

广西科学 2018年第25卷 总目次

第1期(2018年2月)

综述类

- 广西海洋科学研究回顾与展望 陈波,竺利波(1)
- 水沙交界面冲刷与淤积的同步性探讨 刘金贵,林振良,李庆,等(10)
- 广西北部湾海水养殖业现状与病害防控技术体系研究展望 李鹏飞,余庆,覃仙玲,等(15)
- 水生生物病原核酸适配体研究进展 周伶俐,李鹏飞,秦启伟(26)
- 鱼类溶菌酶和组织蛋白酶研究进展 魏世娜,秦启伟(32)

实验研究类

- “纳沙”台风期间广西白龙尾近岸海域余流特征及产生机制 陈波,陈宪云,侍茂崇,等(36)
- 钦州湾蓄泥坑泥沙扩散数值模拟 吴桂丹,高劲松,朱冬琳(43)
- 岸线变化对钦州湾污染物输移扩散的影响 牙韩争,董德信,朱冬琳,等(51)
- 涠洲岛西面及西南面沉积物重金属污染分析 谢谊,张腾,雷富,等(57)
- 基于新型核酸适配体-荧光分子检测探针的石斑鱼虹彩病毒病快速诊断 李鹏飞,余庆,李菲,等(63)
- 广西北部湾大宗海水养殖鱼类卵形鲳鲹感染溶藻弧菌及其致病性研究 余庆,李菲,王一兵,等(68)
- 广西卵形鲳鲹小脑来源细胞系的建立及特征分析 余庆,李菲,覃仙玲,等(74)
- 球形棕囊藻北部湾株对不同形态磷源的利用及碱性磷酸酶特性研究 覃仙玲,陈波,赖俊翔,等(80)
- 海绵 *Pseudoceratina* sp. 共栖细菌多样性及其抑制甘蔗鞭黑粉菌活性研究 李菲,黄庶识,王伟,等(87)
- 鳕鱼胶原蛋白肽即食凝胶的研制 米顺利,易湘茜,李俊豪,等(94)
- 基于专利分析的中国海洋生物肥料发展现状与发展建议 郭庆,吴霜,赵雅慧,等(100)

第2期(2018年4月)

桉树生态营林研究

- 全球桉树人工林发展面临的困境与对策 温远光,周晓果,喻素芳,等(107)
- 不同林地清理和培肥措施对桉树人工林植物多样性的影响 温远光,严宇航,陶彦良,等(117)
- 不同林地清理方式下生物炭和氮添加对桉树红锥混交林土壤养分的影响 陶彦良,周晓果,温远光,等(128)
- 炼山和套种绿肥对桉树人工林下植物和土壤 C : N : P 化学计量特征的影响 陆艳仙,周晓果,陶彦良,等(139)
- 不同轮伐期对巨尾桉人工林碳固存的影响 卢婵江,温远光,周晓果,等(149)
- 不同轮伐期巨尾桉人工林的经济效益分析 卢婵江,周晓果,黄冰川,等(158)

海洋环境

- 近 50 年北海市海岸线变迁及其环境效应分析…………… 梁文,胡自宁,宋垠先,等(163)
- 2014 年北部湾主要河流污染状况及污染物入海通量…………… 李斌,谭趣孜,李蕾鲜,等(172)
- 涠洲岛湿地对鸕鹚类水鸟的承载力评估…………… 莫竹承,孙仁杰,陈骁,等(181)

海洋生物

- 香港巨牡蛎对不同密度 2 种浮游植物的摄食研究…………… 蓝文陆,付家想,李天深,等(189)
- 广西北海市的鸟类资源…………… 孙仁杰,刘文爱,余桂东,等(197)

林业基础科学

- 南宁至友谊关高速公路边坡植被枯落物特性研究…………… 化彬,蓝嘉川,招礼军(212)
- 南宁市 4 种绿化树种的滞尘效益评估…………… 莫若果,招礼军,朱栗琼,等(217)

特邀栏目

- 不同产地两面针果壳挥发油化学成分及其抗肿瘤活性…………… 柴玲,刘布鸣,林霄,等(223)
- 投稿指南…………… (196)

第 3 期(2018 年 6 月)

开篇词

- 工业酶制剂开发应用和生物工程创新平台的成功典范…………… 黎贞崇,韦宇拓(229)

