

# 《西北林学院学报》第四届编辑委员会

ISSN 1001-7461  
CN 61-1202/S

主任委员 赵忠

副主任委员 刘建军 窦延玲 唐明 张文辉

编委 (按姓氏笔画排序)

马希汉 弓弼 刘建军 刘国彬 李周歧 李卫忠  
陈辉 吴发启 孟全省 张硕新 张文辉 岳田利  
范升才 屈永建 赵忠 段渊古 胡景江 肖耀平  
郭风平 姚顺波 唐明 唐德瑞 高锦明 曹支敏  
韩崇选 雷瑞德 雷亚芳 慕小倩 樊金拴

主编 刘建军

副主编 窦延玲(专职)

本期责任编辑 韩燕

本期英文编辑 马希汉

## 西北林学院学报

XIBEI LINXUEYUAN XUEBAO

(1984年创刊)

2019年1月 第34卷第1期(总第155期)  
(双月刊)

主管单位: 中华人民共和国教育部

主办单位: 西北农林科技大学

编辑出版: 西北林学院学报 编辑部  
(陕西杨陵邰城路3号)

邮政编码: 712100

电 话: 029-87082059

电子信箱: xlxb@vip.163.com

网 址: http://www.xblxb.cn

主 编: 刘建军

副 主 编: 窦延玲(专职)

印 刷: 陕西森奥印务有限公司

国内总发行: 陕西省西安市邮局

国内订阅: 全国各地邮局

国外发行: 中国国际图书贸易总公司  
(北京市车公庄西路35号)

国际标准连续出版物刊号: ISSN 1001-7461  
国内统一连续出版物刊号: CN 61-1202/S

## JOURNAL OF NORTHWEST FORESTRY UNIVERSITY

(Started in 1984)

Vol. 34 No. 1 (Sum. 155) Jan. 2018  
(Bimonthly)



全国中文核心期刊  
全国科技核心期刊  
中国科学引文数据库统计源期刊  
RCCSE 中国核心学术期刊  
全国高校优秀学报  
陕西省优秀科技期刊

西北林学院学报

第三十四卷

第一期

二〇一九年一月

# 西北林学院学报

JOURNAL OF NORTHWEST FORESTRY UNIVERSITY

第34卷 第1期

Vol. 34 No. 1

2019

西北农林科技大学



公开发行 邮发代号: 52-99 国内定价: 40.00元

## 目 次

### 森林生物学

- 秦岭火地塘林区不同海拔不同林型土壤  $\text{CO}_2$ 、 $\text{CH}_4$ 、 $\text{N}_2\text{O}$  通量研究 ..... 刘岳坤, 庞军柱, 辰凡, 彭长辉, 张硕新, 侯琳, 王效科, 张红星(1)
- 连栽杉木林地土壤对其无性系幼苗土壤酶活性和酚酸类物质含量的影响 ..... 罗红艳, 陈潇潇, 曹光球, 陈爱玲, 魏晓骁, 叶义全(11)
- 黄土高原丘陵沟壑区 2 种起源油松林更新苗根际土壤酶活性和养分含量比较研究 ..... 沈震, 武玉荷, 党鹏, 刘金良, 赵忠(19)
- 荒漠草原不同土壤类型柠条根际土壤养分与土壤颗粒分布特征研究 ..... 牛宋芳, 刘秉儒, 张文文, 潘笑笑, 祝忠有(25)
- 桂西北细叶云南松天然林凋落物及土壤养分特征 ..... 廖良宁, 卢姿瑾, 李远发, 叶绍明, 喻素芳(31)
- 滨海沙地不同树种人工林生物量及凋落物碳氮养分归还 ..... 葛露露, 何宗明, 林宇, 苏利堡, 黄秀勇(39)
- 元江稀树灌丛降雨再分配及其与气象因子的关系 ..... 熊壮, 叶文, 张树斌, 杨大新(47)
- 套种绿肥对桉树人工林土壤理化性质的影响 ..... 高文杰, 程飞, 廖博一, 林俊平, 蔡泉星, 刘爱琴(54)
- 高温胁迫对野生湖北百合生理指标的影响 ..... 蒋瑶, 陈文波, 黄江中, 陈其兵(62)
- 基于 SPEI 的陕北黄土丘陵区干旱特征及影响因素分析 ..... 郭旭新, 赵英, 高志永, 汪有科(69)
- 毛竹叶片重要营养元素的光谱敏感波段分析 ..... 张佳奇, 余坤勇, 刘健, 曾琪, 邓洋波, 张今朝, 姚雄, 陈樟昊(77)
- 橡胶树叶片不同发育时期 SPAD 值及叶色动态变化 ..... 张凤良, 李小琴, 毛常丽, 吴裕, 倪书邦(83)
- 不同生境准噶尔无叶豆群落特征及物种多样性研究 ..... 施翔, 孟凡翔, 杨姗霖, 冶建明, 庞玮(91)

