiming Zhang</i>	

0725-950	<b>Research on Batch Non-Intrusive Fault Detection Method for Fractional Frequency Transmission System</b>	4131
	<i>Jing Wu, Chenchen Li, Zhibin Ye, Yuchao Shi, Lianhui Ning, Guofeng Xu</i>	
0726-952	<b>Robustness Investigation of Grid-Connected Inverter in Weak Grid and Optimization Based on an Improved Grid Voltage Feedforward Path</b>	4137
	<i>Huili Zhang, Tianzhi Fang</i>	
0727-953	<b>Adhesion Control of Bogie-Controlled Inner-city Trains</b>	4143
	<i>Song Wang, Zhen Shen, Jingchun Huang</i>	
0728-954	<b>Design and Simulation of Distributed Fuel Cell Cogeneration System Under Different Conditions</b>	4149
	<i>Shuozi Niu, Kaicheng Liu, Guixiong He, Lei Chen</i>	
0729-955	<b>Analysis of Excitation Magnetic Field of Air-cored Superconducting Linear Synchronous Motor for EDS Train</b>	4155
	<i>Qingwen Ge, Baoqun Kou, Lu Zhang, Yanqing Zhang, Zihua Zhang, Xiufang Du</i>	
0730-956	<b>Research on Plasma Biomass Straw Liquefaction Plant and Its Application</b>	4160
	<i>Jinmao Li, Chunlian Song, Dandan Lu, Yike Zhang</i>	
0731-957	<b>Joint Forecasting of Regional Wind and Solar Power Based on Attention Nerual Network</b>	4165
	<i>Yongrui Zhang, Jie Yan, Shuang Han, Yongqian Liu, Zongpeng Song</i>	
0732-958	<b>Construction of Distribution Network Topology Identification Model Based on Voltage Correlation Coefficient</b>	4170
	<i>Yushan Zhou, Yuan Gu, Xiao Zhang, Ye Lu, Hailong Gao, Lucheng Hong</i>	
0733-960	<b>Optimal Stepwise Inertial Control of Wind Turbine Based on Fuzzy Control and Deep Neural Network</b>	4176
	<i>Tao Zhou, Yalun Wang, Yan Xu</i>	
0734-961	<b>An Adaptive Electric Power Management System for the Transmission Line Intelligent Gateway</b>	4184
	<i>Chong Wang, Xinhui Zhong, Ziqi Zhou, Zengyang Liu, Yudi Zhou</i>	
0735-962	<b>Research on Energy Management Method and Simulation of Hybrid Propulsion VTOL UAV</b>	4190
	<i>Rongchao Ren, Jingbo Wei, Haoze Wang, Kun Liu, Zijie Qin, Mingzhi Cao</i>	
0736-963	<b>Urban Rail Transit Stray Current on 500kV Transformers Along the Line Test Analysis of Dc Magnetic Bias Effect</b>	4198
	<i>Hua Huang, Lu Chen, Tianyi Wu, Chenzhao Fu</i>	
0737-964	<b>Diffusion Motion Analysis of gas Molecules in Oil - paper Insulation System Based on Molecular Dynamics Simulation</b>	4205
	<i>Zhongyu Zhao, Guan Wang, Zihao Li, Hang Geng</i>	

0738-965	<b>A particular Solution of Cylindrical Rarefied Plasma Systems</b> <i>Ming Lam,Zhibo Yuan</i>	4211
0739-966	<b>Electromagnetic Interference of Shared Tower 5G Base Station Antennas on Micro-meteorological Online Monitoring Equipment</b> <i>Daokun Qi,Chanyuan Liu,Xingfa Liu,Bo Tang</i>	4214
0740-967	<b>Optimal Configuration for Battery Energy Storage System Assisting Thermal Unit in Primary Frequency Regulation: A Practical Application</b> <i>Hengjie Li,Yongjun Feng,Yang Du,Xingwang Chen,Zhongguang Yang,Yipu Li,Donghan Feng,Yun Zhou</i>	4220
0741-968	<b>Dispatch Potential Evaluation of Generalized Electric Vehicle Charging Stations Based on Traffic Flow</b> <i>Zhao Liu,Xiaojun Wang,Chun Xiao,Yuqing Liu,Xihao Wang,Yao Li,Qingwen Han</i>	4226
0742-969	<b>Design and Analysis of a Tubular Flux-Switching Permanent Magnet Linear Motor for Aviation Actuator</b> <i>Qixuan Shu,Lihua Zhou,Ruiwu Cao</i>	4232
0743-970	<b>Study on Temperature Parameter Characteristics of Needle-Plate Air Discharge Plasma</b> <i>Shuai Yang,Ziheng Yu,Huan Chen,Chuan Li,Yong Yang</i>	4238
0744-973	<b>Studies on Loss of a Motor Stator Iron Core with High Silicon Electrical Steel Considering Temperature and Compressive Stress Factors</b> <i>Deji Ma,Jianwei Li,Baozhi Tian,Hang Zhang,Meng Li,Ruilin Pei</i>	4243