综述类

- 枯草芽孢杆菌表达系统及其启动子的研究进展…………… 熊海涛,韦宇拓(233)
- 基因重组型枯草芽孢杆菌芽孢表面展示技术与应用…………… 张国艳,张欢欢,员君华,等(242)
- 淀粉酶的分类及应用研究进展…………… 罗春雷,韦宇拓(248)
- 酶催化功能混杂性研究进展…………… 杨键,龙丽娟(253)
- 细胞色素 P450 酶生物转化及新催化反应的最新进展…………… 潘丽霞,朱婧,王青艳,等(258)
- 类泛素化修饰 Neddylation 在心脏生物学中的作用…………… 李双月,苏华波(262)
- 逆转录转座子 LINE-1 的活性调控及其在癌症中的作用…………… 朱绮霞,李一向,成春燕,等(268)
- 左旋多巴的合成研究新进展…………… 陈五九,曹鹏,宋国田,等(274)
- 香蕉茎叶资源化利用研究进展…………… 米慧芝,韦宇拓,潘世优,等(279)

实验研究类

- Klebsiella* sp. GXK-1 的 α -L-鼠李糖苷酶的酶学性质…………… 郭双双,兰青,何贺贺,等(290)
- 重组脂肪酶自诱导发酵培养基优化…………… 潘勤春,刘兴胥,吕军,等(299)
- 中国三个不同地区的活羊调运网络及其布鲁氏菌病传播风险(英文)…………… 吴洋丽,孙向东(304)
- LC3 真核表达载体构建及其在 293T 细胞中自噬诱导研究…………… 游金,李游,施洁,等(313)
- TLR2 和 TLR6 在鸟分枝杆菌诱导巨噬细胞凋亡中的作用…………… 宁雪萍,杨东君,张依,等(318)
- 基于转座子策略提高链霉菌中 landomycin E 产量的研究…………… 王青艳,朱婧,秦艳,等(325)
- 以甘薯为原料发酵生产丙酮-丁醇-乙醇的研究…………… 俸雪,严睿萍,沈峰林,等(330)
- 两株氧化葡萄糖酸杆菌静息细胞的催化性能比较…………… 韦柳静,卢磊芳(339)

第 4 期(2018 年 8 月)

广西红树林资源及其恢复与利用

广西红树林演化史与研究历程	范航清,陆露,阎冰(343)
广西红树林的植物类型	潘良浩,史小芳,曾聪,等(352)
广西红树林恢复历史、成效及经验教训	范航清,莫竹承(363)
广西红树林生态系统的常见物种	孙仁杰,范航清,吴斌,等(372)
红树林与海岸房地产共赢模式初论	范航清(388)

环境保护

西江流域柳江水体重金属污染状况及健康风险评价	李世龙,熊建华,邓超冰,等(393)
基于综合水质标识指数法的九洲江水质评价	刘捷,邓超冰,黄祖强,等(400)
近 50 年钦江水沙变化研究	黎树式,黄鹄(409)

特邀栏目

海南岛东北海域海流和余流特征分析	任叙合,尤启明,郭静,等(418)
基于粗糙集的决策树集成学习算法	时雷,段其国,张娟娟,等(423)
带非欧氏范数的双稳定束方法	欧小梅,唐春明(428)
ZnO 纳米线的制备及其影响因素	杨文婷,沈晓明(433)
酶形式差异的三酶系统一步法转化头孢菌素 C 制备 7-氨基头孢烷酸	邱杰,刘玉婷,陈钰泉,等(438)
可食用性植物软胶囊囊材的性质研究	许凤,李祥乾,李宁,等(444)
我院两刊影响因子和学科排序今年又获大幅提升	(417)

第 5 期(2018 年 10 月)

综述类

广西岩溶区的水土流失特点及其防治	蒋忠诚,罗为群,邓艳,等(449)
广西岩溶水资源与社会服务功能	姜光辉,郭芳(456)
广西岩溶景观特征及其形成演化分析	韦跃龙,李成展,陈伟海,等(465)
岩溶区钙与土壤有机碳关系的研究进展	杨慧,梁影,徐觉明,等(505)
桂林毛村地下河流域岩溶关键带碳循环研究	黄芬,吴夏,杨慧,等(515)
广西岩溶地区火龙果生态产业的培育及其发展	陆树华,谭艳芳,李冬兴,等(524)

