



ISSN1000-4025
CN61-1091/Q

西北植物学报

ACTA BOTANICA BOREALI-OCCIDENTALIA SINICA

第37卷 第2期

Vol.37 No.2



2

西北农林科技大学 主办
科学出版社

2017

西北植物学报

(Xibei Zhiwu Xuebao, 1980 年创刊)

2017 年 2 月 第 37 卷 第 2 期

目 次

· 研究报告 ·

- 蒙古冰草 *Lhcb1* 基因克隆及干旱胁迫下的表达分析 赵彦,高鑫,王丹,高翠萍,云锦凤(211)
- 小桐子糖原合成激酶基因 *JcGSK* 的克隆与表达分析 黄尧瑶,文锦芬,邓明华,龚明,陈浩维(217)
- 慈竹中 2 个 *NAC* 转录因子的克隆与分析 李会萍,黎帮勇,胡尚连,曹颖(225)
- 小麦 *F-box* 基因 *TaFBL14* 的克隆及表达分析 李铃仙,魏春茹,李虎滢,魏新燕,于秀梅(232)
- 大豆 *KUP/HAK/KT* 钾转运体基因家族的鉴定与表达分析
..... 晁毛妮,温青玉,张晋玉,张志勇,董洁,于亚鑫(239)
- ‘云香’水仙 *ACC* 合成酶基因 *NtACS1* 的克隆及遗传转化
..... 孙申申,温秀萍,杨菲颖,李梦思,李欢,李科,陈晓静(250)
- 龙眼 *miR171* 家族进化特性及其表达分析
..... 曾友竞,林玉玲,崔彤彤,陈晓慧,徐小萍,张梓浩,程春振,陈裕坤,赖钟雄(258)
- 天女木兰遗传多样性微卫星标记的研究 王金玲,王瑞俭,杜凤国,孙广仁,邹奎,王仲晖,张树平(266)
- 铁皮石斛 *2n* 花粉诱导及其形成的细胞机制研究 王爱华,吴青青,杨澜,陈之林(273)
- 蒙古黄芪营养器官结构与有效成分积累特征研究 滕红梅,王玲丽,胡晓晨,王伟平,胡正海(279)
- 3 种垂直绿化基质中园林植物干旱适应性的比较 邱帅,卢山,余磊,房瑶瑶,魏建芬,江波(286)
- 根肿病胁迫下外源 SA 对不结球白菜抗性诱导和生理生化的影响
..... 朱红芳,高倩倩,李晓锋,刘金平,翟文,邢诗怡,朱玉英(297)
- 黄腐酸和甜菜碱预处理对干旱胁迫下平邑甜茶生理特性及光合的影响
..... 李爱梅,张玲,张超,赵鹏博,勾薇,陈富彩,高梅,张立新(307)
- 根施甜菜碱对镍胁迫下小麦幼苗生长生理的影响
..... 巴青松,张根生,凌玉,李桂萍,宋运贤,张鹏飞,傅兆麟(315)
- 葎草幼苗的生理生化特征对盐胁迫的响应 王碧霞,黎云祥,丁春邦(321)
- 不同温度对烟草生长发育及光合作用的影响 杨利云,段胜智,李军营,逢涛,杨双龙,王莎莎,龚明(330)
- 盐碱胁迫对山葡萄光合特性及生长发育的影响
..... 王振兴,吕海燕,秦红艳,赵滢,刘迎雪,艾军,曹建冉,杨义明,沈育杰(339)
- 陕北刺槐林木生长及林下植被与土壤水分对种植密度的响应特征
..... 万方数据 吴多洋,焦菊英,于卫洁,徐海燕,陈一先(346)