0745-974	<b>State Estimation of CRH2-High-Speed-Train Traction Motor and its Implementation on Hardware Platform</b> <i>Song Wang,Hanchen Zhou,Jingchun Huang</i>	4249
0746-975	<b>Effect of Functional Group Introduction on the Trap Energy Level Distribution of SiR</b> <i>Yani Wang,Pinshun Ren,Shuai Zhang,Xingwu Yang,Chun Liu,Yalin Wang</i>	4255
0747-979	<b>Investigation on the Dual-frequency Fluctuation Suppression of Inductor Current in a Single-phase Single-stage Current-Source Inverter</b> <i>Anna Yang,Xuezhi Wu,Jingjing Qi,Wenzheng Xu,Liya Xiao,Xin Fang</i>	4260
0748-980	<b>A New Start-up Method for Dual Active Bridge Power Converters</b> <i>Xiaozhe Liu,Minghao Han,Donglei Liu,Zhen Li,Zheng Dong,Zhenbin Zhang</i>	4266
0749-982	<b>Economic Analysis of Energy Storage Peak Shaving Considering Full Life Cycle Cost</b> <i>Junhui Li,Chenyu An,Jingxiang Zhang,Cuiping Li,Haiji Zhao,Jun Yu,Xuezhu Jin,Kaiyuan Hou,Fei Xu</i>	4271

0750-984	<b>Optimal Scheduling Method of Wind Power-photovoltaic-photothermal Integrated Energy System with Flexibility in Mind</b>	4277
	<i>Zhicheng Ma, Sixian Liu, Jinping Zhang, Haiying Dong</i>	
0751-985	<b>Research on Measuring Method of Power Frequency Superimposed Impulse Voltage</b>	4283
	<i>Kangmin Hu, Zhaozhi Long, Wenting Li, Jiawei Fan, Kunxiong Liu, Shaobo Liu, Feng Zhou</i>	
0752-986	<b>Influence of Gate Resistance on Crosstalk of SiC MOSFETs</b>	4287
	<i>Hao Xu, Yumeng Cai, Peng Sun, Zhibin Zhao</i>	
0753-991	<b>The Deterioration Mechanism of The Mechanical and Electrical Properties of Insulating Cardboard Under Mechanical Force</b>	4293
	<i>Zihao Li, Guan Wang, Zhongyu Zhao, Xu Jiang</i>	
0754-992	<b>State Estimation of AC/DC Distribution Network Based on Pseudo Measurement Modeling of Load Distribution Coefficient</b>	4298
	<i>Yuliang Cao, Oyunbaatar Bayartsog, Guoqiang Sun</i>	
0755-993	<b>Wideband Circuit Modeling of a Adjustable VFTO Simulator Considering Frequency-Dependent Characteristics</b>	4304
	<i>Kejie Li, Jun Zhao</i>	
0756-994	<b>Research on Multi-stage Constant Current Charging Method Based on Particle Swarm Optimization Algorithm</b>	4308
	<i>Changzhou Yu, Siqi Huang, Kang Rong, Jiale Yan, Long Shen, Meimei Sun</i>	
0757-995	<b>Rolling Optimization of Wind Power and Pumped Hydro Storage System based on W-IGDT</b>	4314
	<i>Mingkang He, Binrui Cao, Wenwen He, Xiaofei Li, Xiong Wu,</i>	
0758-996	<b>Research on a New Type of Grid Reactive Power Control Strategy Based on Multi-Station Integration</b>	4320
	<i>Jianxiang Huang, Jinyun Yu, Tuteng Chen, Feng Xu</i>	
0759-1000	<b>Effective Carbon Tax Learning via Cap and Trade</b>	4326
	<i>Jinhao Liang, Wenqian Jiang, Chenye Wu</i>	
0760-1001	<b>Comparative Analysis of PIV-Based and Model-Based Methods in Calculating Electrical Force Produced by a Blade-Plane Actuator</b>	4332
	<i>Zelu Yan, Christophe Louste, Philippe Traoré, Jian-An Fang, Weizong Wu, Jinlin Lin</i>	
0761-1004	<b>High-current Arc Test and Characteristic Research in Converter Transformer</b>	4337
	<i>Jun Deng, Zhicheng Xie, Zhicheng Pan</i>	
0762-1005	<b>Research on New Design and Analysis of Stator Tooth Splicing Structure Using Anisotropic Electrical Steel in an Electric Machine</b>	4341
	<i>Anrui Hu, Xiangjian Zhang, Lei Wang, Hang Zhang, Shibo Xu, Ruilin Pei</i>	

0763-1006	<b>Transmission and Energy Storage Expansion Planning against Extreme Event</b> <i>Yang Yuan,Heng Zhang,Haozhong Cheng,Jianping Zhang,Zheng Wang</i>	4347
0764-1007	<b>Rapid Treatment with Pulsed Gliding Arc Plasma in Ambient Air to Increase the Hydrophobicity of Silicone Rubber for Electrical Insulators</b> <i>Bangdou Huang,Jianben Liu,Yan Liu, Jiachuan Yu, Cheng Zhang, Tao Shao</i>	4353
0765-1008	<b>Proximal-Policy-Optimization-based Intra-day Scheduling of Hydrogen Fueling Station</b> <i>Binrui Cao,Xiong Wu,Mingkang He,Shengyao Chen,Xiaofei Li,Wenwen He</i>	4357
0766-1009	<b>An Integrated Optimization Design Method of Single-Phase PV Inverter Based on Machine Learning</b> <i>Gui-Hua Liu,Wen-Qing Qu,Xin-Yang Wang,Wei Wang</i>	4363
0767-1010	<b>Fabrication and Performance Analysis of TiN/W Superlattice Electrodes for Low-power Phase Change Memory</b> <i>Xinyuan Xu,Jie Liu,Pu Tang,Jing Xiao,Ming Tao</i>	4369
0768-1011	<b>Research on Lightning Protection of VMIP <math>\pm 350</math>kV Transmission Line</b> <i>Liuchun Zhang,Yu Yin,Weidong Shi,Tiantian Lu,Peng Kang</i>	4375
0769-1012	<b>Analysis of the Method of Reducing the Induced Voltage and Current of Ground Wire</b> <i>Lingzi Zhou,Zhenpeng Tang,Xiaojin Liu,Weiling Ye,Yupu Sun,Fanghui Yin,Liming Wang</i>	4379
0770-1014	<b>Electromagnetic Performance Analysis of a Flux Reversal Permanent Magnet Linear Machine</b> <i>Jilong Zhao,Qingfeng Han,Zhuolin Lu,Lixuan Wang,Lei Wang</i>	4383
0771-1016	<b>A Linearized Battery Degradation Model Based on NN for V2G Coordination Programming</b> <i>Haoming Gao,Yirong Guo,Yifan Wei,Chaojie Xu,Languang Lu,Minggao Ouyang,Xuebing Han</i>	4387
0772-1018	<b>A Simple Calculation Method for Lightning Stroke Flashover Rate of 10 kV Distribution Overhead Lines</b> <i>Ting Lei,Haibin Shen,Xia Zhao,Tiantian Lu</i>	4394
0773-1020	<b>Key Technologies of Structrue Design of 385m Super-high Long-span Transmission Tower</b> <i>Buhui Li,Zuomin Wang,Qingsong Tao,Liang Yu,Haibo Long</i>	4398
0774-1021	<b>Predictive Control Strategy of Power Electronic Traction Transformer for Fault Tolerance Condition</b> <i>Nan Zhao,Zedong Zheng,Yongdong Li</i>	4403
0775-1023	<b>Coordinated Control Strategy for Black Start of Wind Farm Assisted by Energy Storage System</b> <i>Zhihao Tian,Shibin Bai,Yuping Zhang,Yunyun Xie,Fusuo Liu,Jianliang Gao</i>	4409

0776-1024	<b>Design of Fast Charging Magnetic Circuit Structure for AGV Wireless Charging</b> <i>Yang Lu, Chen Yang Xia, Ang Cheng Li</i>	4415
0777-1026	<b>Transient Voltage Stability Assessment Based on an Improved TCN-BiLSTM Framework</b> <i>Yucheng Chen, Haipeng Xie</i>	4420
0778-1027	<b>A TMR based Current Measurement Sensor for HVDC Transmission System</b> <i>Fan Yang, Chong Xu, Bangda Wei, Bangyan Wang, Youwen Zhang</i>	4427
0779-1028	<b>Calculation of Iron Loss with Multi-Physics Coupling for High-Speed Axial-Flux Motor Using Ultra-Thin Electrical Steel Considering Bending Stress</b> <i>Jianwei Li, Deji Ma, Hang Zhang, Meng Li, Baozhi Tian, Ruilin Pei</i>	4436
0780-1029	<b>Design Considerations and Validation of Three Compensation Approaches to Deal With Problem of Phase Difference for Grid-Connected Current Source Inverter</b> <i>Guobin Wang, Rongliang Shi, Caihua Lan</i>	4442
0781-1030	<b>An Economic study of Power Secondary Frequency Regulation with Different Energy Storage Systems</b> <i>Guiyuan Xue, Chen Wu, Zekai Xu, Zhao Liu</i>	4448
0782-1031	<b>A WPT Study of Mixed Resonance Stabilized Output Power</b> <i>Han Xu, Yunhu Yang, Dazhaung Liang, Ruofei Hong, Xuefeng Hu</i>	4455
0783-1032	<b>Introducing Fractional-order Controller to Load Frequency Control with Battery Energy Storage Considering Frequency Regulation Cost</b> <i>Jiansheng Wu, Leijun Xiang, Liaoyuan Lin</i>	4461
0784-1033	<b>Effects of Armature Material and Armature-coil Distance on the Performance of Electromagnetic Reconnection Launcher</b> <i>Jun Qiu, Shengyi Song, Minfu Liao, Rufan Wang, Dequan Wang, Xingjian Zhou</i>	4467
0785-1034	<b>Optimization Analysis of 220kV Substation Grounding Network Based on CDEGS</b> <i>Caiquan Wen, Jiexiong Quan, Xianning Li, Hanliang Lin, Hongshun Liu, Zhiyuan Zhang, Xiaohui Zhu</i>	4472
0786-1036	<b>Generation Potential and Economy Analysis of Green Hydrogen in China</b> <i>Jiawei Wu, Jinyu Xiao, Jinming Hou, Jinxuan Zhang, Chen Jin, Ruoyu Han</i>	4477
0788-1039	<b>Radiation Emission Characteristics of Alternating Current Arc Discharges with Live Working Robot</b> <i>Xingfa Liu, Yifeng Li</i>	4487
0789-1040	<b>Comparative Synthetic Inertia Assessment Between Droop And Virtual Synchronous Generator Control For Weak Grids Integration</b> <i>Minyang Wang, Ke Meng, Liang Yuan, Zheng Liang</i>	4493

0790-1042	<b>Analytical Optimization of Surface-Inserted Machines With Double-Layer Halbach Magnets</b>	4499
	<i>Youyuan Ni,Junxia Du,Liang Zhang</i>	
0791-1043	<b>Learning the Marginal Fuel Type for Effective Carbon Reduction</b>	4504
	<i>Songpeng Cao,Chenye Wu</i>	
0793-1045	<b>Torque Ripple Suppression-Based Fault-Tolerant Model Predictive Current Control of Five-Phase PMSM Drives with Open-Circuit Faults</b>	4515
	<i>Jiachen Du,Liyan Luo,Wentao Huang</i>	
0794-1046	<b>Insulation Repair of Flashover Damaged Polymer Using Plasma Spraying</b>	4521
	<i>Penghao Zhang,Yilong Mao,Liang Yu,Feiyu Wu,Shoulong Dong,Chenguo Yao</i>	
0795-1047	<b>The Study of SF<sub>6</sub> Decomposition Detection by Photoacoustic Spectroscopy</b>	4525
	<i>Liming Wang,Xin Zi</i>	
0796-1048	<b>Future Demand and Innovative Development of Advanced UHV Power Transmission technology in the Scenarios of Global Energy Interconnection</b>	4530
	<i>Xiaoling Zhao,Jinyu Xiao,Yao Liu, Jiawei Wu,Zheng Xu,Zheyang Yu</i>	
0798-1050	<b>Windage Loss and Torque Ripple Reduction in Stator-permanent Magnet Flux-switching Machines</b>	4544
	<i>Zhiheng Zhang, Wei Hua, Wenfei Yu, Peixin Wang, Mingjin Hu, Gan Zhang</i>	
0799-1051	<b>Design of Optimized Gate Driver of SiC MOSFET for High-Frequency High-Power-Density CSI</b>	4549
	<i>Yinzhen Shen,Zheng Wang,Yang Xu</i>	
0800-1053	<b>Non-intrusive Load Disaggregation Method Considering State Probability Factors</b>	4555
	<i>Changhua Yin,Haixia Liu,Wenjing Li,Fei Yao</i>	
0801-1054	<b>Impact of the VSG on SSR of Turbine Generator</b>	4561
	<i>Yang Yang,Zaijun Wu</i>	
0802-1056	<b>Fault Isolation Strategy of Cascaded H-bridge Rectifier in Power Electronic Traction Transformer</b>	4565
	<i>Chengyao Ma,Lu Zhao,Enze Fan,Qiongquan Ge</i>	
0803-1058	<b>Discrete-Time Zero-Dynamic Control for 1500V Battery Three-Phase Inverter</b>	4570
	<i>Bainian Chen,Xiangjun Quan,Qinran Hu,Kai Hou,Fei Song,Junhui Wang,Tiankui Sun</i>	



0804-1059	<b>Analysis of the Influence of Transformer Harmonics Caused by DC Bias on Reactive Power Compensation Capacitor Banks</b>	4576
	<i>Ganlin Wang,Guoxin Zhang,Hongshun Liu,Dayang Yu,Qilin Wang,Long Chen</i>	
0806-1062	<b>Research on Application of a Prefabricated-cabined Energy Storage System in an Island Micro-grid</b>	4588
	<i>Xinghua Huang,Yuanliang Fan,Han Wu,Weiming Chen,Zewen Li</i>	
0807-1063	<b>Research on the Impact of Coupling Photovoltaic Power and Gas Power on Power System Operation</b>	4593
	<i>Enbo Luo,Hai Lu,Hao Zhang,Ao Li</i>	
0808-1064	<b>Reliability Analysis of Diamond-shaped Distribution Network under Large-scale Distribution generation integration Access</b>	4599
	<i>Ao Li,Zhi Wu,Mingze Zhang</i>	
0809-1066	<b>Research on the Strategy of the Fault Recovery and Emergency Repair of Distribution Network with Distributed Generation Under Extreme Conditions</b>	4605
	<i>Tianxiang Ma,Xin Duan,Yan Xu,Hui Zhang</i>	
0810-1067	<b>Robust Optimal Dispatch for Virtual Power Plant Considering Green Certificate Trading</b>	4611
	<i>Hong-Yi Zhou,Kang-Ning Yao,Jing-Jing Bai</i>	
0811-1068	<b>A Hydrogen Refueling System for Fuel Cell Electric Vehicles: Towards Low Carbon Oriented Power and Transportation Systems</b>	4617