实验研究类

漓江干流水体主要离子化学变化特征及影响因素	张陶,蒲俊兵,李建鸿,等(532)
广西里湖地下水化学特征及其影响因素	李瑞,肖琼(544)
武鸣灵水岩溶泉的水环境变化及管理保护面临的新问题	郭芳,姜光辉,刘绍华(553)
崇左岩溶峰林区岩溶发育特征及对钻孔涌水量的影响	李腾芳,覃小群,黄奇波,等(560)
广西岩溶天坑资源及其开发利用	黄保健,张远海,陈伟海,等(567)
桂林旅游洞穴可持续利用研究	陈伟海,邓亚东,唐立,等(579)
广西喀斯特地区植物根际土壤解磷菌筛选及促生效应研究	张中峰,周龙武,徐广平,等(590)

喀斯特季节性雨林优势种群生态位特征及其对石漠化地区植被修复的启示	皇甫昭,李冬兴,王 斌,等(599)
典型喀斯特区域植物物种多样性研究——以广西中越边境喀斯特地区种子植物为例	许为斌,黄俞淞,吴望辉,等(611)
基于亚米级卫星数据的典型喀斯特小流域石漠化空间格局与演变特征	闫 妍,黄凯燕,胡宝清(620)
近 30 年广西喀斯特地区石漠化时空演变	陈燕丽,莫建飞,莫伟华,等(625)

第 6 期(2018 年 12 月)

有色金属的微结构与性能

Zr 基生物医用合金材料的发展与探索	刘东云,湛永钟(633)
铝锡轴承合金的摩擦磨损机理与性能	韦炫辰,张方旭,唐红云,等(639)
YB-10Al 铝合金物相组成和断口形貌分析	王 涛,黄国任,温静娴,等(645)
Zr 元素对铜-石墨复合材料界面改性的影响	张 坤,庞明君,丁晓龙,等(649)
Al-Cu 二元系在 540℃时的扩散行为研究	欧阳义芳,刘 珂,曹 宇,等(654)
晶体相场法模拟晶界萌生裂纹扩展机理	邓力滔,卢昱江,刘哲源,等(658)

生物科学

多倍体细菌与古细菌的生存及生长优势	李海娟,徐玲玲(663)
酸性木聚糖酶产生菌 XYW5 的筛选及酶学性质	吴仁智,黄 俊,芦志龙,等(669)
速生桉叶水提物对肝癌细胞株 HepG2 生长的抑制和凋亡作用	周金爱,余 军,黄东萍,等(678)

环境保护

大藤峡水利枢纽施工初期对冬季水鸟群落的影响	李相林,谢 华,彭 波,等(684)
广西元宝山矿区重金属空间分布特征	刘朋雨,张连凯,黄奇波,等(694)
广西环江县农田土壤重金属空间变异及分布特征	徐业梅,张超兰,黎 宁,等(701)
喀斯特石漠化与人文驱动因素相关性研究——以广西为例	苏成杰,岳 涛,蒋 霖,等(709)

特邀栏目

基于记忆效应的空间公共物品博弈	牛亚兰,赵 明(715)
硝酸铁催化热解桉木制备半焦及其反应性研究	崔 凯,黄中艺,李立硕(721)
新线搜索下修正 PRP 共轭梯度法的全局收敛性及其数值结果	王松华,吴加其(728)
北海城市红树林中的红树蚬属贝类	刘文光,王 帅,杨明柳,等(734)

No. 1 (February 2018)

Review

Review and Prospect of Research on Guangxi Marine Sciences	CHEN Bo, ZHU Libo (1)
A Study on the Mutually Exclusive of Erosion and Deposition at the Water-sediment Interface	LIU Jingui, LIN Zhenliang, LI Qing, et al. (10)
Current Situation and Research Prospects of Disease Control Technology System of Mariculture in Beibu Gulf of Guangxi	LI Pengfei, YU Qing, QIN Xianling, et al. (15)
Advances in Study of Aptamers in Pathogens of Aquatic Organisms	ZHOU Lingli, LI Pengfei, QIN Qiwei (26)
Advance on Lysozyme and Cathepsin of Fish	WEI Shina, QIN Qiwei (32)