### 林木遗传育种与培育

- 磴口县引种胡杨的生长规律及其评价 ..... 厉静文, 郭浩, 吕永军, 辛智鸣, 霍俊澎(97)
- 抚育间伐对红桦林生态系统碳密度的影响 ..... 殷博, 董鹏飞, 党坤良(105)
- 油茶 F1 代苗期叶表型性状遗传多样性研究 ..... 王东雪, 曾雯珺, 江泽鹏, 蔡娅, 张乃燕(113)
- 楸树优良品种‘朝霞’增殖及生根培养的研究 ..... 孟路, 刘勇, 贺国鑫, 邢丽霞, 方志军(119)
- 生草当年对枣园土壤性状及红枣品质的影响 ..... 庞群虎, 宋丽华, 王竞, 孙权, 齐雁冰, 王锐(124)
- 糖蜜对人工培养银叶真藓生长发育的影响 ..... 李晨辉, 赵允格(130)
- 不同剂量稀土对金雨金合欢幼苗生长的影响 ..... 唐洪辉, 赵庆, 杨洋, 魏丹, 杨清, 许东先(137)
- 贵州山地葡萄园土壤和树体养分状况及其评价 ..... 王玉倩, 张文娥, 潘学军(144)

### 森林保护学

- 10 种生物源杀菌剂对苹果树腐烂病菌的室内活性评价 ..... 王帅, 刘召阳, 高小宁, 冯浩, 秦虎强, 黄丽丽(150)

- 云南3种乔木防火期内含水率变化及预测模型 ..... 张运林,宋红,胡海清(157)  
2003—2016年中国华北地区森林火灾时空特征研究 ..... 张恒,马运佳,彭徐剑,张秋良(163)  
黄河湿地孟津段生态环境状况及对策研究 ..... 赵腾飞,郭准,郭净净,李杰锋,刘洋洋,马朝红(170)

### 森林经理学

- 天然麻栎次生林生长规律研究 ..... 刘小军,刘平宇,赵苗苗,谭佳伟,杨斌,张文辉(175)  
西南桦人工林生长规律研究 ..... 陶玉华,赵峰,庞正轰,黄光启,赖曼芳,李魁荣,黄秀英(180)  
珠江三角洲城市群生态状况变化遥感评价 ..... 张洁,杨燕琼(184)  
洮河国家级自然保护区生态需水与水资源承载力评价研究 .....  
..... 赵亮生,邱书志,薄乖民,丁骞,张克栋,闫毓斌,王少明(192)  
基于NDVI-Albedo特征空间的陕西省干旱与荒漠化遥感监测 ..... 岳辉,刘英(198)  
伏牛山区栓皮栎天然次生林地位指数ANN模型构建 ..... 陈晨,刘光武,陈涛,温仲清(206)  
黄土高原地区2001—2015年植被覆盖变化及气候影响因子 ..... 孟晗,黄远程,史晓亮(211)

