

目次

特稿

湿地松全同胞家系主要经济性状的遗传变异与选择研究/吴际友,李志辉,龙应忠,等 ..... 1

生物科学与技术

中国梨新 SFBB- $\gamma$  基因的鉴定及序列分析/乌云塔娜,包梅荣,李铁柱 ..... 5  
梨  $S_{12}$ -RNase 基因启动子植物表达载体的构建及转基因研究/刘学英,乌云塔娜 ..... 11  
雷公藤组织培养外植体消毒和选择/李 键,李建鹏,吴承祯,等 ..... 18

林学

白花泡桐优树组织培养幼化技术研究/李芳东,邓建军,张 悦,等 ..... 22  
配方施肥对杜仲雄花主要活性成分含量的影响/刘昌勇,李 钦,杜红岩,等 ..... 29  
轻型基质理化性质变化对金叶榆容器苗生长的影响/邓华平,杨桂娟,王正超,等 ..... 35  
不同灌溉水平下两个茶属植物品种的形态和生理反应/龙 维,文仕知,张冬林,等 ..... 41  
长三角平原水网地区耐湿景观树种引种适应性评价与选择/刘娜娜 ..... 47  
不同化学药剂对大果蔷薇种子萌发的影响/李永红,费 芳,王春梅 ..... 53  
湖南杜鹃花资源及其开发利用/康用权,彭春良,廖菊阳,等 ..... 57  
珙桐的生物生态特性和人工引种促花研究/陈迎辉,彭春良,李迪友,等 ..... 64

遗传育种

尾叶桉×细叶桉杂种生长与耐寒性的联合选择/何旭东,李发根,翁启杰,等 ..... 68

植物生理

催裂剂对油茶果采后生理效应与品质的影响/梁文斌,谭益民,余祥威,等 ..... 72  
低温胁迫对 5 种柞柳抗寒性生理指标的影响/司剑华,卢素锦 ..... 78  
南方 4 种木本植物相对叶绿素指标及其分布/柯炳炘,贺立静,苏志尧 ..... 82

木材科学与技术

尾叶桉家系木材性状的变异研究/李光友,徐建民,杜志鹤,等 ..... 87  
用低温等离子体对玉米秆表面改性的研究/陈桂华,向仕龙,周鲁英 ..... 92

|                                              |     |
|----------------------------------------------|-----|
| 热压过程竹材的径向应变特性/韩 健,高喜桃 .....                  | 96  |
| 原竹对剖联丝展开片材加工与竹木复合层积材制造技术/丁定安,孙晓东,李 阳,等 ..... | 100 |

## 土木工程

|                                              |     |
|----------------------------------------------|-----|
| 分数导数粘弹性模型描述的土体中球形空腔的稳态响应/刘林超,苏子平 .....       | 104 |
| 边坡软弱层评价中全波列声波测井的理论与实验研究/谢忠球,肖宏彬,李珍玉,等 .....  | 108 |
| 高校校园新旧整合设计模式的系统分析与建构——以湖南大学与中南大学为例/何 玮 ..... | 112 |

## 物理学

|                                |     |
|--------------------------------|-----|
| 连续钢桁梁桥车桥振动的模态法分析/杨仕若 .....     | 120 |
| 边界条件对二维相对运动的影响分析/罗勇锋,龚志强 ..... | 125 |

## 化学工程

|                                   |     |
|-----------------------------------|-----|
| 低游离 TDI 含量聚氨酯固化剂的研究/孙德彬,花铁果 ..... | 129 |
|-----------------------------------|-----|

## 机电工程

|                                     |     |
|-------------------------------------|-----|
| 动磁式直线冰箱压缩机数值模拟与分析/谢洁飞,李新华,肖周勇 ..... | 133 |
| 余热与太阳能驱动汽车空调系统/钟吉湘 .....            | 138 |

## 旅 游

|                                     |     |
|-------------------------------------|-----|
| 游憩践踏对张家界国家森林公园植被的影响研究/付红军,杨懿琨 ..... | 143 |
|-------------------------------------|-----|

## 数 学

|                                   |     |
|-----------------------------------|-----|
| 全波形 LiDar 数据分解方法的研究/刘 峰,谭 畅 ..... | 148 |
|-----------------------------------|-----|

## 计算机应用

|                                              |     |
|----------------------------------------------|-----|
| 基于 J2EE 框架与 ExtJS 的 Web 系统登录设计/刘震宇,肖武魁 ..... | 155 |
|----------------------------------------------|-----|

## 学者风采

|              |    |
|--------------|----|
| 吴际友研究员 ..... | 封二 |
|--------------|----|

## 特色学科

|                                 |    |
|---------------------------------|----|
| 湖南省林业科学院森林培育学科优势研究团队简介(一) ..... | 封三 |
|---------------------------------|----|