Experiment

Characteristics and Formation Mechanism of the Residual Current in the Coastal Waters of Bailongwei during the Nesat Typhoon	CHEN Bo, CHEN Xianyun, SHI Maochong, et al. (36)
Numerical Modeling of Sediment Diffusion from a Mud-storage Pit in Qinzhou Bay	WU Guidan, GAO Jingsong, ZHU Donglin (43)
Impact of Shoreline Changes on the Pollutant Transport and Dispersion in Qinzhou Bay	YA Hanzheng, DONG Dexin, ZHU Donglin, et al. (51)
Analysis of Heavy Metal Pollution in Sediments on the West and Southwest of Weizhou Island	XIE Yi, ZHANG Teng, LEI Fu, et al. (57)
Establishment and Characterization of Novel Specific Aptamer-based Fluorescent Molecular Probe for Rapid Diagnosis of Grouper Iridovirus Diseases	LI Pengfei, YU Qing, LI Fei, et al. (63)
Isolation, Identification and Pathogenicity of <i>Vibrio alginolyticus</i> from Marine Cultured <i>Trachinotus ovatus</i> in Beibu Gulf, Guangxi	YU Qing, LI Fei, WANG Yibing, et al. (68)
Establishment and Characterization of a Novel Cell Line from Cerebellum of Golden Pompano (<i>Trachinotus ovatus</i>) Cultured in Guangxi	YU Qing, LI Fei, QIN Xianling, et al. (74)
Study on the Utilization of Different Phosphorus and Alkaline Phosphatase Characteristics of <i>Phaeocystis globosa</i> Cultivated from Beibu Gulf	QIN Xianling, CHEN Bo, LAI Junxiang, et al. (80)
Diversity of Sponge-Derived Bacteria Isolated from <i>Pseudoceratina</i> sp. against <i>Sporisorium scitamineum</i> in vitro	LI Fei, HUANG Shushi, WANG Wei, et al. (87)
The Development of Cod Skin Collagen Peptide Ready-to-eat Gel	MI Shunli, YI Xiangxi, LI Junhao, et al. (94)
Patent Analysis-based Study on Marine Biofertilizer in China and Its Development Proposals	GUO Qing, WU Shuang, ZHAO Yahui, et al. (100)

No. 2 (April 2018)

Study of Ecological Management in *Eucalyptus* Plantations

The Predicament and Countermeasures of Development of Global <i>Eucalyptus</i> Plantations	WEN Yuanguang, ZHOU Xiaoguo, YU Sufang, et al. (107)
Effects of Different Ground Clearance and Fertilizing Treatments on Plant Diversity of <i>Eucalyptus</i> Plantations in Subtropical China	WEN Yuanguang, YAN Yuhuang, TAO Yanliang, et al. (117)
Effects of Biochar and Nitrogen Addition on Soil Nutrients under Different Ground Clearance method in Mixed <i>Eucalyptus</i> and <i>Castanopsis hystrix</i> Plantations	TAO Yanliang, ZHOU Xiaoguo, WEN Yuanguang, et al. (128)
Effects of Controlled Burning and Interplanting <i>Tephrosia candida</i> on Plant and Soil C : N : P Stoichiometry in <i>Eucalyptus</i> Plantations	LU Yanxian, ZHOU Xiaoguo, TAO Yanliang, et al. (139)
Effects of Rotation Length on Carbon Sequestration in <i>Eucalyptus grandis</i> × <i>E. wrophylla</i> Plantations	LU Chanjiang, WEN Yuanguang, ZHOU Xiaoguo, et al. (149)
Economic Benefit Analysis of <i>Eucalyptus grandis</i> × <i>E. wrophylla</i> Plantations in Difference Rotations	LU Chanjiang, ZHOU Xiaoguo, HUANG Bingchuan, et al. (158)

Marine Environment

- Analyses on Shoreline Changes and Its Environmental Impacts in Beihai City Since the Last 50 Years, Guangxi, China
..... LIANG Wen, HU Zining, SONG Yinxian, et al. (163)
- The Research on Contaminative Conditions and Pollutants Fluxing into Sea of Major Rivers in Guangxi Beibu Gulf in 2014
..... LI Bin, TAN Quzi, LI Leixian, et al. (172)
- An Evaluation of Wetland Carrying Capacity of Shorebirds on Weizhou Island
..... MO Zhucheng, SUN Renjie, CHEN Xiao, et al. (181)

Marine Organism

- Study on Clearance Rate and Filtration Rate of Different Size of *Crassostrea hongkongensis* Feeding on Two Phytoplankton with
Different Density LAN Wenlu, FU Jiexiang, LI Tianshen, et al. (189)
- Birds in Beihai Guangxi, China SUN Renjie, LIU Wen'ai, YU Guidong, et al. (197)

Basic Science of Forestry

- Characterization of Vegetation Litter on the Slope of Nanyou Highway HUA Bin, LAN Jiachuan, ZHAO Lijun (212)
- Assessment on Effect of Dust-retention of the Four Green Plants in Nanning
..... MO Ruoguo, ZHAO Lijun, ZHU Liqiong, et al. (217)

Special Columns

- Chemical Constituents and Antitumor Activities Research of Essential Oil of the Fruit Shell of *Zanthoxylum nitidum* (Roxb.) DC.
From Different Areas CHAI Ling, LIU Buming, LIN Xiao, et al. (223)

No. 3 (June 2018)

Preface

- The Successful model for the Development and Application of Industrial Enzyme Preparation and Bioengineering Innovation Plat-
form LI Zhenchong, WEI Yutuo (229)

Review

- Research Progress of *Bacillus subtilis* Expression System and Its Promoter Regulatory Elements
..... XIONG Haitao, WEI Yutuo (233)
- Technique and Application of Recombinant *Bacillus subtilis* Spore Surface Display
..... ZHANG Guoyan, ZHANG Huanhuan, YUN Junhua, et al. (242)
- Current Progress in Application of Amylase and Its Classification LUO Chunlei, WEI Yutuo (248)
- A Brief Overview of Catalytic Promiscuity of Enzymes YANG Jian, LONG Lijuan (253)
- The Latest Advance of Biotransformation and New Catalytic Reaction of Cytochrome P450 Enzymes
..... PAN Lixia, ZHU Jing, WANG Qingyan, et al. (258)
- The Role of Ubiquitin-like Modification of Neddylation in Cardiac Biology LI Shuangyue, SU Huabo (262)
- The Regulation of Retrotransposon LINE-1 and Its Function in Tumorigenesis
..... ZHU Qixia, LI Yixiang, CHENG Chunyan, et al. (268)
- Advanced Research Progress in L-DOPA Synthesis CHEN Wujie, CAO Peng, SONG Guotian, et al. (274)
- Research Progress on Resource Utilization of Banana Stems and Leaves
..... MI Huizhi, WEI Yutuo, PAN Shiyou, et al. (279)

Experiment

- Enzymatic Characterization of α -L-rhamnosidase from *Klebsiella* sp. GXK-1
..... GUO Shuangshuang, LAN Qing, HE Hehe, et al. (290)
- Optimization of Auto-induction Fermentation Medium for Recombined Lipase
..... PAN Qinchun, LIU Xingxu, LV Jun, et al. (299)
- Sheep Movement Networks in Three Chinese Regions and the Implications of Network Properties for the Spread of Brucellosis
..... WU Yangli, SUN Xiangdong (304)
- Study on Construction of LC3 Eukaryotic Expression Vector and Its Autophagy Induction in 293T Cells
..... YOU Jin, LI You, SHI Jie, et al. (313)
- The Effect of TLR2 and TLR6 on *Macobacterium avium* Induced Macrophages Apoptosis
..... NING Xueping, YANG Dongjun, ZHANG Yi, et al. (318)

Study on a Transposon-based Strategy to Improve Landomycin E Production in <i>Streptomyces</i>	WANG Qingyan,ZHU Jing,QIN Yan, et al. (325)
Research on Fermentation of Acetone-Butanol-Ethanol with Sweet Potato as Raw Material	FENG Xue,YAN Ruiping,SHEN Fenglin, et al. (330)
Comparison of the Catalytic Property by the Resting Cells of Two <i>Gluconobacter oxydans</i> Strains	WEI Liuqing,LU Leifang (339)

No. 4(August 2018)

