

热带生物学报 2018 年总目次

第1期

· 研究报告 ·

- 夜光藻斑块分布与水环境因子的相关关系 熊世斌, 覃超梅, 黄少建, 钟超, 孙凯峰(1)
巴西橡胶树 *HbMYBs* 转录因子的克隆及表达分析 林贤桂, 翟金玲, 黄惜(12)
橡胶树 *HbMVK* 启动子的克隆与缺失表达分析 胡进, 杨翠萍, 巩笑笑, 闫冰玉, 谭玉荣,
王丹, 高璇, 张恒, 刘进平(21)
3个基因共同参与拟南芥对橡胶树白粉菌的抗病性 李亮, 梅双双, 戎伟(31)
海南特有毛花马铃苣苔小尺度局域种群的年龄结构与基因流 邢婀娜, 徐诗涛, 任明迅(37)
不同海拔下海南凤仙花可培养根际真菌和细菌群落的季节性变化
..... 刘宇, 韩淑梅, 宋希强, 丁琼, 王鹏, 赵莹(47)
海南儋州农用地土壤速效磷和速效钾的空间变异
..... 曾迪, 漆智平, 周丹, 魏志远, 王登峰, 高乐, 刘磊(54)
金沙江干热河谷银合欢人工林的土壤水分变化特征 王艳丹, 张梦寅, 范建成, 何光熊, 张明忠, 方海东(61)
5个海巴戟种质低温胁迫下的抗寒性评价 赵帅, 阚艳鹏, 夏栋楠, 符文英(69)
广藿香和藿香 X 射线衍射图谱分析 杨豫章, 吴友根, 李春龚, 张军锋, 庞真真, 于靖(76)
肉桂精油主要活性成分对芒果胶孢炭疽菌的抑制 李秀竹, 陈婷婷, 刘佳怡, 宋海超, 史学群(81)
细菌 VI型分泌系统 Hcp 与 VgrG 蛋白的共进化分析
..... 牛苗静, 谢清标, 李婷, 李春霞, 陈银华, 陶均(90)
气调包装微环境对樱桃品质的影响 王维海, 李源钊, 吴先辉, 庞杰(101)
海南佛寺园林的空间布局与植物景观 宋昌吉, 周鹏, 宋希强, 王健, 杨春淮(109)
- 文献综述 ·
- 我国园林绿地的碳汇研究进展 童家婧, 黄伟, 黎秀琼, 田巍, 吴金山(117)
凤尾蕨属植物的分类学研究进展 杨东梅, 王佳玫, 王小娇, 王发国(123)

第2期

· 研究报告 ·

- 海马齿和长茎葡萄蕨藻的营养成分分析及评价 唐贤明, 刘小霞, 孟凡同, 王爱民, 顾志峰, 刘春胜(129)
暹罗鳄致病性嗜水气单胞菌嗜水亚种的分离鉴定 曾纪锋, 蒲文渊, 郭桂英, 杨诺, 侯国锋, 郑继平(136)
1株高产琼脂糖酶海洋弧菌的分离与酶活性的测定 张静雅, 刘宇鹏, 吴超, 邓益琴, 尹浩贤, 赵哲(142)

东寨港红树林典型区域氯霉素抗性基因的分布

..... 阮孙兰 赵洪伟 张 禹 张腾云 张鸣珊 靳晓拓 黎 平 刁晓平(147)
赤子爱胜蚓肠道中苯并 [a] 芘降解菌 BJ-1 的分离鉴定及其降解能力的测定

..... 李森楠 刁晓平 王海花 龚 莹(156)
MYC 基因家族 5 成员在巴西橡胶树染色体上的物理定位 高 豫 庄南生 王 英 高和琼(163)
木薯 *MeRbohE* 基因的克隆及表达分析 唐枝娟 朱寿松 于心怡 赵 锐 牛晓磊 陈银华 耿梦婷(170)
橡胶草悬浮细胞遗传转化体系的建立 刘明乾 吴绍华 田 郎 张世鑫 李 言 田维敏(176)
牛角瓜叶乙醇提取物的体外抗氧化活性 王 洁 李 花 骆焱平(183)
华石斛种群动态与繁殖策略的相关性分析 王童欣 戚山江 宋希强 孟千万 于旭东(189)
乙醇对不同菌种合成纤维素的影响及高产菌株对乙醇的敏感性和耐受性

