

ISSN 1673-923X  
CODEN ZLKDA 5

# 中南林业科技大学学报

Journal of Central South University of Forestry & Technology

|           |          |
|-----------|----------|
| 第40卷      | 第5期      |
| Volume 40 | Number 5 |

- ◆ 中国精品科技期刊
- ◆ 中国高校百佳科技期刊
- ◆ 全国中文核心期刊
- ◆ 中国科技核心期刊
- ◆ RCCSE中国权威学术期刊
- ◆ 中国科学引文数据库(CSCD)核心库来源期刊
- ◆ 中国科技论文与引文数据库(CSTPCD)来源期刊
- ◆ 美国CA、日本JST等来源期刊

5

2020  
中国·长沙

目次

林学

马尾松格木幼林混交效果研究

……………安 宁, 郭文福, 丁贵杰, 赵 总, 李洪果, 莫世宇, 王维泽, 蒙凤丽 (1)

南洋楹无性系抗寒性研究 ……………刘 英, 曾琪瑶, 曾炳山, 黄烈键, 何卫忠, 何碧红 (7)

无性系和株行距对杨树人工林生长和树冠结构的影响

……………张艳华, 方升佐, 田 野, 丁思惠, 吕 义, Samjhana Wagle (13)

覆盖对毛竹林土壤物理性质及养分含量的影响

……………胡文杰, 庞宏东, 胡兴宜, 刘清平, 徐丽君, 李 玲, 张 涛 (20)

金叶银杏硬枝扦插繁殖生根过程及其生根机制研究

……………王瑞敏, 祝凌云, 陈 颖, 姚秀文, 白景伟, 陈 旭, 张齐齐, 曹福亮 (28)

不同海拔高度对周公山柳杉人工林植物多样性及土壤养分的影响

……………张 荣, 李婷婷, 金 锁, 鱼舜尧, 王 宇, 李禹江, 齐锦秋, 郝建锋 (38)

油茶种间杂交叶表型的遗传变异分析

……………陈 雅, 袁德义, 邹 锋, 朱周俊, 李艳民, 张默涵 (47)

基于无人机影像的天山云杉林伐后更新地林分密度估测研究

……………王雅佩, 王振锡, 李 擎, 刘梦婷, 杨勇强 (57)

生长调节剂对‘香妃’含笑扦插生根及相关酶活性的影响

……………郑巧巧, 兰思仁, 刘雪蝶, 冯玉超, 彭东辉 (67)

杨树根腐病生防菌的筛选及鉴定

……………侯胜铭, 王立海, 张广晖, 孟庆凯, 郝泉龄, 纪文文 (77)

油松人工林不同大小林隙环境因子差异性比较

……………罗桂生, 马履一, 贾忠奎, 沈子初, 迟明峰 (86)

基于  $\pi$  值法则的油松人工林稳定性与空间结构关联性研究

..... 杨 瑞, 赵鹏祥, 李卫忠, 王博恒, 周远博 (95)

构树不同种源叶性状变异研究

..... 崔思明, 郝亚涵, 周 玮, 任 颖, 周 鹏, 陈晓阳 (104)

## 生态学

喀斯特区石漠化治理对土壤水分 - 物理性状的影响——以黔中杠寨小流域为例

..... 侯贻菊, 李 倩, 崔迎春, 赵文君, 杨 滨, 丁访军, 朱 军, 吴 鹏 (111)

峨眉山不同海拔冷杉径向生长对气候变化的响应

..... 白 海, 许 倩, 石松林, 曾琬晴, 谭利平, 彭培好 (128)

## 生物学

香水莲花花粉的采集、干燥和贮藏特性研究 ..... 张慧会, 周 琦, 郭力宇, 祝遵凌 (139)

杨树 miR393 对 *FBL* 基因家族成员调控作用的鉴定

..... 唐 芳, 楚立威, 贺学娇, 舒文波, 卢孟柱 (146)

珙桐 *DiZF-CCCH1* 基因的克隆及表达分析

..... 纪小敏, 李 建, 李 萌, 曹福祥, 董旭杰 (154)

## 环境科学与工程

净化生活污水的浮床植物筛选

..... 彭 蕾, 汤春芳, 陈永华, 陈明利, 杜 露, 柳 俊 (162)

## 林业工程

基于不同预处理的椴树木材基本密度近红外光谱估测及模型优化

..... 尹世逵, 李春旭, 孟永斌, 王 晨, 赵婧含, 李耀翔 (171)

CONTENTS

|  |   |
|--|---|
| Study on mixed young plantation effect of <i>Pinus massoniana</i> and <i>Erythrophleum fordii</i>  |   |
| .....  | AN Ning, GUO Wenfu, DING Guijie, ZHAO Zong, LI Hongguo, MO Shiyu, WANG Weize, MENG Fengli (1)       |
| Physiological analysis on cold resistance of <i>Albizia falcataria</i> clones  |   |
| .....  | LIU Ying, ZENG Qiyao, ZENG Bingshan, HUANG Liejian, HE Weizhong, HE Bihong (7)                      |
| Effects of clone and planting spacing on growth and morphological traits of poplar plantations   |   |
| .....  | ZHANG Yanhua, FANG Shengzuo, TIAN Ye, DING Sihui, LYU Yi, Samjhana Wagle (13)                       |
| Influence of mulching on soil physical properties and nutrients contents of <i>Phyllostachys edulis</i> forest   |   |
| .....  | HU Wenjie, PANG Hongdong, HU Xingyi, LIU Qingping, XU Lijun, LI Ling, ZHANG Tao (20)                |
| Study on rooting process and rooting mechanism of hardwood cuttings of <i>Ginkgo biloba</i> ‘Golden-leaf’  |   |
| .....  | WANG Ruimin, ZHU Lingyun, CHEN Ying, YAO Xiuwen, BAI Jingwei, CHEN Xu, ZHANG Qiqi, CAO Fuliang (28) |
| Effects of different altitude on plant diversity and soil nutrients of <i>Cryptomeria fortunei</i> plantation in Zhougong mountain   |   |
| .....  | ZHANG Rong, LI Tingting, JIN Suo, YU Shun Yao, WANG Yu, LI Yujiang, QI Jin Qiu, HAO Jianfeng (38)   |
| Analysis on genetic variation of phenotypic traits of leaves of F1 progeny from interspecific hybridization of <i>Camellia</i>   |   |
| .....  | CHEN Ya, YUAN Deyi, ZOU Feng, ZHU Zhoujun, LI Yanmin, ZHANG Mohan (47)                              |
| Research on estimation of stand density of regenerate <i>Picea schrenkiana</i> var. <i>tianshanica</i> based on UAV images   |   |
| .....  | WANG Yapei, WANG Zhenxi, LI Qin, LIU Mengting, YANG Yongqiang (57)                                  |
| Effects of growth regulators on rooting and correlative enzyme activities of <i>Michelia figo</i> ‘Xiangfei’ cuttings  |   |
| .....  | ZHENG Qiaoqiao, LAN Siren, LIU Xuedie, FENG Yuchao, PENG Donghui (67)                               |
| Screening and identification of bacteria used for biological control of poplar root rot  |   |
| .....  | HOU Shengming, WANG Lihai, ZHANG Guanghui, MENG Qingkai, HAO Quanling, JI Wenwen (77)               |
| Comparison of environmental factors differences in gaps with different size of <i>Pinus tabulaeformis</i> plantation   |   |
| .....  | LUO Guisheng, MA Lyuyi, JIA Zhongkui, SHEN Zichu, CHI Mingfeng (86)                                 |
| Research on relationship between stability and spatial structure of Chinese pine plantation based on rule of $\pi$ value   |   |
| .....  | YANG Rui, ZHAO Pengxiang, LI Weizhong, WANG Boheng, ZHOU Yuanbo (95)                                |
| Variation of leaf morphological characters of <i>Broussonetia papyrifera</i> from different provenances  |   |
| .....  | CUI Siming, HAO Yahan, ZHOU Wei, REN Ying, ZHOU Peng, CHEN Xiaoyang (104)                           |
| Effects on soil moisture-physical characteristics during rocky desertification comprehensive control in karst region: A case study of Gangzhai small watershed of central Guizhou province |   |
| .....  | HOU Yiju, LI Qian, CUI Yingchun, ZHAO Wenjun, YANG Bin, DING Fangjun, ZHU Jun, WU Peng (111)        |
| Radial growth of <i>Abies fabri</i> response to climate change along an altitudinal transect in the Mount Emei   |   |
| .....  | BAI Hai, XU Qian, SHI Songlin, ZENG Wanqing, TAN Liping, PENG Peihao (128)                          |
| Research on collection, dryness and storage characteristics of <i>Nymphaea hybrid</i> pollen   |   |
| .....  | ZHANG Huihui, ZHOU Qi, GUO Liyu, ZHU Zunling (139)  |
| Identification of regulation of poplar miR393 on <i>FBL</i> family genes   |   |
| .....  | TANG Fang, CHU Liwei, HE Xuejiao, SHU Wenbo, LU Mengzhu (146)                                       |
| Cloning and expression analysis of <i>DiZF-CCCH1</i> gene in <i>Davidia involucrata</i>  |   |
| .....  | JI Xiaomin, LI Jian, LI Meng, CAO Fuxiang, DONG Xujie (154)   |
| Study on screening of floating bed plants to purify domestic sewage  |   |
| .....  | PENG Lei, TANG Chunfang, CHEN Yonghua, CHEN Mingli, DU Lu, LIU Jun (162)                            |
| Near infrared spectral estimation and model optimization of <i>Tilia tuan</i> based on different pretreatments   |   |
| .....  | YIN Shikui, LI Chunxu, MENG Yongbin, WANG Chen, ZHAO Jinghan, LI Yaoxiang (171)                     |