The Resource, Restoration and Utilization of Guangxi Mangroves

Evolution History and Research Processes of Guangxi Mangroves	FAN Hangqing,LU Lu,YAN Bing (343)
The Plant Types of Mangroves in Guangxi	PAN Lianghao,SHI Xiaofang,ZENG Cong, et al. (352)
The History,Achievements and Lessons Learnt for Mangrove Restoration in Guangxi,China	FAN Hangqing,MO Zhucheng (363)
Common Species of Mangrove Ecosystems in Guangxi	SUN Renjie,FAN Hangqing,WU Bin, et al. (372)
Pilot Comments on the Win-win Mode of Mangroves and Coastal Real Estate	FAN Hangqing (388)

Environmental Protection

The Assessment of the Heavy Metal Pollution and Health Risks in the Liujiang River, Xijiang Region	LI Shilong,XIONG Jianhua, DENG Chaobing, et al. (393)
Application of Comprehensive Water Quality Identification Index in Water Quality Evaluation of Jiuzhoujiang River	LIU Jie,DENG Chaobing,HUANG Zuqiang, et al. (400)
Variations of Runoff and Sediment in Qinjiang River in the Past 50 Years	LI Shushi,HUANG Hu (409)

Special Columns

Characteristics Analysis of Current and Residual Current in the Northeastern Sea Area of Hainan Island	REN Xuhe,YOU Qiming,GUO Jing, et al. (418)
Decision Tree Ensemble Learning Algorithm Based on Rough Set	SHI Lei,DUAN Qiguo,ZHANG Juanjuan, et al. (423)
A Doubly Stabilized Bundle Method with Non-Euclidean Norm	OU Xiaomei,TANG Chunming (428)
Preparation and Influencing Factors of ZnO Nanowires	YANG Wenting,SHEN Xiaoming (433)
Study on the One-Pot Conversion of Cephalosporin C to 7-Aminocephalosporanic Acid by Different Enzyme Forms of Tri-Enzymatic System	QIU Jie,LIU Yuting,CHEN Yuquan, et al. (438)
Studied on Properties of Edible Capsule Materials for Soft Capsule	XU Feng,LI Xiangqian,LI Ning, et al. (444)

No. 5(October 2018)

Review

Features and Treatment of Soil Erosion in Karst Areas of Guangxi	JIANG Zhongcheng,LUO Weiqun,DENG Yan, et al. (449)
Karst Water Resources in Guangxi and Their Social Servicing Capacity	JIANG Guanghui,GUO Fang (456)
Characteristics and Formation and Evolution Analysis of the Karst Landscape of Guangxi	WEI Yuelong,LI Chengzhan,CHEN Weihai, et al. (465)
Research Progress of the Relationship between Soil Calcium and Soil Organic Carbon in Karst Area	YANG Hui,LIANG Ying,XU Jueming, et al. (505)
Study on Carbon Cycle of Karst Critical Zone in Maocun Subterranean River Basin of Guilin	HUANG Fen,WU Xia,YANG Hui, et al. (515)
The Cultivation and Development of Dragon Fruit Eco-industry in Karst Area of Guangxi	LU Shuhua,TAN Yanfang,LI Dongxing, et al. (524)

Experiment

Chemical Characteristics Changes of Major Ion and Its Influencing Factors in the Main Stream of Lijiang River	ZHANG Tao,PU Junbing,LI Jianhong, et al. (532)
Hydrochemical Feature and Its Influencing Factors of Lihu Underground Water,Guangxi	LI Rui,XIAO Qiong (544)
Change of Water Environment in Lingshui Karst Spring and New Issues Faced in Water Resources Management and Protection	GUO Fang,JIANG Guanghui,LIU Shaohua (553)
Characteristics of Karst Development and Its Impact on the Yields of Wells in Karst Peak Forest Region in Chongzuo City,Guan-	