### 木材科学

- 基于有限元法速生杨层积材增强家具直榫优化 ..... 曹友霖,王天龙,王娱(218)  
枫桦树枝和树根木质部非结构性碳水化合物的地区差异 .....  
..... 赵西平,郭平平,张昭林,刘势语,王兴昌,王孟珂,周爽爽,南亚培(224)  
可见/近红外光谱技术识别树叶树种的研究 ..... 汪紫阳,尹世達,李春旭,李耀翔(229)  
棉秆在NaOH中水解过程的神经网络模拟与优化 .....  
..... 呼肖娜,杨鹏,杨月霞,洪会霞,雷倩,周娜(237)

### 园林绿化与景观设计

- 基于生态效益下城镇(郊)陡坡及人工立面不同坡度景观林评价——以干旱半干旱区为例 .....  
..... 杨阳,高媛,郝嘉伟,王睿,康海斌,赵国康,王得祥(242)  
城市公园降温效应的季节性差异研究——以石家庄市为例 ..... 张俊艳,林高山,王华静,杨存建(247)  
低山丘陵区景观类型与地形因子耦合关系研究——以伏牛山余脉区为例 .....  
..... 孙全凤,张延龙,牛立新,张刚,洪波(254)  
广州市公园棚架式植物景观评价 ..... 洗丽铧,翁殊斐,林熙迪,冯志坚(261)  
中国省域建成区绿地率空间格局演变分析 ..... 刘志强,王俊帝,邵大伟,洪亘伟(267)  
  
我刊2018年荣获三项奖励 ..... 封二  
《西北林学院学报》2018年影响因子年报 ..... 封三

期刊基本参数:CN61-1202/S \* 1984 \* b \* A4 \* 272 \* zh \* P \* 40.00 \* 1000 \* 41 \* 2019-01

