

目 次

化学与生物化学

- 毛梗豨莶乙酸乙酯部位化学成分及生物活性研究 刘 华, 靳永亮, 张纪越, 朱伶俐, 盛天露, 刘 峰(1699)
拟草果总黄酮制备纯化及抗炎活性研究 柴 玲, 陈明生, 袁健童, 冯 军, 刘布鸣(1706)
19种常见中药材醇提物的体外抗菌活性筛选 张铁焕, 吴玉霞, 奚佐红, 左国营(1712)
基于藜麦转录组的脂肪酸生物合成途径解析 时小东, 孙梦涵, 吴 琪, 邬晓勇, 赵 钢(1721)
盐穗木病程相关蛋白 HcPR10 抗血清的制备及鉴定 张 花, 杨 涛, 衡友强, 王 艳(1732)
南美天胡荽及其根际土壤水浸提液化感成分分析 周 旭, 胡亚萍, 葛晓敏, 陈水飞, 马方舟, 丁 晖(1740)

生理与分子生物学

- 不同产地浙贝母生物碱含量及其合成相关基因表达研究 吴秋丽, 嵇元烨, 董莉莉, 沈晓霞, 王志安, 王忠华(1755)
水分胁迫对极小种群东兴金花茶幼苗光合特性的影响 唐健民, 柴胜丰, 邹 蓉, 陈宗游, 史艳财, 蒋运生, 韦 霄(1764)
沙特番茄黄化曲叶病毒 AC2 基因编码蛋白的生物信息学分析 朱晓林, 魏小红, 王宝强, 冯 悅, 赵耀东(1773)
NaHCO₃胁迫对紫根水葫芦形态学指标和光合参数的影响 程贝贝, 陈胜艳, 岳莉然(1781)
橡胶树橡胶生物合成调控相关基因的表达相关性分析 杨署光, 杨秀光, 赵 悅, 史敏晶, 李 言, 邓小敏, 晁金泉, 田维敏(1790)
原始小球藻 AP2 转录因子的生物信息学分析 付 春, 唐 易, 江 纳, 杨瑶君(1800)
地黄 RgCDPK 基因的克隆与表达分析 原增艳, 宋小锋, 朱畇昊(1816)

生态与地理

- 滇西北高山冰缘带植物新记录 徐 波, 陈光富(1824)
中国橙衣属和果衣属地衣的新记录种(英文) 王春晓, 孙美洁, 赵遵田(1833)
土壤氮素异质性分布和马先蒿寄生对长芒棒头草生长发育及根系分布的影响 田玉清, 隋晓琳, 张 婷, 李艳梅, 李爱荣(1838)
藏药“榜间”主流品种基原植物的潜在分布研究 唐 艺, 丁 荣, 付 林, 古 锐, 邓 薇, 孙洪兵(1849)
山西吕梁山草本群落物种多样性的海拔梯度格局及与环境因子的关系 张世雄, 秦瑞敏, 杨晓艳, 温 静, 徐满厚(1860)
基于无人机影像探讨格氏栲天然林林窗数量分布及其影响因素 卢尧舜, 何中声, 罗丽洁, 刘金福, 施友文, 沈彩霞(1869)
桂北不同林龄桉树人工林土壤微生物数量和酶活性特征研究 段春燕, 何成新, 沈育伊, 滕秋梅, 徐广平, 罗亚进, 周龙武, 顾大形, 何 文, 黄科朝(1877)

责任编辑 何永艳 李 莉 蒋巧媛 周翠鸣
责任校对 周翠鸣 何永艳 李 莉 蒋巧媛
英文编辑/校对 李 莉 周翠鸣 何永艳 蒋巧媛
封面/版式设计 蒋巧媛 李 莉 周翠鸣 何永艳

期刊基本参数: CN 45-1134/Q * 1981 * m * A4 * 200 * zh+en * P * ