



ISSN 1006-8023
CN23-1388/S
CODEN: SGEOCY

中国高校优秀科技期刊
中文核心期刊
中国科技核心期刊
中国农林核心期刊

森 林 工 程

FOREST ENGINEERING

SEN LIN GONG CHENG

第 38 卷
Vol.38

第 5 期
No.5

2022

ISSN 1006-8023



09>
9 771006 802226

东北林业大学

中国林学会森林工程分会

森林工程 第38卷 第5期

(2022年9月)

目 次

· 森林资源建设与保护 ·

外源生长素质量浓度和扦插基质对色木槭嫩枝扦插生根的影响

..... 周鑫鑫,李茹月,臧世阳,堃芃,杨玲(1)

多时相 PolInSAR 数据土地覆盖类型分类研究 程腾辉,范文义,吴国明(10)

兴安落叶松林土壤养分与酶活性的动态分析 党乾顺,隋心,陈福元,穆立蔷(18)

美国白蜡扦插过程中插穗内含物变化分析 常雪薇,薛满满,李春明,杨立学(29)

地表细小可燃物含水率野外自动记录监测系统设计与试验

..... 于宏洲,柳慧,张运林,宁吉彬,郭妍,胡同欣,杨光(38)

陕西6个主栽核桃品种花粉特性研究 张焕玲,童开林,梁烜毓(48)

蒙古栎烂皮病病原菌鉴定 黄麒,陈洁,刘忠玄,刘雪峰,刁桂萍(56)

· 木材科学与工程 ·

木粉与相容剂含量对木塑复合材料声学振动性能的影响

..... 刘镇波,李晓君,于云鹏,万珂,郝骞,王艺达,王辰希(62)

阳离子化稻草纤维对诱惑红吸附性能的研究

..... 朱琦浩,盆宇洁,张森倩,芈聪慧,潘磊,孙浩洲,王立娟(68)

· 森工技术与装备 ·

灌木切割试验装置切割振动分析 薄仕文,李耀翔,王海滨(75)

基于无人机光学遥感的森林生物量估算研究 李滨,刘可宁(83)

植物导管中穿孔板的流体力学建模与流阻分析 刘九庆,谢力(93)

基于YOLOv5的林业有害生物检测与识别 孙丽萍,谭少亨,周宏威,邹青池(104)

匀浆结合超声-微波协同提取桔梗中桔梗皂苷D和党参炔苷工艺研究

..... 张庆芬,李占君,李晓雪,孙思全,李姣,杨逢建(110)

· 道路与交通 ·

冻融循环作用下铁尾矿砂水泥土强度及变形特性研究 胡建林,高鹏飞,张玉龙(121)

双掺再生水泥稳定碎石干缩性能研究 张立群,张学峰,崔宏环,任忠钊(128)

轮胎与钢桥面相互作用下重交通荷载图式分析 景晶晶,侯新宇,林军,刘鑫,刘为平(137)

人工冻结红黏土冻融特性试验研究 王升福,吕亮,刘光炎,罗成文,薛凯喜,李栋伟(144)

乳化沥青粒度表征及与早期强度相关性 王明,刁万民,孙斌,霍同德(151)

岩沥青/植物油复合再生沥青的流变性能 陈冬,张志强,段鑫明,张亮亮,李志宏,胡照广(159)

现浇大直径基坑支护能量蓄水管桩能量交换系统研究

..... 胡庄,胡俊,汪磊,夏京,王志鑫,曾东灵,佳琳(169)

基于修正PRM算法的智能车辆路径规划研究 李琼琼,徐溢琪,布升强,杨家富,陈勇(179)

Forest Engineering

(Sep. ,2022)