## CONTENTS

Soil-Atmosphere Exchange of Nitrous Oxide, Methane and Carbon Dioxide of Different Forest Types at Different Elevations in Huoditang Forest Region of Qinling Mountains .....	LIU Yue-kun, PANG Jun-zhu, YI Fan, PENG Chang-hui, ZHANG Shuo-xin, HOU Lin, WANG Xiao-ke, ZHANG Hong-xing(1)
Effects of Continuous Planting on Soil Enzyme Activities and Phenolic Acid Contents in Soil and Root Tips of <i>Cunninghamia lanceolata</i> .....	LUO Hong-yan, CHEN Xiao-xiao, CAO Guang-qiu, CHEN Ai-ling, WEI Xiao-xiao, YE Yi-quan(11)
Comparison of the Enzyme Activities and Soil Nutrients in the Rhizosphere of <i>Pinus tabuliformis</i> Seedlings of Two Origins in Hilly and Gully Regions of Loess Plateau .....	SHEN Zhen, WU Yu-he, DANG Peng, LIU Jing-liang, ZHAO Zhong(19)
Characteristics of Soil Nutrients and Particle Size Distribution in Rhizosphere of <i>Caragana korshinskii</i> under Different Soil Types .....	NIU Song-fang, LIU Bing-ru, ZHANG Wen-wen, PAN Xiao-xiao, ZHU Zhong-you(25)
Litter and Soil Nutrient Characteristics of <i>Pinus yunnanensis</i> var. <i>tenuifolia</i> Natural Forest in Northwest Guangxi .....	LIAO Liang-ning, LU Zi-jin, LI Yuan-fa, YE Shao-ming, YU Su-fang(31)
Biomass and Litter Carbon and Nitrogen Return of Different Plantations in the Sandy Coastal Plain Area .....	GE Lu-lu, HE Zong-ming, LIN Yu, SU Li-bao, HUANG Xiu-yong(39)
Rainfall Redistribution and Its Relationship with Meteorological Factors in Yuanjiang Valley-type Savanna, Southwest China .....	XIONG Zhuang, YE Wen, ZHANG Shu-bin, YANG Da-xin(47)
Effects of Interplanting Green Manure on Soil Physical and Chemical Properties of Eucalyptus Plantation .....	GAO Wen-jie, CHENG Fei, LIAO Bo-yi, LIN Jun-ping, CAI Quan-xing, LIU Ai-qin(54)
Effects of High Temperature Stress on Physiological Indexes of Wild <i>Lilium henryi</i> .....	JIANG Yao, CHEN Wen-bo, HUANG Jiang-zhong, CHEN Qi-bing(62)
SPEI Based Drought Characters and Factors in Loess Hilly Regions of Northern Shaanxi .....	GUO Xu-xin, ZHAO Ying, GAO Zhi-yong, WANG You-ke(69)
Spectral Sensitive Band Analysis of Important Nutrient Elements of <i>Phyllostachys pubescens</i> Leaves .....	ZHANG Jia-qi, YU Kun-yong, LIU Jian, ZENG Qi, DENG Yang-bo, ZHANG Jin-zhao, YAO Xiong, CHEN Zhang-hao(77)
Dynamic Changes of SPAD Value and Color of <i>Hevea brasiliensis</i> Leaves during Different Growth and Development Periods .....	ZHANG Feng-liang, LI Xiao-qin, MAO Chang-li, WU Yu, NI Shu-bang(83)
Community Characteristics and Species Diversity of <i>Eremosparton songoricum</i> under Different Habitats .....	SHI Xiang, MENG Fan-xiang, YANG Shan-lin, YE Jian-ming, PANG Wei(91)
Growth Regularity and Evaluation of <i>Populus euphratica</i> Introduced in Dengkou County .....	LI Jing-wen, GUO Hao, LÜ Yong-jun, XIN Zhi-ming, HUO Jun-peng(97)
Effects of Thinning on Carbon Density of <i>Betula albo-sinensis</i> Ecosystem .....	YIN Bo, DONG Peng-fei, DANG Kun-liang(105)
Genetic Diversity of leaf Phenotypic Traits in F1 Progeny of <i>Camellia oleifera</i> .....	WANG Dong-xue, ZENG Wen-jun, JIANG Ze-peng, CAI Ya, ZHANG Nai-yan(113)
Multiplication and Rooting Culture of <i>Catalpa bungei</i> ‘Zhaoxia’ .....	MENG Lu, LIU Yong, HE Guo-xin, XING Li-xia, FANG Zhi-jun(119)
Effects of Growing Grasses in Jujube Orchards on Soil Properties and Fruit Quality .....	PANG Qun-hu, SONG Li-hua, WANG Jing, SUN Quan, QI Yan-bing, WANG Rui(124)
Influence of Molasses on the Growth of Artificial Cultured <i>Bryum argenteum</i> .....	LI Chen-hui, ZHAO Yun-ge(130)