	<i>Fang Yu,Junshi Chen,Tianyou Xie,Zhitao Zhang,Ying Yao,Yuechuan Tao</i>	
0812-1069	<b>Research on Fault-Tolerant Control of Axial Field Flux-Switching Permanent Magnet Motor under Open-Circuit Fault</b>	4623
	<i>Huayang Jin,Wei Zhang,Xiyu Liu</i>	
0813-1070	<b>Field-Circuit Coupled Modelling of Superconducting Cable for Positive and Zero Sequence Impedance Analysis</b>	4629
	<i>Huiming Zhang,Hongjie Zhang,Jianping Yang,Jian Zheng,Yongqing Zhao,Ting Jiao</i>	
0814-1071	<b>Two-stage Optimal Allocation of Generalised Energy Storage Based on Building Regulable Resources</b>	4633
	<i>Jing Meng,Meng Song,Ciwei Gao</i>	
0815-1073	<b>Differential Protection of Active Distribution Networks Based on 5G Communication Technology</b>	4639
	<i>Zhiren Liu,Jian Dai,Kai Chen,Xinrong Zhu,Jinghua Xie,Tianyu Fang</i>	
0816-1074	<b>Research and Application of Hybrid ANPC Control Strategy</b>	4645
	<i>Yuning Zhou,Yu Zhang,Pingping Du,Hua Yang</i>	

0817-1075	<b>Risk Assessment of Cyber Physical Power System considering Attack Model</b>	4650
	<i>Manli Li,Haibo Xu,Jianbing Xu,Zhao Ding,Qitao Liu,Zhaoyang Yin</i>	
0818-1078	<b>Identification Method of Photovoltaic Roofs Based on High Resolution Images</b>	4656
	<i>Peng Zhu,Xuan Yang,Kai Shen,Xia Wu,Huiliang Fan,Xin Tian</i>	
0819-1079	<b>Effect of Plasma Modification on the Dispersion of High Thermal Conductive Nano-filler</b>	4662
	<i>Wei Yang,Kun Wang,Yun Chen,Jingyi Yan,Chuansheng Zhang,Fei Kong,Tao Shao</i>	
0820-1080	<b>Virtual Energy Storage Model of District Cooling System Based on Minimum Energy Consumption</b>	4666
	<i>Lan Qin,Di Bai,Meng Song</i>	
0821-1081	<b>Cooperation of Pumped Hydro Storage and Battery Storage System Considering Mode Transformation</b>	4672
	<i>Yizhou Feng,Zhi Wu,Xin Chen,Bo Yuan</i>	
0822-1083	<b>Analysis of the Decision-Making Process of Prosumers in the Transactive Energy Market</b>	4679
	<i>Jing Xinyi,Meng Song,Ciwei Gao,Chaoliang Wang,Lei Li,Wei Liu</i>	
0823-1084	<b>Research on Performance and Application Efficiency of GaN SiC Cascode Devices</b>	4685
	<i>Yuming Zhou,Jiahui Zhou,Jinkun Chu</i>	
0824-1085	<b>Modeling and Fault Characteristics of Grid-Interfaced Converters in Active Distribution Networks</b>	4691
	<i>Zhiren Liu,Limin Yu,Jinfeng Hu,Zhen Zhu,Jinghua Xie</i>	
0825-1086	<b>Optimization Strategy of STATCOM Control Parameters Based on Digital Twin</b>	4697
	<i>Xinyuan Shi,Han Liu,Wei Liu</i>	
0826-1088	<b>A Defects Detection System for Substation Based on YOLOX</b>	4703
	<i>Yao Cui,Junjie Ye,Xin Huang,Xin Zhang,Linlin Zhong</i>	
0827-1089	<b>Hierarchical Aggregation and Scheduling Potential Analysis for Residential Flexible Loads</b>	4708
	<i>Junjun Xu,Xiang Zhang,Haijiao Liu,Tengfei Zhang</i>	
0828-1091	<b>A Coordination Control Strategy Participating in Frequency Control for VSC-HVDC and LCC-HVDC</b>	4716
	<i>Jia Li,Yongjun Xia,Wei Yao,Qingtao Han,Jinyu Wen</i>	
0829-1093	<b>Research on Optimal Power Generation Allocation Scheme of DC Transmission Line under the Guidance of Carbon Peak and Carbon Neutralization Targets</b>	4722
	<i>Jing Zhang,Qianmao Zhang,Tianfeng Xu,Yuhan Liu,Changzheng Gao</i>	
0830-1094	<b>Unstable Limit Cycle Induced by Outer Control Loops and Stability Boundary of VSC System</b>	4728
	<i>Guangzheng Xing,Lei Chen,Yong Min,Hangyin Mao</i>	

0831-1095	<b>Review of Typical Energy Storage Resources From the Perspective of Generalized Energy Storage System</b>	4733
	<i>Zitao Zhang, Meng Song, Haoming Liu, Chaoliang Wang, Lei Li, Wei Liu</i>	
0832-1097	<b>Small-Sample Interval Prediction Model based on Transfer Learning for Solar Power Prediction</b>	4739
	<i>Runhao Geng, Huan Long, Wei Gu</i>	