..... 贾 佳 陈华美 王艳梅 邵璐滢 刘晓兰 李从发 刘四新(198)
海南辣椒白斑病病菌鉴定及田间药效试验 黄文枫 王 敏 胡艳平 马伏宁 郭 刚(203)
干旱胁迫对海南黄灯笼椒辣味及相关生理生化指标的影响

..... 王龙飞 成善汉 夏 枫 倪 苗 张 浩 王 平 汪志伟 朱国鹏 林师森(207)
珊瑚砂和回填客土含水量对植物种植成活的影响 王小锋 杨 松 潘亚飞(214)
桉树皮对小白菜种子发芽的影响 李思远 余雪标 陈候鑫 王 睿 王 牌 童思远 林承博(219)
海南省主要陆生入侵植物在不同生境类型的适生性

..... 李嘉昊 李东海 赵瑞白 杨小波 罗文启 张凯 吴庭天(225)
海南大学儋州校区入侵植物调查

..... 谢 薇 蔡泽坪 于旭东 吴繁花 陈银华 罗佳佳 刘建舜 吴银杏 周 环(234)
“海绵城市”理念下的三亚城市公园雨水利用设计策略 宋珏莹 许先升 唐银莹 李 丹(244)
基于层次分析法的海口市日月广场景观评价 李清云 陈展川 侯则红 肖亦敏(252)
· 文献综述 ·

扇叶铁线蕨的研究进展 汪金梅 于旭东 蔡泽坪 徐诗涛 吴繁花 罗佳佳(260)

第 3 期

多杀菌素和乙基多杀菌素对斑马鱼胚胎发育的影响 孔伟浩 高薇珊 范咏梅 (267)

纳米 TiO₂ 对斑马鱼超氧化物歧化酶活性的影响 张 章 唐文浩 唐天乐(274)

抗菌肽对凡纳滨对虾抗病性和免疫指标的影响

..... 胡世康 王 博 秦海鹏 廖栩峰 孙成波 刘永胜 曲 朋(281)
潮汐式水流方式对循环水养殖系统氮磷的净化 陆伟强 顾志峰(287)
CRISPR/Cas9 的外膜囊泡转运与无乳链球菌清除

..... 侯国锋 曾家伟 羊熙春 王爱媛 刘亚欣 曾纪锋 郭桂英 杨 诺 李 迁 郑继平(295)
巴西橡胶树 *HbGSK1* 的基因克隆与表达分析

..... 杨署光 吴绍华 陈月异 李 言 张世鑫 史敏晶 田维敏(302)

火龙果根系在淹水胁迫下的基因差异表达

..... 闫臻,齐钊,熊睿,刘成立,徐敏,韦双双,阮云泽,汤华(312)

火龙果干旱胁迫下根和茎的基因差异表达

..... 齐钊,闫臻,徐敏,刘成立,程玉,熊睿,骆娟,汤华(320)

基质和激素对海南杜鹃扦插生根的影响 陈怡超,宋希强,赵莹,史佑海(328)

白妙樱的组织培养和快速繁殖 陆露,蒋细旺(333)

晚抽薹萝卜亲本的配合力及遗传力分析 曾小玲,黄建都,谢鑫鑫,祝金虹(339)

不同株间覆盖方式对山栏稻农艺性状及杂草防效的影响

..... 何光亮,赵建发,何美丹,柯智,袁潜华(344)

苦丁茶冬青不同种质材料的花果形态学观察 潘学峰,邵国伟,刘国民(350)

星油藤营养器官的解剖结构 王亚荣,张世鑫,宋希强,蔡波,蔡泽坪,于旭东(358)

第4期

卵形鲳鲹深海网箱养殖渔获模式的研究 林川,何永姑,王小兵(363)

卵形鲳鲹 IgM 蛋白的纯化和抗血清的制备 张胜楠,吴莹,孙云,曹贞洁,周永灿(370)

QuEChERS 方法在软体类海产品兽药多残留检测中的应用

..... 魏祯,曹献英,陈健,刘桂华(377)

铜离子对锦鲤 DNA 的损伤 刘秋妤,陈新,覃宗敏,卓文,唐敏(388)