红棕杜鹃不同海拔种群的表型多样性研究	苏应雄,张 雪,王文礼,赵云勇,王跃华,申仕康(356)
荒漠草原 3 种典型群落类型的土壤微生物量碳氮研究	张义凡,刘学东,陈 林,李学斌,杨新国(363)
云南纳板河保护区蕨类植物区系地理研究	王 倩,李根会,黄 琳,李 娟,覃家理(372)
藏药匙叶翼首草高频组织培养再生体系优化研究	袁 芳,李 晶,任海平,王大阳,兰小中(379)
· 研究技术与方法 ·	
黄果龙葵和龙葵染色体制片优化及核型分析	徐洪国,祁宏英,顾灵杰(387)
· 植物新类群与新分布 ·	
国产合瓣花植物名称的后选模式指定——Ⅱ. 报春花科、龙胆科、马鞭草科、唇形科(英文)	林 云,毕海燕,杨志荣,罗天琳,何珊珊,陈雅丽,敬 璇,云映霞,王明琼,林 祁(394)
连蕊芥(十字花科)一新异名	臧春鑫,朱文娟,关 潇,陈 龙,秦 帅,赵利清(399)
· 研究论坛与综述 ·	
氢气调节植物生长发育和提高植物抗逆性的研究进展	张海那,范海延,于 洋,贾淑敏,于广超,陈秋敏,赵珺玥(402)
植物种子寿命的生理及分子机制研究进展	周文冠,孟永杰,陈 锋,帅海威,罗晓峰,杨文钰,舒 凯(408)

CONTENTS

Cloning and Expression Analysis of *Lhcb1* from *Agropyron mongolicum* Keng under Drought Stress
..... ZHAO Yan ,GAO Xin ,WANG Dan ,GAO Cuiping ,YUN Jinfeng(211)

Cloning and Expression Analysis of *JcGSK* Gene in *Jatropha curcas* L
..... HUANG Yaoyao ,WEN Jinfen ,DENG Minghua ,GONG Ming ,CHEN Haowei(217)

Cloning and Analysis of Two *NAC* Transcription Factor Genes in *Bambusa emeiensis*
..... LI Huiping ,LI Bangyong ,HU Shanglian ,CAO Ying(225)

Cloning and Expression Analyses of F-box Gene *TaFBL14* in Wheat
..... LI Lingxian ,WEI Chunru ,LI Huiying ,WEI Xinyan ,YU Xiumei(232)

Identification and Expression Analysis of KUP/HAK/KT Potassium Transporter Gene Family in Soybean [*Glycine max*
(L.) Merr.] CHAO Maoni ,WEN Qingyu ,ZHANG Jinyu ,ZHANG Zhiyong ,DONG Jie ,YU Yaxin(239)

Molecular Cloning and Its Transformation of ACC Synthase *NtACS1* Gene from *Narcissus tazetta* var . Yunxiang
..... SUN Shenshen ,WEN Xiuping ,YANG Feiying ,LI Mengsi ,LI Huan ,LI Ke ,CHEN Xiaojing(250)

Evolutionary Characterization and Expression of miR171 Family in *Dimocarpus longan* Lour ZENG Youjing ,LIN Yuling ,
CUI Tongtong ,CHEN Xiaohui ,XU Xiaoping ,ZHANG Zihao ,CHENG Chunzhen ,CHEN Yukun ,LAI Zhongxiong(258)

Genetic Diversity of *Magnolia sieboldii* Assessed with SSR Markers
..... WANG Jinling ,WANG Ruijian ,DU Fengguo ,SUN Guangren ,ZOU Kui ,WANG Zhonghui ,ZHANG Shuping(266)

Study on 2n Pollen Induction and Cytological Mechanism of 2n Pollen Formation in *Dendrobium officinale*
..... WANG Aihua ,WU Qingqing ,YANG Lan ,CHEN Zhilin(273)

Anatomy of Vegetative Organs and the Accumulation of Active Constituents in *Astragalus membranaceus* var . *mongolicus*
..... TENG Hongmei ,WANG Lingli ,HU Xiaochen ,WANG Weiping ,HU Zhenghai(279)

Study on Drought Adaptability of Landscape Plants in 3 Vertical Greening Substrates
..... QIU Shuai ,LU Shan ,YU Lei ,FANG Yaoyao ,WEI Jianfen ,JIANG Bo(286)

Effect of Exogenous Salicylic Acid on Seedling Growth and Clubroot Disease (*Plasmodiophora brassicae*) in Pak-choi(*Brassica*
campestris ssp . *chinensis* Makino)
..... ZHU Hongfang ,GAO Qianqian ,LI Xiaofeng ,LIU Jinping ,ZHAI Wen ,XING Shiyi ,ZHU Yuying(297)

Effects of Fulvic Acid and Betaine Pretreatment on Physiological Characteristics and Photosynthesis of *Malus hupehensis*
under Drought Stress
.....