0833-1098	<b>A Novel Stochastic Optimal Scheduling Strategy for Wind-Solar-Pumped Storage Power System Considering Scenario Clustering</b>	4744
	<i>Zeyin Hou, Xiuyan Jing, Liantao Ji, Pu Wang, Huan Xie, Qi Qin</i>	
0834-1099	<b>Distributed Feeder Automatic Recovery Strategy Based on Line Load Rate and Peer-to-Peer Communication</b>	4749
	<i>Yue Zheng, Pan Zhang, Xianxu Huo, Hualei Zou, Han Xu, Tengfei Zhang</i>	
0835-1100	<b>Virtual Power Plant Integration with Smart Grids: a Review</b>	4755
	<i>Weishi Zhang, Chuan He, Hanhan Qian, Zhemin Lin, Yongbo Li, Xueting Zhao, Wei Zhang, Congzhong Shu</i>	
0836-1101	<b>Similarity Laws in Dual-frequency Capacitively Coupled RF Plasmas with Electrical Asymmetry Effect</b>	4760
	<i>Dong Yang, Xiaobing Zou, Yangyang Fu</i>	
0837-1102	<b>Influencing Factors and Suppressing Methods of Current Imbalance for Parallel-Connected SiC MOSFETs : A Review</b>	4764
	<i>Jianshen Qiao, Bin Zhao, Peng Sun, Yumeng Cai, Zhibin Zhao</i>	
0838-1103	<b>Modeling and Active Power Control Strategy of Wind-photovoltaic-pumped Storage Hybrid Generation System</b>	4770
	<i>Qi Qin, Liantao Ji, Longxiang Chen, Tao Zhang, Huan Xie</i>	
0839-1104	<b>Toluene Conversion by Gliding Arc Discharge in the Simulated Gasified Product Gas</b>	4776
	<i>Yaqin Shi, Shiyun Liu, Liang Ding, Danhua Mei, Zhi Fang</i>	
0840-1106	<b>Harmonic Analysis of V2G System Based on Integrated Filter Inductor</b>	4782
	<i>Haiwei Cai, Zhipeng Jiang, Ru Huang, Honghua Xu, Shaojun Liu, Jingzhou Xu</i>	
0841-1107	<b>Effect of Power Module Layer Thickness on Reliability</b>	4787
	<i>Yao Zhao, Zheng Liu, Zhiqiang Wang, Guofeng Li, Bing Ji</i>	
0842-1108	<b>Analysis of Influence of Virtual Inertia of Grid-forming Inverter on Transient Stability Characteristics</b>	4793
	<i>Xifang Huang, Ling Zhu, Wei Li, Mingfei Li, Xiangjun Quan, Zaijun Wu</i>	
0843-1109	<b>Simulation Study on Dynamic Reactive Power Demand Characteristics after Commutation Failures of an HVDC Transmission System</b>	4798
	<i>Jiale Hong, Liang Qin</i>	

0844-1110	<b>A Hybrid Modular Multilevel DC-DC Converter with Minimized Circulating Current</b>	4804
	<i>Zongzhe Tian, Fei Zhang</i>	
0845-1112	<b>Performance Analysis of DC-Biased Modular Linear Variable Flux Reluctance Machines</b>	4811
	<i>Yiming Shen, Yanxin Li, Qinfen Lu</i>	
0846-1114	<b>A Pre-Synchronization Strategy for Grid-Forming Loop-Closing Device in Distribution Network</b>	4816
	<i>Wenjie Gao, Fei Ding, Mingming Shi, Xuefeng Ge, Jiaying Lei, Renzhi Huang</i>	
0847-1115	<b>Analysis and Modeling of a Magnetically Levitated Synchronous Permanent Magnet Planar Motor with Concentric Structure Winding</b>	4821
	<i>Lu Zhang, Baoquan Kou</i>	
0848-1117	<b>Knowledge Graph Construction for Electric Substation Based on Multiple-source Data</b>	4826
	<i>Zheng Jiang, Huan Long</i>	
0849-1118	<b>SAC-based Multi-agent Framework for Continuous Volt-Var Control in Distribution Network with High Penetration of PVs</b>	4831
	<i>Tao Zhu, Guojun Lu, Yong Duan, Di Hai, Shengchao Zhou, Ruiying Zhang, Jing Wei</i>	
0850-1121	<b>Modeling of the DD Planner Coil with Ferrite for the Wireless Power Transfer System</b>	4836
	<i>Min Wu, Hongchang Cui, Chenxu Zhao, Xipei Yu, Xu Yang, Wenjie Chen, Laili Wang</i>	
0851-1122	<b>Photovoltaic Optimal Configuration of Net Zero Energy Building Based on Whole-process Energy Efficiency</b>	4842
	<i>Keteng Jiang, Haibo Li, Yi Lei, Jing Kang, Chao Yang, Junzhe Zhang, Han Yang</i>	
0852-1123	<b>Numerical Simulation of the Current Pulses of Positive Corona Discharge in SF6</b>	4848
	<i>Qingqing Gao, Jiawei Zhang, Xiaohua Wang, Aijun Yang, Dingxin Liu, Chunping Niu</i>	
0853-1124	<b>Investigation of Torque Contributions of Main-order Working Harmonics in Consequent-pole PM Vernier Machines</b>	4853