文心兰 *OnRR9* 基因克隆及表达 闫冰玉,巩笑笑,谭玉荣,王鹏,李双江,潘英文,刘进平(393)烟草 *NtD14* 基因的遗传转化及其功能 徐琳,张泽,吕贤哲,李肇通,黄惜(401)

海南中部丘陵区鸭脚木次生林群落种间的关联性

..... 王牌,苟志辉,农寿千,黄川腾,林玲,余雪标(409)

泰国柚常温贮藏的采后品质变化 刘娟,阮音音,曾丽萍,李新国(418)

外源无机硒肥对铁皮石斛生长及多糖含量的影响 陈丽璇,陈淳,陈菲,柯合作(423)

氮肥施用量对火龙果枝条生长及养分积累的影响

..... 程玉,徐敏,熊睿,刘成立,林家年,阮云泽,任太军,王国洪,赵鹏飞,汤华(427)

50 株诺丽内生真菌抑菌活性的比较及其菌株鉴定

..... 胡征波,吴友根,易天凤,于靖,杨东梅,张军锋(433)

金线莲促生内生真菌的筛选与鉴定 周康,吴文碟,宋希强,周扬(440)

木蹄层孔菌子实体的化学成分分析 李冉,马青云,孔凡栋,谢晴宜,丁琼,赵友兴(445)

辣木茎提取物对小鼠胃肠道的调节作用 储春霞,黄圣卓,梅文莉,戴好富(452)

3 种微藻生物量监测方法的比较 刘积光,李昂,刘平怀(457)

三公膏传统工艺的改进及其多肽含量的测定 李扬,杨莹,张凌云,邓世明(464)

Journal of Tropical Biology

Vol. 9 2018

Contents of Main Articles

NO. 1

• Research reports •

- Correlation Between the Patch Distribution of *Noctiluca scintillans* Bloom and Aquatic Environmental Factors *QI Shibin , QIN Chaomei , HUANG Shaolian , ZHONG Chao , SUN Kaifeng(1)*
- Cloning and Expression Profiling of Transcription Factors *HbMYBs* of *Hevea brasiliensis* *LIN Xiangui , ZHAI Jinling , HUANG Xi(12)*
- Cloning and Deletion Analysis of *HbMVK* Promoter from Rubber Tree (*Hevea brasiliensis*) *HU Jin , YANG Cuiping , GONG Xiaoxiao , YAN Bingyu , TAN Yurong , WANG Dan , GAO Xuan , ZHANG Heng , LIU Jinping(21)*
- Involvement of 3 Genes in the Disease Resistance of *Arabidopsis* against *Oidium heveae* *Li Liang , MEI Shuangshuang , RONG Wei(31)*
- Age Structure and Gene Flows of Fine-scale Populations of *Oreocharis dasyantha* (Gesneriaceae), an Alpine Herb Endemic to Hainan Island *XING Enuo , XU Shitao , REN Mingxun(37)*
- Seasonal Variation of Microbial Communities in the Rhizosphere of *Impatiens hainanensis* (Balsaminaceae) at Different Altitudes *LIU Yu , HAN Sumei , SONG Xiqiang , DING Qiong , WANG Peng , ZHAO Ying(47)*
- Spatial Variability of Soil Available Phosphorus and Soil Available Potassium Contents in Agricultural Land in Danzhou , Hainan Province *ZENG Di , QI Zhiping , WEI Zhiyuan , WANG Dengfeng , GAO Le , LIU Lei(54)*
- Soil Moisture of *Leucaena leucocephala* Plantations in the Dry-hot Valley of Jinsha River , Yunnan *WANG Yandan , ZHANG Mengyin , FAN Jiancheng , HE Guangxiong , ZHANG Mingzhong , FANG Haidong(61)*
- Evaluation of Cold Resistance of Five Accessions of *Morinda citrifolia* Linn Germplasm under Low Temperature Stress *ZHAO Shuai , QUE Yanpeng , XIA Dongnan , FU Wenyi(69)*
- Analysis of X-ray Diffraction Pattern on *Pogostemon cablin* and *Agastache rugosa* *YANG Yuzhang , WU Yougen , LI Chungong , ZHANG Junfeng , PANG Zhengzheng , YU Jing(76)*
- Effect of Antifungal Components of Cinnamon Essential Oil on *Colletotrichum gloeosporioides* Penz. *LI Xizhu , CHEN Tingting , LIU Jiayi , SHI Xuequn(81)*
- Co-evolution of Hep and VgrG Proteins of Type VI Secretion System *NIU Miaojing , XIE Qingbiao , LI Ting , LI Chunxia , CHEN Yinhua , TAO Jun(90)*
- Effects of Modified Atmosphere Packaging on the Quality of Cherry *WANG Weihai , LI Yuanzhao , WU Xianhui , PANG Jie(101)*
- Spatial Layout and Construction of Buddhist Temple Landscapes in Hainan Island *SONG Changji , ZHOU Peng , SONG Xiqiang , WANG Jian , YANG Chunhuai(109)*
- ##### • Literature reviews •
- Researches on Carbon Sequestration in Urban Green Spaces in China *TONG Jiajing , HUANG Wei , LI Xiuqiong , TIAN Wei , WU Jinshan(117)*
- Research Advances in Taxonomy of *Pteris* *YANG Dongmei , WANG Jiamei , WANG Xiaoqiao , WANG Faguo(123)*