gxi	<i>LI Tengfang, QIN Xiaoqun, HUANG Qibo</i> , et al. (560)
Karst Tiankeng Resource of Guangxi and Its Exploitation	<i>HUANG Baojian, ZHANG Yuanhai, CHEN Weihai</i> , et al. (567)
Study on Sustainable Utilization of Show Caves in Guilin City	<i>CHEN Weihai, DENG Yadong, TANG Li</i> , et al. (579)
Screening of Phosphate Solubilizing Bacteria and Growth Promoting Effect in Rhizosphere Soil of Karst Area in Guangxi	<i>ZHANG Zhongfeng, ZHOU Longwu, XU Guangping</i> , et al. (590)
Niche Characteristics of Dominant Populations of Tropical Karst Seasonal Rainforest Implications for Vegetation Restoration in Rock Desertification Region	<i>HUANG Fuzhao, LI Dongxing, WANG Bin</i> , et al. (599)
Study on Plant Diversity in Typical Karst Areas, A Case of Seed Plant in Karst Areas of Guangxi Along the Sino-Vietnamese Border	<i>XU Weibin, HUANG Yusong, WU Wanghui</i> , et al. (611)
The Spatial Pattern and Evolution Features of Rocky Desertification in Representative Karst Watershed based on Sub-Meter Satellite Data	<i>YAN Yan, HUANG Kaiyan, HU Baoqing</i> (620)
Temporal and Spatial Distributions of Rocky Desertification in Guangxi Karst Area in the Past 30 Years	<i>CHEN Yanli, MO Jianfei, MO Weihua</i> , et al. (625)

No. 6 (December 2018)

Microstructure and Properties of Non-ferrous Metals

Development and Exploration of Zr-based Biomedical Alloy Materials	<i>LIU Dongyun, ZHAN Yongzhong</i> (633)
Friction and Wear Mechanism and Properties of Al-Sn Bearing Alloys	<i>WEI Xuanchen, ZHANG Fangxu, THAN Hongyun</i> , et al. (639)
Analysis on the Phase Component and Fracture Morphology of YB-10 Aluminum Alloy	<i>WANG Tao, HUANG Guoren, WEN Jingxian</i> , et al. (645)
The Effect of Zirconium Content on the Interfacial Modification of Copper-graphite Composites	<i>ZHANG Kun, PANG Mingjun, DING Xiaolong</i> , et al. (649)
Study on Diffusion Behavior of Al-Cu Binary System at 540°C	<i>OUYANG Yifang, LIU Ke, CAO Yu</i> , et al. (654)
Phase Field Simulation of Nucleation and Propagation of Crack from Grain Boundary	<i>DENG Litao, LU Yujiang, LIU Zheyuan</i> , et al. (658)

Biological Sciences

The Survival and Growth Advantages of Polyploid Bacteria and Archaea	<i>LI Haijuan, XU Lingling</i> (663)
Screening of Microbial Strain XYW5 for Acidic Xylanase and Enzymatic Properties of Crude Acidic Xylanase	<i>WU Renzhi, HUANG Jun, LU Zhilong</i> , et al. (669)
Growth Inhibition and Apoptosis of Hepatocellular Carcinoma HepG2 Cells by the <i>Eucalyptus robusta</i> Leaf Water Extract	<i>ZHOU Jin'ai, YU Jun, HUANG Dongping</i> , et al. (678)

Environmental Protection

Impact of Datengxia Gorge Water Conservancy on Waterfowl Communities in Winter at the Early Stage of Construction	<i>LI Xianglin, XIE Hua, PENG Bo</i> , et al. (684)
Spatial Distribution Characteristics of Heavy Metals in Yuanbaoshan Mining Area, Guangxi	<i>LIU Pengyu, ZHANG Liankai, HUANG Qibo</i> , et al. (694)
Spatial Variability and Distribution Characteristics of Heavy Metals in Farmland Soils in Huanjiang County, Guangxi	<i>XU Yemei, ZHANG Chaolan, LI Ning</i> , et al. (701)
Correlation Research between Karst Rocky Desertification and Human Activities: A Case of Guangxi	<i>SU Chengjie, YUE Tao, JIANG Lin</i> , et al. (709)

Special Columns

Base on Memory Effect of Spatial Public Goods Game	<i>NIU Yalan, ZHAO Ming</i> (715)
Study on Preparation of Eucalyptus Biochar by Catalytic Pyrolysis with $\text{Fe}(\text{NO}_3)_3$ and Its Reactivity	<i>CUI Kai, HUANG zhongyi, LI lishuo</i> (721)
Global Convergence and Numerical Results of a Modified PRP Conjugate Gradient Method with a New Line Search	<i>WANG Songhua, WU Jiaqi</i> (728)
Occurrence and Distribution of Mud Clam, <i>Polymesoda</i> spp. in Mangroves at Beihai City	<i>LIU Wenguang, WANG Shuai, YANG Mingliu</i> , et al. (734)