Vol. 38

No. 5

CONTENTS

• Forest Resources Development and Conservation •

- Effects of Exogenous Auxin Mass Concentration and Cuttings Substrate on the Rooting of the Softwood Cuttings of *Acer mono* ZHOU Xinxin, LI Ruyue, ZANG Shiyang, KUN Peng, YANG Ling(1)
Research on Land Cover Type Classification of Multi-temporal PolInSAR Data CHENG Tenghui, FAN Wenqi, WU Guoming(10)
Dynamic Analysis of Soil Nutrients and Enzyme Activities in *Larix gmelinii* Forest DANG Qianshun, SUI Xin, CHEN Fuyuan, MU Liqiang(18)
Analysis of Inclusions Changes in Cuttings of *Fraxinus americana* During Cutting CHANG Xuwei, XUE Manman, LI Chunming, YANG Lixue(29)
Design and Experiment of Monitoring System for Surface Fine Fuel Moisture YU Hongzhou, LIU Hui, ZHANG Yunlin, NING Jibin, GUO Yan, HU Tongxin, YANG Guang(38)
Research on Pollen Characteristics of Six Main Walnut Cultivars in Shaanxi Province ZHANG Huanling, TONG Kailin, LIANG Xuanyu(48)
Identification of Pathogen of *Quercus mongolica* Branch Canker Diseases HUANG Qi, CHEN Jie, LIU Zhongxuan, LIU Xuefeng, DIAO Guiping(56)

• Wood Science and Engineering •

- Effects of Wood Powder and Compatibilizer Content on Acoustic Vibration Properties of Wood–Plastic Composite LIU Zhenbo, LI Xiaojun, YU Yunpeng, WAN Ke, HAO Qian, WANG Yida, WANG Chenxi(62)
Study on the Adsorption Properties of Allura Red on Cationized Straw Fibers ZHU Qihao, PEN Yujie, ZHANG Miaoqian, MI Conghui, PAN Lei, SUN Haozhou, WANG Lijuan(68)

• Forest Engineering Technology and Equipment •

- Cutting Vibration Analysis of Shrub Cutting Experimental Device BO Shiwen, LI Yaoliang, WANG Haibin(75)
Forest Biomass Estimation Based on UAV Optical Remote Sensing LI Bin, LIU Kening(83)
Fluid Mechanics Modeling and Flow Resistance Analysis of Perforation Plates in the Vessels of Vascular Plants LIU Jiuqing, XIE Li(93)
Forestry Pests Detection and Identification Based on YOLOv5 SUN Liping, TAN Shaoheng, ZHOU Hongwei, ZOU Qingchi(104)
Homogenate Pretreatment Followed by Ultrasonic–Microwave Synergistic Extraction of Platycodin D and Lobetyolin from the *Platycodon radix* ZHANG Qingfen, LI Zhanjun, LI Xiaoxue, SUN Siquan, LI Jiao, YANG Fengjian(110)

• Road and Traffic •

- Study on Strength and Deformation Characteristics of Cement Soil of Iron Tailing Sand Under Freeze–thaw Cycles HU Jianlin, GAO Pengfei, ZHANG Yulong(121)
Study on Dry Shrinkage Performance of Binary Recycled Cement Stabilized Fragments ZHANG Liqun, ZHANG Xuefeng, CUI Honghuan, REN Zhongzhao(128)
Heavy Traffic Load diagram Study Under Tire Steel Bridge Interaction JING Jingjing, HOU Xinyu, LIN Jun, LIU Xin, LIU Weiping(137)
Experimental Study on Freeze–thaw Characteristics of Red Clay Due to Artificial Freezing WANG Shengfu, LYU Liang, LIU Guangyan, LUO Chengwen, XUE Kaixi, LI Dongwei(144)
Characterization of Particle Size of Emulsified Asphalt and its Correlation with Early Strength WANG Ming, DIAO Wanmin, SUN Bin, HUO Tongde(151)
Rheological Properties of Rock Bitumen/Plant Oil Composite Regenerated Bitumen CHEN Dong, ZHANG Zhiqiang, DUAN Xinning, ZHANG Liangliang, LI Zhihong, HU Zhaoguang(159)
Development of Energy Exchange System for Cast-in-place Large Diameter Foundation Pit Retaining Energy Storage Pipe Pile HU Zhuang, HU Jun, WANG Lei, XIA Jing, WANG Zhixin, ZENG Dongling, JIA Lin(169)
Research on Smart Vehicle Path Planning Based on Modified PRM Algorithm LI Qiongqiong, XU Yiqi, BU Shengqiang, YANG Jiafu, CHEN Yong(179)