

中文核心期刊 中国科技核心期刊
RCCSE 中国权威学术期刊 (A+)

ISSN 1006 - 6772
CN 11 - 3676/TD
CODEN JJIIST

洁净煤技术

CLEAN COAL TECHNOLOGY

“2060碳中和”栏目



4
2022
第28卷 第4期
2022年4月出版

ISSN 1006-6772
9 771006 677220 04>

主管 国家矿山安全监察局
主办 煤炭科学研究总院 煤炭工业洁净煤工程技术研究中心

万方数据

洁净煤技术

第28卷 第4期 (总第140期) 2022年4月

目次

“2060 碳中和”栏目

CO₂ 甲烷化镍基催化剂研究进展 张晓俐,古芳娜,苏发兵,许光文(1)

中国煤炭学会煤粉锅炉专业委员会专栏

预热燃烧还原性气氛下煤中 C/O/N 元素的迁移特性

..... 张毅,朱建国,吕清刚,张孝禹,张嘉航,潘飞(18)

基于 GRI-Mech 3.0 机理的甲烷/空气多孔介质燃烧特性数值分析

..... 王鹏涛,贾楠,刘鹏中,崔豫泓,牛芳(26)

煤粉预热低 NO_x 燃烧技术进展 王帅,刘洋,刘愿武,牛艳青,朱广庆,薛旭峰,惠世恩(33)

氧分级对准东煤富氧燃烧 NO_x 生成与积灰特性的影响

..... 孙瑞金,王长安,赵林,王超伟,马成果,车得福(42)

氯盐改性堇青石吸附剂氧化烟气中 Hg⁰ 的试验 邢向文,方蓓蓓,张肖阳,崔琳,董勇(51)

基于声学法的堆积煤粉温度场实时监测 杨庚,闫计栋,沈国清,安连锁,李宗金(59)

直接空冷凝汽器流场及性能优化数值模拟 王森,黄骞,曹文广,李水清(66)

述评

SCR 脱硝氨转化、吸附及飞灰氨脱除技术研究现状

..... 唐潇,徐仁博,张发捷,马云龙,赵宏,王乐乐,孙路石,于洁(75)

煤制乙二醇废水处理关键技术研究进展 杨芊,魏江波,孙齐,刘志学,滕巍,陶志达(86)

研究论文

Ni₂P/Al₂O₃-TiO₂ 催化剂制备及其非加氢饱和性能 陈羽,王九占,李泽,荆洁颖,李文英(94)

40 kg 神东煤焦炉热解试验及产物分析 彭德军,邱传耕,张飞(103)

神东煤回转窑热解破碎特性 苒亮(110)

流化床煤气化过程中焦油生成特性 邓尚致,姜华伟,李伟强,袁野,郭庆杰,王翠苹(119)

改性处理对煤基电容炭结构及电化学性能的影响

..... 张兆华,王谦,张步勤,张凤梅,张传祥,黄光许,邢宝林(127)

纤维素、半纤维素和木质素对生物质燃烧行为影响研究 刘洋,姜通,邹春,章海生(137)

燃煤火电机深度调峰运行试验 张绪辉,杨兴森,辛刚,刘科,崔福兴,赵中华(144)

中心富燃料直流煤粉燃烧器燃烧及 NO_x 生成特性 沈涛,宋民航,夏良伟,黄莺,路丕思(151)

基于反应温度控制的低氮燃烧调整技术研究与应用

..... 施斌,但振宇,牟克慧,李楠,赵鹏勃,孙献斌(160)

燃煤电厂煤及燃烧产物中氟的赋存与浸出特征 郝乾坤,方全国,陈亚飞,皮中原,陈思涵(166)

基于模糊神经网络的燃煤锅炉炉膛结渣特性研究 朱超,郁翔,李峰,周熙宏,毕凌峰,杨冬(175)

风幕代替中心筒的旋风分离器性能研究 孙世超,周镇港,袁东辉,郑秀平,段伦博(183)

期刊基本参数:CN11-3676/TD * 1995 * b * A4 * 190 * zh * P * ¥35.00 * 5000 * 22 * 2022-04

本期执行编辑:常明然

Clean Coal Technology

Vol.28 No.4 (Series No.140) Apr. 2022

CONTENTS

Column for Carbon Neutrality

Research progress of nickel-based catalysts for carbon dioxide methanation
..... ZHANG Xiaoli, GU Fangna, SU Fangbing, XU Guangwen(1)

Special Column of Pulverized Coal Boiler Committee, China Coal Society

Analysis of migration characteristics of C/O/N elements in coal under preheated combustion reducing atmosphere
..... ZHANG Yi, ZHU Jianguo, LYU Qinggang, ZHANG Xiaoyu, ZHANG Jiahang, PAN Fei(18)

Numerical analysis of CH₄/air porous media combustion characteristics based on GRI-Mech 3.0 mechanism
..... WANG Pengtao, JIA Nan, LIU Pengzhong, CUI Yuhong, NIU Fang(26)

A review of preheating-low NO_x combustion coupling technology of pulverized coal
..... WANG Shuai, LIU Yang, LIU Yuanwu, NIU Yanqing, ZHU Guangqing, XUE Xufeng, HUI Shien(33)

Effects of staged oxygen on NO_x formation and ash deposition characteristics during oxy-fuel combustion of high-alkali coal SUN Ruijin, WANG Chang'an, ZHAO Lin, WANG Chaowei, MA Chengguo, CHE Defu(42)

Experimental study on oxidation removal of elemental mercury from flue gas by chloridesalts modified cordierite adsorbents XING Xiangwen, FANG Beibei, ZHANG Xiaoyang, CUI Lin, DONG Yong(51)