NO. 2

• Research reports •

- Analysis and evaluation of nutrient contents of *Sesuvium portulacastrum* and *Caulerpa lentillifera* *TANG Xianming , LIU Xiaoxia , MENG Fatong , WANG Aimin , GU Zhifeng , LIU Chunsheng(129)*
- Isolation and Identification of Pathogenic *Aeromonas hydrophila* ssp. *hydrophila* from *Crocodylus siamensis* *ZENG Jifeng , PU Wenyuan , GUO Guiying , YANG Nuo , HOU Guofeng , ZHENG Jiping(136)*
- Isolation and Enzyme Activity Assay of An Agarase - producing *Vibrio* sp. Strain *ZHANG Jingya , LIU Yupeng , WU Chao , DENG Yiqin , YIN Haoxian , ZHAO Zhe(142)*

- Distribution of Chloramphenicol Resistance Genes in the Typical Area of Mangroves in Dongzhai Harbor ,
Hainan , China RUAN Sunlan , ZHAO Hongwei , ZHANG Yu , ZHANG Tengyun ,
ZHANG Mingshan , JIN Xiaotuo LI Ping DIAO Xiaoping(147)
- Isolation and identification of benzo[a]pyrene-degrading strain BJ-1 and determination of its degrading
capability in the gut of *Eisenia fetida* LI Sennan , DIAO Xiaoping , WANG Haihua , GONG Ying(156)
- Physical Location of 5 Members of MYC Gene Family on the Chromosomes in *Hevea brasiliensis*
..... GAO Yu , ZHUANG Nanshen , WANG Ying , GAO Heqiong(163)
- Cloning and Expression Analysis of MeRbohE Gene in Cassava
..... Tang Zhijuan , Zhu Shousong , Yu Xinyi , Zhao Rui , Niu Xiaolei , Chen Yinhua , Geng Mengting(170)
- Establishment of Genetic Transformation System for Suspension Cells of *Taraxacum koksaghyz* Rodin
..... LIU Mingqian , WU Shaohua , TIAN Lang , ZHANG Shixin , LI Yan , TIAN Weimin(176)
- In vitro antioxidant activity of the ethanol extracts from the leaves of *Calotropis gigantea*
..... WANG Jie , LI Hua , LUO Yanping(183)
- Correlation Analysis Between Population Dynamics and Reproduction Strategies in *Dendrobium sinense*
(Orchidaceae) , an Endemic Orchid in Hainan Island
..... WANG Tongxin , QI Shanjiang , SONG Xiqiang , MENG Qianwan , YU Xudong(189)
- The Effect of Ethanol on Bacterial Cellulose Synthesis by Different Bacterial Species and the Sensitivity
and Tolerance of High-yield Bacterial Strains to Ethanol
..... JIA Jia , CHEN Huamei , WANG Yanmei , SHAO Luying , LIU Xiaolan , LI Congfa , LIU Sixin(198)
- Identification and Field Fungicide Efficacy Test of Gray Leaf Spot Disease on Sweet Pepper Caused by
Stemphylium lycopersici in Hainan Province
..... Huang Wenfeng , Wang Min , Hu Yanping , Ma Funing , Guo Gang(203)
- Effects of water stress on pungency of hot pepper (*Capsicum chinense* Jacquin) and related physiological
and biochemical indexes WANG Longfei , CHENG Shanhan , XIA Feng , NI Miao ,
ZHANG Hao , WANG Ping , WANG Zhiwei , ZHU Guopeng , LIN Shisen(207)
- The Effect of Water Content in Coral Sand and Backfilled Soil on the Survival of Cultured Plants
..... WANG Xiaofeng , YANG Song , PAN Yafei(214)
- Effect of Eucalyptus Bark on the Germination of Pakchoi Seeds
..... LI Siyuan , YU Xuebiao , CHEN Houxin , WANG Rui , WANG Pai , TONG Siyuan , LIN Chengbo(219)
- Adaptivity of Major Terrestrial Invasive Plants in Different Habitats in Hainan Province
..... LI Jiahao , LI Donghai , ZHAO Ruibai , YANG Xiaobo ,
LUO Wenqi , ZHANG Kai , WU Tingtian GAO Boyu(225)
- Investigation of invasive plants in Danzhou Campus of Hainan University
..... XIE Wei , CAI Zeping , YU Xudong , WU Fanhua , LUO Jiajia ,
CHEN Yinhua , LIU Jianshun , WU Yinxing ZHOU Huan(234)
- Analysis of Rainwater Utilization Design Strategy in Sanya Urban Park under the Theory of Sponge City
..... SONG Jueying , XU Xiansheng , TANG Yinying , LI Dan(244)
- Landscape Evaluation of Riyue Square in Haikou City Based on Analytic Hierarchy Process
..... LI Qingyun , CHEN Zhanchuan , HOU Zehong , XIAO Yimin(252)
- Literature reviews •
- Research Advances on *Adiantum flabellulatum* L.
..... WANG Jinmei , YU Xudong , CAI Zeping , XU Shitao , WU Fanhua , LUO Jiajia(260)