LI Aimei , ZHANG Ling , ZHANG Chao , ZHAO Pengbo , GOU Wei , CHEN Fucai , GAO Mei , ZHANG Lixin(307)	
Physiological Effects of Root-applying Glycine Betaine on Wheat Seedlings Growth under Nickel Stress	
..... BA Qingsong , ZHANG Gensheng , LING Yu , LI Guiping , SONG Yunxian , ZHANG Pengfei , FU Zhaolin(315)	
Physiological and Biochemical Responses of <i>Humulus scandens</i> Seedlings to NaCl Stress	
..... WANG Bixia , LI Yunxiang , DING Chunbang(321)	
Effects of Different Temperatures on Growth , Development and Photosynthesis of Tobacco (<i>Nicotiana tabacum</i> L .) Plants	
... YANG Liyun , DUAN Shengzhi , LI Junying , PANG Tao , YANG Shuanglong , WANG Shasha , GONG Ming(330)	
Photosynthetic Characteristics and Growth Development of Amur Grape (<i>Vitis amurensis</i> Rupr .) under Saline-Alkali Stress	
..... WANG Zhenxing ,	
LÜ Haiyan , QIN Hongyan , ZHAO Ying , LIU Yingxue , AI Jun , CAO Jianran , Yang Yiming , SHEN Yujie(339)	
Response Characteristics of Locust Growth , Understory Vegetation and Soil Moisture on Planting Density in Northern Shaanxi	
..... WU Duoyang , JIAO Juying , YU Weijie , XU Haiyan , CHEN Yixian(346)	
Phenotypic Diversity of <i>Rhododendron rubiginosum</i> Populations at Different Altitudes	
..... SU Yingxiong , ZHANG Xue , WANG Wenli , ZHAO Yunyong , WANG Yuehua , SHEN Shikang(356)	
Soil Microbial Biomass Carbon and Nitrogen in 3 Typical Communities of Desert Grassland	
..... ZHANG Yifan , LIU Xuedong , CHEN Lin , LI Xuebin , YANG Xinguo(363)	
Floristic Phytogeography of Pteridophytes in Naban River Watershed National Nature Reserve of Yunnan	
..... WANG Qian , LI Genhui , HUANG Lin , LI Juan , QIN Jiali(372)	
Efficient <i>in vitro</i> Plant Regeneration System of Tibetan Medicine <i>Pterocephalus hookeri</i> (C . B . Clarke) Höeck	
..... YUAN Fang , LI Jing , REN Haiping , WANG Dayang , LAN Xiaozhong(379)	
Optimization of Chromosome Sectioning Technique and Karyotype Analysis of <i>Solanum nigrum</i> var . <i>suaveolens</i> and <i>Solanum</i>	
<i>nigrum</i>	
XU Hongguo , QI Hongying , GU Lingjie(387)	
Lectotypifications of Some Names in Sympetalae from China—II . Primulaceae , Gentianaceae , Verbenaceae and Lamiaceae	
..... LIN Yun , BI Haiyan ,	
YANG Zhirong , LUO Tianlin , HE Shanshan , CHEN Yali , JING Xuan , YUN Yingxia , WANG Mingqiong , LIN Qi(394)	
A New Synonym of <i>Systemon petrovii</i> Botsch . (Cruciferae)	
..... ZANG Chunxin , ZHU Wenjuan , GUAN Xiao , CHEN Long , QIN Shuai , ZHAO Liqing(399)	
Research Progress of Hydrogen Regulating Plant Growth and Development and Improving Plant Stress Resistance	
..... ZHANG Haina , FAN Haiyan , YU Yang , JIA Shumin , YU Guangchao , CHEN Qiumin , ZHAO Junyue(402)	
Advances in Studies of Physiological and Molecular Mechanisms of Plant Seed Longevity	
... ZHOU Wenguan , MENG Yongjie , CHEN Feng , SHUAI Haiwei , LUO Xiaofeng , YANG Wenyu , SHU Kai(408)	