

## 目 次

### · 生物质能源资源化高效利用专栏 ·

木质纤维素类生物质热解转化研究进展

姚磊,葛立超,赵灿,王睿坤,左明锦,张玉黎,汪洋,许昌(665)

大型炉排炉清洁高效燃烧的问题剖析与实炉优化

张睿智,汪林正,赵善辉,邓睿渠,罗永浩(681)

燃煤耦合农林废弃物在流化床内燃烧的氮氧化物生成特性模拟研究

张涛,戴良旭,王长安,杨琨,袁天霖,崇培安,车得福(692)

生物质与煤矸石(煤系高岭土)共燃行为及固定碱金属特性研究

李昊,刘海玉,乔晓磊,谢玉婷,金燕(703)

成型生物质流化床气化及结渣影响因素研究

范浩东,李姜昊,张涵,张雄,张世红(710)

基于物理信息神经网络的生物质气化产物分布预测方法

邓志平,任少君,翁琪航,朱保宇,司凤琪(719)

生物质三组分对成型颗粒物理性能的影响

黄健添,张守玉,郎森,陈旭阳,张邢佳,徐梓航,马达夫,吴玉新,吕俊复(727)

基于改进白鲸算法的太阳能与生物质互补 CCHP 系统多目标优化研究

王耀臣,王锡,刘琦,侯宏娟,徐宝萍,李安喆(735)

### · 动力设备与系统 ·

高岭土粒径对新疆煤积灰行为及烧结特性的影响

陶丽,泮浩翔,吕为智,于敦喜(745)

引进中间变量确定汽轮机中间分隔轴封漏汽量的方法研究

郭容赫,潘宏刚(752)

分流叶片长度及周向偏移量对 ORC 向心透平性能的影响

韩旭,李奇,杨依栋,刘树华,李鹏(759)

### · 新能源与储能 ·

CaO/CaCO<sub>3</sub> 储能系统材料设计研究进展

潘怡,刘敦禹,金晶(770)

### · 数字化与智能化 ·

基于多元精细复合多尺度波动散布熵和累积欧氏距离矩阵测度的风电机组变桨轴承退化

状态评估 王晓龙,李英晟,付锐棋,何玉灵(782)

基于混合算法下 RBF 神经网络的执行机构非线性特性在线辨识与补偿

刘鑫屏,陈艺文,董子健(792)

### · 绿色低碳 ·

基于深度强化学习的 SCR 脱硝系统协同控制策略研究

赵征,刘子涵(802)

大型脱硝中试平台上 SO<sub>3</sub> 的低温催化生成特性

李文焘,肖海平,洪春雪,刘毅,韩振兴(810)

### · 综合能源系统 ·

“双碳”目标下新型医疗废物气化多联产系统 3E 分析

孔梦迪,叶学民,刘迪,李春曦(817)

危废焚烧锅炉饱和蒸汽驱动有机朗肯循环系统热力学分析

张曼铮,吴苏日姑嘎,肖猛,闫沛伟,苗政,纪献兵,徐进良(827)

CONTENTS

• Topic on Efficient Utilization of Biomass Energy Resources •

Research Progress in Pyrolysis and Conversion of Lignocellulosic Biomass  
..... YAO Lei, GE Lichao, ZHAO Can, WANG Ruikun, ZUO Mingjin, ZHANG Yuli,  
WANG Yang, XU Chang (665)

Analysis and Optimization for Practical Applications of Clean and Efficient Combustion of Large-scale Grate Furnace  
..... ZHANG Ruizhi, WANG Linzheng, ZHAO Shanhui, DENG Ruiqu, LUO Yonghao (681)

Simulation Study on Nitrogen Oxide Formation Characteristics in Co-combustion of Coal and Agricultural Waste in Fluidized Bed Boiler  
..... ZHANG Tao, DAI Liangxu, WANG Chang'an, YANG Kun, YUAN Tianlin,  
CHONG Peian, CHE Defu (692)

Study on Co-combustion Behaviour of Biomass with Gangue (Coal Kaolin) and Retention Characteristics of Alkali Metals  
..... LI Hao, LIU Haiyu, QIAO Xiaolei, XIE Yuting, JIN Yan (703)

Study on the Factors Affecting Gasification and Slag Formation of Biomass Briquettes in Fluidized Bed  
..... FAN Haodong, LI Jianghao, ZHANG Han, ZHANG Xiong, ZHANG Shihong (710)

Prediction Method for Biomass Gasification Product Distribution Based on Physics-informed Neural Network  
..... DENG Zhiping, REN Shaojun, WENG Qihang, ZHU Baoyu, SI Fengqi (719)

Effect of Biomass Components on Physical Properties of Pellets  
..... HUANG Jiantian, ZHANG Shouyu, LANG Sen, CHEN Xuyang, ZHANG Xingjia,  
XU Zihang, MA Dafu, WU Yuxin, LÜ Junfu (727)

Research on Multi-objective Optimization of a CCHP System with Solar and Biomass Complementary Based on Improved Beluga Whale Algorithm  
..... WANG Yaochen, WANG Xi, LIU Qi, HOU Hongjuan, XU Baoping, LI Anzhe (735)

• Power Equipment and System •

Effect of Kaolin Particle Size on Ash Deposition and Sintering Characteristics of Xinjiang Coal  
..... TAO Li, PAN Haoxiang, LÜ Weizhi, YU Dunxi (745)

Method of Determining Gland Seal Leakage of Steam Turbine by Introducing Intermediate Variable  
..... GUO Ronghe, PAN Honggang (752)

Effects of Splitter Blade Length and Circumferential Offset on the Performance of ORC Radial Inflow Turbine  
..... HAN Xu, LI Qi, YANG Yidong, LIU Shuhua, LI Peng (759)

• New Energy Resources and Energy Storage •

Research Progress on Material Design of CaO/CaCO<sub>3</sub> Energy Storage System  
..... PAN Yi, LIU Dunyu, JIN Jing (770)

• Digitalization and Intelligentization •

Degradation State Evaluation of Wind Turbine Generator Set Pitch Bearing Based on Multivariant Refined Composite Multiscale Fluctuation Dispersion Entropy and Cumulative Euclidean Distance Matrix Measure  
..... WANG Xiaolong, LI Yingsheng, FU Ruiqi, HE Yuling (782)

Online Identification and Compensation of Nonlinear Characteristics of Actuator Based on Radial Basis Function Neural Network Under Hybrid Algorithm  
..... LIU Xinping, CHEN Yiwen, DONG Zijian (792)

• Green Energy and Low-carbon Technology •

Research on Cooperative Control Strategies for SCR Denitrification Systems Based on Deep Reinforcement Learning  
..... ZHAO Zheng, LIU Zihan (802)

Low-temperature Catalytic Generation Characteristics of SO<sub>3</sub> on a Large Pilot Denitrification Platform  
..... LI Wentao, XIAO Haiping, HONG Chunxue, LIU Yi, HAN Zhenxing (810)

• Integrated Energy System •

3E Analysis of a Novel Medical Waste Gasification Polygeneration System with 'Carbon Peak' and 'Carbon Neutrality' Goals  
..... KONG Mengdi, YE Xuemin, LIU Di, LI Chunxi (817)

Thermodynamic Analysis of the Organic Rankine Cycle Driven by Saturated Steam from the Hazardous Waste Incinerator  
..... ZHANG Manzheng, WU Suriguga, XIAO Meng, YAN Peiwei, MIAO Zheng, JI Xianbing, XU Jinliang (827)