NO. 3

- Research reports •
- Effects of Pleocidin and Spinetoram on the Development of Zebrafish Embryos
..... KONG Weihao , GAO Weishan FAN Yongmei(267)
- Effects of Titanium Dioxide Nanoparticles on SOD Activity in Zebrafish
..... ZHANG Zhang , TANG Wenhao , TANG Tianle(274)
- Effect of Microbial Antimicrobial Peptides on Disease Resistance and Immune Indices of *Litopenaeus vannamei*
..... HU Shikang , WANG Bo , QIN Haipeng , LIAO Xuzheng , SUN Chengbo , LIU Yongsheng , QU Peng(281)
- Removal of Nitrogen and Phosphate through Tidal Water Flow in Recirculating Aquaculture Systems
..... LU Weiqiang , GU Zhifeng(287)
- Outer Membrane Vesicles as CRISPR/Cas9 System Carrier for Elimination of *Streptococcus agalactiae*
..... HOU Guofeng , ZENG Jiawei , YANG Xichun , WANG Aiyuan , LIU Yaxin , ZENG Jifeng ,
GUO Guiying , YANG Nuo , LI Qian , ZHENG Jiping(295)
- Molecular Cloning and Expressional Analysis of *HbGSK1* from Rubber Tree (*Hevea brasiliensis* Müll. Arg.)
..... YANG Shuguang , WU Shaohua , CHEN Yueyi , LI Yan , SHI Minjing , TIAN Weimin(302)

Differential Gene Expression of Pitaya Root Induced Under Flooding Stress	YAN Zhen , QI Zhao , XIONG Rui , LIU Chengli , XU Min , WEI Shuangshuang , RUAN Yunze , TANG Hua(312)
Differentially Expressed Genes of Roots and Stems of Pitaya under Drought Stress	QI Zhao , YAN Zhen , XU Min , LIU Chengli , CHENG Yu , XIONG Rui , LUO Juan , TANG Hua(320)
Effects of Substrate and Hormone on Cutting Propagation of <i>Rhododendron hainanense</i>	CHEN Yichao , SONG Xiqiang , ZHAO Ying , SHI Youhai(328)
Tissue Culture and Rapid Propagation of <i>Cerasus serrulata</i> var. <i>lannesiana</i> ‘Sirotae’	LU Lu , JIANG Xiwang(333)
Analysis of Combining Ability and Heritability of Late-bolting Radish Parents	ZENG Xiaoling , HUANG Jiandu , XIE Xinxin , ZHU Jinhong(339)
Effects of Cultivation in Different Mulching Patterns on the Agronomic Traits of Shanlan Upland Rice and Weed Control	HE Guangliang , ZHAO Jianfa , HE Meidan , KE Zhi , YUAN Qianhua(344)
Morphological Observation on the Flowers and Fruits of Different Germplasm Materials of <i>Ilex kudingcha</i> C. J. Tseng in China	PAN Xuefeng , SHAO Guowei , LIU Guomin(350)
Anatomical Structure of Vegetative Organs of <i>Plukenetia volubilis</i>	WANG Yarong , ZHANG Shixin , SONG Xiqiang , CAI Bo , CAI Zeping , YU Xudong(358)