Real time monitoring of accumulated pulverized coal temperature field based on acoustic method
..... YANG Geng, YAN Jidong, SHEN Guoqing, AN Liansuo, LI Zongjin(59)

Numerical investigation on the flow field and performance optimization of the direct air-cooled condenser
..... WANG Miao, HANG Qian, CAO Wenguang, LI Shuiqing(66)

Reviews

Research status of SCR ammonia conversion, adsorption and ammonia removal technology from fly ash
..... TANG Xiao, XU Renbo, ZHANG Fajie, MA Yunlong, ZHAO Hong, WANG Lele, SUN Lushi, YU Jie(75)

Key technologies for treatment of wastewater from coal-to-ethylene glycol
..... YANG Qian, WEI Jiangbo, SUN Qi, LIU Zhixue, TENG Wei, TAO Zhida(86)

Research Articles

Synthesis of Ni₂P/Al₂O₃-TiO₂ catalyst and its phenanthrene hydrogenation saturation performance
..... CHEN Yu, WANG Jiuzhan, LI Ze, JING Jieying, LI Wenyong(94)

Pyrolysis experiment and product analysis of Shendong coal in 40 kg experimental oven
..... PENG Dejun, DI Chuangeng, ZHANG Fei(103)

Fragmentation characteristics of Shendong coal during pyrolysis in rotary kiln CHANG Liang(110)

Generation characteristics of tar in fluidized bed coal gasification
..... DENG Shangzhi, JIANG Huawei, LI Weiqiang, YUAN Ye, GUO Qingjie, WANG Cuiping(119)

Effect of modification on structure and electrochemical properties of coal based activated carbon
..... ZHANG Zhaohua, WANG Qian, ZHANG Buqin, ZHANG Fengmei,
..... ZHANG Chuanxiang, HUANG Guangxu, XING Baolin(127)

Influence of the cellulose, hemicellulose and lignin on the combustion behavior of biomass
..... LIU Yang, JIANG Tong, ZOU Chun, ZHANG Haisheng(137)

Experimental study on deep peak regulation operation of coal-fired thermal power unit
..... ZHANG Xuhui, YANG Xingsen, XIN Gang, LIU Ke, CUI Fuxing, ZHAO Zhonghua(144)

Combustion and NO_x formation characteristics of a central fuel-rich direct current pulverized coal burner
..... SHEN Tao, SONG Minhang, XIA Liangwei, HUANG Ying, LU Pisi(151)

Research and application of low nitrogen combustion adjustment technology based on reaction temperature control
..... SHI Bin, DAN Zhenyu, MOU Kehui, LI Nan, ZHAO Pengbo, SUN Xianbin(160)

Occurrence and leaching characteristics of fluorine in coal and combustion products of coal fired power plant
..... HAO Qiankun, FANG Quanguo, CHEN Yafei, PI Zhongyuan, CHEN Sihan(166)

Slagging characteristics of coal fired boiler furnace based on fuzzy neural network
..... ZHU Chao, YU Xiang, LI Feng, ZHOU Xihong, BI Lingfeng, YANG Dong(175)

Performance of cyclone separator replacing vortex finder with air curtain
..... SUN Shichao, ZHOU Zhengang, YUAN Donghui, ZHENG Xiuping, DUAN Lunbo(183)



洁净煤技术



传 媒

中文核心期刊

中国科技核心期刊

RCCSE 中国权威学术期刊 (A+)

荷兰《文摘与引文数据库》(Scopus)

美国《化学文摘》(CA)

俄罗斯《文摘杂志》(AJ)

美国《艾博思科数据库》(EBSCO host)

美国《乌利希期刊指南》(Ulrichsweb)

日本《日本科学技术振兴机构中国文献数据库》(JST)

《煤炭领域高质量科技期刊分级目录》T2级

洁净煤技术

CLEAN COAL TECHNOLOGY

JIEJINGMEI JISHU

月刊 (1995年创刊)

第 28 卷 第 4 期 (总第140期) 2022年4月

Monthly (Started in 1995)

Vol. 28 No.4 (Series No.140) Apr. 2022

主 管 国家矿山安全监察局
主 办 煤炭科学研究总院
煤炭工业洁净煤工程技术研究中心
出 版 《洁净煤技术》编辑部
(北京朝阳区和平里煤炭大厦 100013)
主 编 解 强
副 主 编 史翊翔 赵永椿 段伦博 曹景沛
主 任 代艳玲
副 主 任 常明然
责任编辑 白娅娜 常明然 张 鑫
国内发行 《洁净煤技术》编辑部
国外发行 中国国际图书贸易集团有限公司
(北京399信箱)
国外代号 1430Q
印 刷 北京联合互通彩色印刷有限公司
广告发布登记号 京朝市监广登字20200056号

Superintended by National Mine Safety Administration
Sponsored by China Coal Research Institute
Clean Coal Engineering Research Center of Coal Industry
Published by Editorial Department of Clean Coal Technology
(Coal Tower, Hepingli, Chaoyang District, Beijing 100013, China)
Editor in Chief XIE Qiang
Associate Editor in Chief SHI Yixiang ZHAO Yongchun
DUAN Lunbo CAO Jingpei
Director DAI Yanling
Associate Director CHANG Mingran
Responsible Editor BAI Yana CHANG Mingran ZHANG Xin
Domestic Distributed by Editorial Department of Clean Coal Technology
Overseas Distributed by China International Book Trading Corporation
(P.O.Box 399, Beijing, China)
Overseas Subscription Code 1430Q

中国标准连续出版物号: ISSN 1006-6772
CN 11-3676/TD
国内定价: 35.00元

电 话: (010) 87986452
(010) 87986451

电子邮箱: jjmjs@263.net
投稿网址: www.jjmjs.com.cn