



重庆市出版专项资金资助期刊

ISSN 1000-582X  
CODEN CPAOD4

CHONGQING DAXUE XUEBAO

# 重庆大学学报

JOURNAL OF  
CHONGQING UNIVERSITY



中国 重庆  
CHONGQING, CHINA

## 本刊荣获

- 第一届重庆出版政府奖优秀期刊奖
- 全国“百强报刊”
- 中国国际影响力优秀学术期刊
- 中国高校精品科技期刊奖
- 中国高校百佳科技期刊
- 中国科技论文在线优秀期刊一等奖
- 重庆市“十佳科技期刊”

1

2023年1月  
第46卷 第1期  
Vol. 46 No. 1

# 重庆大学学报

第46卷 第1期 2023年1月

## 目 次

### 机械·电气工程

- 低碳合金钢 18CrNiMo7-6 齿轮弯曲疲劳试验研究与误差分析  
..... 陈地发,刘怀举,朱加赞,徐永强,魏沛堂,何海风 (001)
- 基于样本扩充与 IDANN 的刀具状态识别方法  
..... 董绍江,蒋明佑,罗召霞 (016)
- 基于 LASSO 回归的 R-vine copula 模型构建及其在化工过程故障检测中的应用  
..... 邓红涛,贾 琼,李绍军,李 伟 (027)
- 考虑新型设备的配电网规划研究综述  
..... 罗 旭,罗 潇,温力力,范 丽,李 博,刘璐晓,刘华勇,任洲洋 (035)
- 挡风墙尾流作用下导线表面粗糙度对接触网正馈线气动特性的影响  
..... 赵珊鹏,岳永文,张友鹏 (046)

### 土木·环境工程

- $\alpha\text{-Fe}_2\text{O}_3$  晶面调控及其非均相光芬顿催化降解甲基橙特性  
..... 梁建军,陈书黎,周 颖 (057)
- MBR 工艺强化脱氮除磷处理滇池农业面源污水的调控方法及实际应用  
..... 吴 思,马志龙,杨占强,丁文川,郑良秋,王涛涛,曾晓岚 (068)
- 土坯力学性能及受压本构模型研究  
..... 兰官奇,李晓光,张坤,王毅红,朱熹育 (076)
- 钢纤维橡胶自密实混凝土静态力学性能研究  
..... 叶建峰,庄金平,颜桂云,潘晨阳 (084)
- 基于 180 s 劲度模量的低温开裂指数预测  
..... 崔世彤,易军艳,冯德成,赵 舍,孙志棋 (095)

### 通信·计算机·自动化

- 自适配权重特征融合的持续身份认证  
..... 陶 鹏,邓绍江 (103)
- 基于知识蒸馏与 ResNet 的声纹识别  
..... 荣玉军,方映凡,田 鹏,程家伟 (113)
- 基于运动试验平台的 MOEA/D 改进洗出算法仿真及试验  
..... 刘伟超,王 辉 (125)

# Journal of Chongqing University

Vol. 46 No. 1 Jan. 2023

## CONTENTS

### Mechanical and Electrical Engineering

Experimental study and error analysis on bending fatigue of low-carbon alloy steel 18CrNiMo7-6 gear

..... CHEN Difa, LIU Huaiju, ZHU Jiazan, XU Yongqiang, WEI Peitang, HE Haifeng(001)

Tool status recognition method based on sample expansion and IDANN

..... DONG Shaojiang, JIA NG Mingyou, LUO Zhaoxia(016)

Model of R-vine copula based on LASSO regression and its application in chemical process fault detection

..... DENG Hongtao, JIA Qiong, LI Shaojun, LI Wei(027)

Review of new equipment integrated distribution network planning

..... LUO Xu, LUO Xiao, WEN Lili, FAN Li, LI Bo, LIU Lurao, LIU Huayong, REN Zhouyang(035)

The influence of wire surface roughness on the aerodynamic characteristics of the catenary positive feeder under the action of the wake flow of the wind-break wall

..... ZHAO Shanpeng, YUE Yongwen, ZHANG Youpeng(046)

### Civil and Environmental Engineering

$\alpha$ -Fe<sub>2</sub>O<sub>3</sub> crystal plane control and its catalytic degradation properties in heterogeneous photo-Fenton for methyl orange

..... LIANG Jianjun, CHEN Shuli, ZHOU Ying(057)

Regulatingmethod and practical application of MBR process intensified denitrification and dephosphorization treatment of agricultural non-point source sewage in Dianchi Lake

..... WU Si, MA Zhilong, YANG Zhanqiang, DING Wenchuan, ZHENG Liangqiu, WANG Taotao, ZENG Xiaolan(068)

Mechanical properties and compression constitutive models of adobe

..... LAN Guanqi, LI Xiaoguang, ZHANG Kun, WANG Yihong, ZHU Xiyu(076)

Research on static mechanical properties of self-compacting concrete mixed with steel fiber and rubber

..... YE Jianfeng, ZHUA NG Jingping, YAN Guiyun, PAN Chenyang(084)

Prediction of low-temperature cracking index based on 180 s stiffness modulus

..... CUI Shitong, YI Junyan, FENG Decheng, ZHAO Han, SUN Zhiqi(095)

### Communication , Computer and Automation Engineering

Continuous authentication based on adaptive deep feature fusion

..... TAO Peng, DENG Shaojiang(103)

Voiceprint recognition based on knowledge distillation and ResNet

..... RONG Yujun, FANG Yifan, TIAN Peng, CHENG Jiawei(113)

Simulation and experiments of MOEA /D improved washout algorithm based on motion test platform

..... LIU Weichao, WANG Hui(125)