NO. 4

Development of Net Cage-based Deep Sea Aquaculture and Catch Models for <i>Trachinotus ovatus</i>	LIN Chuan , HE Yonggu , WANG Xiaobing(363)
Purification of Serum IgM from <i>Trachinotus ovatus</i> and Preparation of Mouse Sera Anti-IgM	ZHANG Shengnan , WU Ying , SUN Yun , Cao Zhenjie , ZHOU Yongcan(370)
The Application of QuEChERS Method in Multi-residue Detection of Veterinary Drugs in Marine Products	WEI Zhen , CAO Xianying , CHEN Jian , LIU Guihua(377)
DNA Damage of Cu ²⁺ to <i>Cyprinus carpio</i>	LIU Qiuyu , CHEN Xin , QIN Zongmin , ZHUO Wen , TANG Min(388)
Cloning and Expression Analysis of <i>OnRR9</i> Gene in <i>Oncidium</i>	YAN Bingyu , GONG Xiaoxiao , TAN Yurong , WANG Peng , LI Shuangjiang , PAN Yingwen , LIU Jinping(393)
Characterization of <i>NtD14</i> by Overexpression in <i>Nicotiana tabacum</i> L.	XU Lin , ZHANG Ze , LU Xianzhe , LI Zhaotong , HUANG Xi(401)
Interspecific Association of Schefflera octophylla Secondary Forest Communities in the Central Part of Hainan	WANG Pai , GOU Zhihui , NONG Shouqian , HUANG Chuangteng , Ling Ling , YU Xuebiao(409)
The Changes of Postharvest Quality in Thai Pomelo Fruits Stored at Room Temperature	LIU Juan , RUAN Yinyin , LONG Chunrui , ZENG Liping , LI Xinguo(418)
Effects of Selenium Fertilizer on the Growth of <i>Dendrobium officinale</i>	CHEN Lixuan , CHEN Chun , CHEN Fei , KE Hezuo(423)
Effects of Nitrogen Application Rate on the Growth and Nutrient Accumulation of Pitaya Shoots	CHENG Yu , XU Min , XIONG Rui , LIU Chengli , LIN Jianian , RUAN Yunze , REN Taijun , WANG Guohong , ZHAO Pengfei , TANG Hua(427)
Identification and Comparison of Microbial Inhibition Activity of 50 Strains of Noni Endophytic Fungi	HU Zhengbo , WU Yougen , YI Tianfeng , YU Jing , YANG Dongmei , ZHANG Junfeng(433)
Screening and Identification of Endophytic Fungi Favorable for the Growth of <i>Anoectochilus formosanus</i> (Orchidaceae)	ZHOU Kang , WU Wendian , SONG Xiqiang , ZHOU Yang(440)
Analysis of Chemical Constituents from the Fruiting Bodies of <i>Fomes fomentarius</i>	LI Ran , MA Qingyun , KONG Fandong , XIE Qingyi , DING Qiong , ZHAO Youxing(445)
Effect of <i>Moringa oleifera</i> Stem Extract on the Regulation of Gastrointestinal Motility of Mice	CHU Chunxia , HUANG Shengzhuo , MEI Wenli , DAI Haofu(452)
An Optimal Method for Biomass Measurement of Microalgae	LIU Jiguang , LI Ang , Liu Pinghuai(457)
Improvement of the Traditional Preparation Process and Determination of Polypeptide Content of a Li Ethnic Group Medicine: Sangonggao	LI Yang , YANG Ying , ZHANG Linyun , DENG Shiming(464)