	<i>Ya Li, Qinglin Zhou, Jun Hang, Wei Li, Shichuan Ding</i>	
0854-1125	<b>Comparative Analysis of Energy Efficiency of AC and DC Power Supply Systems in Different Regions and Buildings</b>	4859
	<i>Keteng Jiang, Haibo Li, Yi Lei, Jingrong Liu, Junzhe Zhang, Han Yang</i>	
0855-1126	<b>Multi-parameter Online Identification of Permanent Magnet Synchronous Motor Based on Dynamic Forgetting Factor Recursive Least Squares</b>	4865
	<i>Zhao Ma, Wei Zhang, Jianbiao He, Huayang Jin</i>	
0856-1127	<b>Analysis Methodology for Multiple Resonators in Wireless Power Transfer Systems</b>	4871
	<i>Zuoting Zhang, Hui Yang</i>	

0857-1128	<b>Control Design for 1500V Battery Three-Phase Inverter Considering Black Start</b>	4877
	<i>Bainian Chen, Xiangjun Quan, Kai Hou, Fei Song, Tiankui Sun</i>	
0858-1130	<b>Moisture Assessment of the ERIP Insulation bushing Based on Self-Adaptive Particle Swarm Optimization Algorithm</b>	4881
	<i>Taiwei Liu, Xiongjie Xie, Wei Hu, Xiaoqing Luo, Qiming Ye, Pengbo Yin</i>	
0859-1132	<b>Distributed Secondary Control for Dynamic Microgrids for Seamless Topology Switching</b>	4886
	<i>Yanchun Mao, Zhe Chen, Zhihao Li</i>	
0860-1133	<b>An Improved Line Differential Protection Based on Average Compensation for Synchronous Sampling in Power Systems</b>	4891
	<i>Yalong Chen, Zhe Chen, Zhihao Li</i>	
0861-1134	<b>Repetitive Operation and Insulation Recovery Characteristics of a Sealed-off Double-gap Pseudospark Switch</b>	4897
	<i>Jiaqi Yan, Saikang Shen, Guoxiang Sun, Weidong Ding, Weizong Wang</i>	
0862-1135	<b>A Novel Heteropolar Hybrid-Magnetic-Circuit Memory Machine</b>	4903
	<i>Hui Yang, Yixian Wang, Wei Liu, Heyun Lin, Z. Q. Zhu, Hanlin Zhan, Wenjie Chen, Di Wu, Minghu Yu</i>	
0863-1136	<b>A Feedforward Current Control for Two-Stage AC/DC converters with Good Dynamic Performance</b>	4909
	<i>Yuanzhi Liu, Li Zhang, Chennan Huang, Minghao Lu, Junyang Shi</i>	
0864-1138	<b>Fault Waveform Construction Method for Detecting the Intelligent Switch based on GAN and CNN</b>	4916
	<i>Xiuru Wang, Rui Liang, Shaohua Han, Wangqing Mao, Xuan Ge, Peng Zhang</i>	
0865-1140	<b>Digital Simulation and Automatic Test of Source Network Load Storage Cooperative Control</b>	4922
	<i>Peng Xu, Jinshan Chen, Feng Li</i>	
0866-1141	<b>Multi-Time Granularity Line Loss Prediction for Distribution Network Based on MIC and Deep Learning</b>	4928
	<i>Yangchao Xu, Jun Fang, Guang Ling, Tianheng Chen, Junjie Chen, Jie Wang</i>	
0867-1142	<b>Electromagnetic Noise Analysis of the PMSM motor caused by Carrier Frequency of the Inverter</b>	4934
	<i>Peng Li, Dan Shi, Guangming Xie, Zhongqing Wu, Yunchong Wang</i>	
0868-1143	<b>Comprehensive Energy Consumption Assessment Based on Industry Energy Consumption Structure Part I: Analysis of Energy Consumption in Key Industries</b>	4942
	<i>Siyu Zheng, Yujia Zhang, Suyang Zhou, Qiang Ni, Juan Zuo</i>	

0869-1144	<b>Comprehensive Energy Consumption Assessment Based on Industry Energy Consumption Structure Part II: Assessment and Forecasting of Energy Consumption in Key Industries at Zhejiang</b>	4950
	<i>Yujia Zhang, Siyu Zheng, Suyang Zhou, Juan Zuo</i>	
0870-1145	<b>Hardware-in-loop based Digital Twin Technology for Integrated Energy System: A Case Study of Guangyang Island in Chongqing</b>	4956
	<i>Yongtao Chen, Qian Chen, Jin Gao, Zhe Li, Xiao Chen</i>	
0871-1146	<b>A Novel Calibration Method for Integrated Energy System Operation Optimization based on Hardware-in-Loop System</b>	4963
	<i>Chuanbao Liu, Suyang Zhou, Zhong Liu, Hengmen Liu, Xing Zhan</i>	
0872-1147	<b>Operation Analysis and Torque Performance Optimization of a Novel Self-aligning Limited-Angle Vibration Torque Machine</b>	4969