CONTENTS

|                                                                                                                                                                                          |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Genetic variation and selection of main economic characteristics of Slash pine full-sib family/WU Ji-you, LI Zhi-hui, LONG Ying-zhong, et al. ....                                       | 1   |
| Identification and sequence analysis of new SFBB-gamma of Chinese pear/WUYUN Ta-na, BAO Mei-rong, LI Tie-zhu .....                                                                       | 5   |
| Cloning of <i>S</i> <sub>12</sub> - <i>RNase</i> promoter region of Chinese pear ( <i>Pyrus pyrifolia</i> ) and construction of plant expression vector/LIU Xue-ying, WUYUN Ta-na .....  | 11  |
| Selection and sterilization of explant of <i>Tripterygium wilfordii</i> in tissue culture/LI Jian, LI Jian-juan, WU Chen-zheng, et al. ....                                              | 18  |
| Study on tissue culture rejuvenation technology of the <i>Paulownia fortunei</i> superior trees/LI Fang-dong, DENG Jian-jun, ZHANG Yue, et al. ....                                      | 22  |
| Effects of formula fertilization on the content of main active components from <i>Eucommia ulmoides</i> male flower/LIU Chang-yong, LI Qin, DU Hong-yan, et al. ....                     | 29  |
| Growth effects of the variance of light media physio-chemistry properties on <i>Ulmus pumila</i> seedling in container/DENG Hua-ping, YANG Gui-juan, WANG Zheng-chao, et al. ....        | 35  |
| Morphological and ecophysiological responses of <i>Camellia</i> cultivars to different irrigation levels/LONG Wei, WEN Shi-zhi, ZHANG Dong-lin, et al. ....                              | 41  |
| Adaptability evaluation and selection of humidity tolerance and landscape tree species introduced from USA to Yangtze Delta Region/LIU Na-na ....                                        | 47  |
| Effects of different chemical agents treatments on seed germination of <i>Rosa webbiana</i> /LI Yong-hong, FEI Fang, WANG Chun-mei .....                                                 | 53  |
| Discussion on development and utilization of <i>Rhododendron</i> resources in Hunan/KANG Yong-quan, PENG Chun-liang, LIAO Ju-yang, et al. ....                                           | 57  |
| Biology and ecology characteristics and man-made promotion blossom in introduced areas of <i>Davidia involucreata</i> /CHEN Ying-hui, PENG Chun-liang, LI Di-you, et al. ....            | 64  |
| Selection of <i>Eucalyptus urophylla</i> × <i>E. tereticornis</i> hybrids in growth and cold hardiness/HE Xu-dong, LI Fa-gen, WENG Qi-jie, et al. ....                                   | 68  |
| Physiological and qualitative responses of post-harvest fruit to cracking agent in <i>Camellia oleifera</i> /LIANG Wen-bin, TAN Yi-min, SHE Xiang-wei, et al. ....                       | 72  |
| Effects of low temperature stress on cold-resistance physiological indexes of five <i>Tamarix</i> L. in Qinghai/SI Jian-hua, LU Su-jin .....                                             | 78  |
| Relative chlorophyll content and its distribution of four woody species in south China/KE Xian-dong, HE Li-jing, SU Zhi-yao .....                                                        | 82  |
| Study of variation of six wood traits among <i>Eucalyptus urophylla</i> families/LI Guang-you, XU Jian-min, DU Zhi-hu, et al. ....                                                       | 87  |
| Surface modification of corn stalk by low temperature plasma/CHEN Gui-hua, XIANG Shi-long, ZHOU Lu-ying .....                                                                            | 92  |
| Properties of radial strain of bamboo in the process of hot pressing/HAN Jian, GAO Xi-tao .....                                                                                          | 96  |
| Mutually cutting and spreading out bamboo culms and processing technique of laminated bamboo-wood composite lumber/DING Ding-an, SUN Xiao-dong, LI Yang, et al. ....                     | 100 |
| Steady state response of a spherical cavity in soil described by fractional derivative viscoelastic model/LIU Lin-chao, SU Zi-ping .....                                                 | 104 |
| Theory and test research of full waveform acoustic logging for slope weak layer evaluation/XIE Zhong-qiu, XIAO Hong-bin, LI Zhen-yu, et al. ....                                         | 108 |
| Systematical analysis and construction of new and old integration design patterns for university campus; taking Hunan University and South Central University as an example/HE Wei ..... | 112 |
| Analysis of vehicle-bridge vibration of continuous truss girder bridge by mode method/YANG Shi-ruo .....                                                                                 | 120 |
| Analysis of effects of boundary conditions on system behavior in two-dimensional relative motion/LUO Yong-feng, GONG Zhi-qiang .....                                                     | 125 |
| Polyurethane curing agent with low free TDI content/SUN De-bin, HUA Tie-guo .....                                                                                                        | 129 |
| Numerical simulation and analysis of moving-magnet linear refrigerator compressor/XIE Jie-fei, LI Xin-hua, XIAO Zhou-yong .....                                                          | 133 |
| Air-conditioning system driven by waste heat and solar energy/ZHONG Ji-xiang .....                                                                                                       | 138 |
| Impact of recreational trappings on vegetation damage in Zhangjiajie National Forest Park/FU Hong-jun, YANG Yi-kun .....                                                                 | 143 |
| Study of decomposition of full waveform airborne laser scanner data/LIU Feng, TAN Chang .....                                                                                            | 148 |
| The design for web login base on J2EE and ExtJS/LIU Zhen-yu, XIAO Wu-kui .....                                                                                                           | 155 |