Effects of Different Doses of Rare Earth Elements on the Growth of <i>Acacia adunca</i> Seedlings .....	TANG Hong-hui,ZHAO Qing,YANG Yang,WEI Dan,YANG Qing,XU Dong-xian(137)
Soil and Tree Nutrient Status and Evaluation of Vineyards in Guizhou Mountainous Region .....	WANG Yu-qian,ZHANG Wen-e,PAN Xue-jun(144)
Antifungal Activity of 10 Biological Fungicides Against <i>Valsa mali</i> .....	WANG Shuai,LIU Zhao-yang,GAO Xiao-ning,FENG Hao,QIN Hu-qiang,HUANG Li-li(150)
Prediction Model of Moisture Content of 3 Tree Species in Yunnan Province .....	ZHANG Yun-lin,SONG Hong,HU Hai-qing(157)
Temporal and Spatial Characteristics of Forest Fires in Northern China from 2003 to 2016 .....	ZHANG Heng,MA Yun-jia,PENG Xu-jian,ZHANG Qiu-liang(163)
Ecological Environment of Mengjin Yellow River Wetland and Improvement Measures .....	ZHAO Teng-fei,GUO Zhun,GUO Jing-jing,LI Jie-feng,LIU Yang-yang,MA Chao-hong(170)
Growth Law of Natural <i>Quercus acutissima</i> Secondary Forest .....	LIU Xiao-jun,LIU Ping-yu,ZHAO Miao-miao,TAN Jia-wei,YANG Bin,ZHANG Wen-hui(175)
Growth Law of <i>Betula alnoides</i> Plantation .....	TAO Yu-hua,ZHAO Feng,PANG Zheng-hong,HUANG Guang-qi,LAI Man-fang,LI Kui-rong,HUANG Xiu-ying(180)
Remote Sensing Evaluation on the Change of Ecological Status of Pearl River Delta Urban Agglomeration .....	ZHANG Jie,YANG Yan-qiong(184)
Ecological Water Demand and Water Resources Carrying Capacity in Taohe River National Nature Reserve .....	ZHAO Liang-sheng,QIU Shu-zhi,BO Gui-min,DING Qian,ZHANG Ke-dong,YAN Yu-bin,WANG Shao-ming(192)
Monitoring of Drought and Desertification in Shaanxi Province Based on NDVI-Albedo Space .....	YUE Hui,LIU Ying(198)
Site Index Simulation for <i>Quercus variabilis</i> Natural Secondary Forest in Funiu Mountainous Area Based on ANN .....	CHEN Chen,LIU Guang-wu,CHEN Tao,WEN Zhong-qing(206)
Vegetation Coverage Change and Climate Impact Factors in the Loess Plateau from 2001 to 2015 .....	MENG Han,HUANG Yuan-cheng,SHI Xiao-liang(211)
Poplar LVL Strengthen and Furniture Joint Size Optimization Based on Finite Element Analysis .....	CAO You-lin,WANG Tian-long,WANG Yu(218)
Regional VariationS of Non-structural Carbohydrates in Xylem of <i>Betula costata</i> Branches and Roots .....	ZHAO Xi-ping, GUO Ping-ping,ZHANG Zhao-lin,LIU Shi-yu,WANG Xing-chang,WANG Meng-ke,ZHOU Shuang-shuang,NAN Ya-pei(224)
Identification of Tree Leaf and Species by Vis/NIR Spectroscopy .....	WANG Zi-yang,YIN Shi-kui,LI Chun-xu,LI Yao-xiang(229)
Simulation and Optimization of Hydrolysis of Cotton Stalk in NaOH Solution by Artificial Neural Network .....	HU Xiao-na,YANG Peng,YANG Yue-xia,HONG Hui-xia,LEI Qian,ZHOU Na(237)
Ecological Benefit of Plantscape Forests in Different Degrees of Steep Slope and Artificial Facade in Arid and Semi-arid Areas .....	YANG Yang,GAO Yuan,HAO Jia-wei,WANG Rui,KANG Hai-bin,ZHAO Guo-kang,WANG De-xiang(242)
Seasonal Differences in the Cooling Effect of Urban Parks:A Case Study of Shijiazhuang .....	ZHANG Jun-yan,LIN Gao-shan,WANG Hua-jing,YANG Cun-jian(247)
Coupling Relationship between Landscape Types and Terrain Factors in Low Mountain Areas:A Case Study of Funiu Mountain .....	SUN Quan-feng,ZHANG Yan-long,NIU Li-xin,ZHANG Gang,HONG Bo(254)
Evaluation of Scaffolding Plantscape in Guangzhou Park .....	XIAN Li-hua,WENG Shu-fei,LIN Xi-di,FENG Zhi-jian(261)
Spatial Pattern Evolution of Provincial Green Rate of Built District in China .....	LIU Zhi-qiang,WANG Jun-di,SHAO Da-wei,HONG Gen-wei(267)