	<i>Hanlin Zhan, Yiyang Xu, Huajie He, Di Wu, Wenjie Chen, Dianguo Xu</i>	
0873-1148	<b>Reconfiguration of the Electric Vehicle Integrated Distribution System Considering Carbon-Reduction Benefit</b>	4975
	<i>Fan Gao, Xinyi Chen, Difei Li, Keke Du, Yangchao Xu</i>	
0874-1149	<b>Two-stage Allocation of Electric Vehicle Charging Stations Considering Coordinated Charging Scenario</b>	4982
	<i>Minhong Li, Tengfei Hou, Hong Xie, Ziheng Hu, Yan Li, Qi Wang</i>	
0875-1150	<b>Portfolio of Wind-Photovoltaic-Loads Toward Green Hydrogen Development</b>	4988
	<i>Zhongfan Gu, Guangsheng Pan, Wei Gu</i>	
0876-1151	<b>Equivalent Analysis of Stator Inter-Turn Fault in Different Winding Topologies of Synchronous Condenser</b>	4994
	<i>Chuan Sun, Songmei Xu, Bing Gu, Yu Zhang, Weijie Tian, Ming Cheng, Chao Wei</i>	
0877-1152	<b>Mechanism Analysis of the Stator Inter-turn Short Circuit Fault of New Synchronous Condenser</b>	4999
	<i>Xiaohu Wang, Chuan Sun, Yajie Jing, Xiyang Li, Chengbo Li, Ming Cheng</i>	
0878-1153	<b>Hierarchical Coordination Control Strategy of Multi-port Energy Hub in the Honeycomb Active Distribution Network</b>	5003
	<i>Zhiqiang Chong, Zhenbin Li, Guangyao Yu, Xiaolin Zheng, Xu Huang</i>	
0879-1154	<b>Research on Energy Balance Control Strategy for Distributed Multi-port Energy Storage System</b>	5009
	<i>Shiqian Ma, Zhiqiang Chong, Bin Wu, Ke Xu, Xu Huang</i>	
0880-1157	<b>Edge-Based NILM System with MDMR Filter-Based Feature Selection</b>	5015
	<i>Qingshan Xu, Yan Liu, Kaining Luan</i>	
0881-1158	<b>Lightning Protection for the Transmission Line of <math>\pm 800</math>kV UHVDC Single Circuit and 500kV EHVAC Double Circuit Erected on the Same Tower</b>	5021
	<i>Liuchun Zhang, Yu Yin, Weidong Shi, Ziming He, Tiantian Lu, Peng Kang</i>	

0882-1159	<b>Research on fine-Evaluation Model of Substation Primary Equipment Condition</b>	5026
	<i>Dong Wang,Deying Ma,Shaofeng Zhang,Xiao Luo,Yifei Wang</i>	
0883-1160	<b>Adaptive-restarting EKF-Based Method for Online Identification of Sub-Synchronous Oscillation</b>	5031
	<i>Xi Chen,Xi Wu,Qingfeng Li,Qiang Li,Bixing Ren,Ke Xu</i>	
0884-1161	<b>Characteristics Analysis for Axial-flux Permanent Magnet Eddy Current Brake with Slotted Disc</b>	5037
	<i>Mengyao Wang,Baoquan Kou,Mengyao Wang,Mengyao Wang</i>	
0885-1162	<b>Simulation of Indoor Temperature and Humidity Control in Intelligent Greenhouse</b>	5042
	<i>Yashan Hu,Qun Zhang,Qiu Wang,Yan Li,Decheng Wang</i>	
0886-1163	<b>Design and Optimization of a 12Slot/11Pole-Pairs Linear Permanent Magnet Vernier Motor</b>	5048
	<i>Yi Shao,He Zhang,Baoquan Kou,Qingwen Ge</i>	
0887-1164	<b>Zero Trust Security of Energy Resource Control System</b>	5052
	<i>Yan Chen,Jian Zhu,Hongbin Ji,Xingchen Zhou</i>	
0888-1165	<b>Design of DSOGI-PLL for Power Converters Tied to Fractional Frequency Transmission System</b>	5056
	<i>Wulue Pan,Xiaodan Wu</i>	
0889-1167	<b>Technology Research on Adjustable Load Resource Participating in Power Grid Dispatching Control</b>	5061
	<i>Bin Yang,Mingming Chen,Bo Li,Shihai Yang</i>	
0890-1168	<b>The Front-Middle-Back Platform Architecture Design of Dispatch Center to Support the Transition to the New Power System with Renewable Energy</b>	5066
	<i>Bo Li,Bo Zhang,Ting Wen,Ruifeng Zhao</i>	
0891-1169	<b>Research on Power Cable Life-Cycle Management and Control System Based on Function-Enhanced Location-Measurement Temperature-Sensed Chip</b>	5072
	<i>Guang Chen,Chenggang Li,Wei Liu,Miao Li,Jianhua Zhen,Kun Dong,Jianfeng Zhao</i>	
0892-59	<b>Cluster Division and Optimal Scheduling of Offshore Wind Power with Energy Storage Based on Fast Unfolding Algorithm</b>	5082
	<i>Dawei Su,Yuchen Hao,Weiqi Li,Reipeng Dai,Xufeng Zhou</i>	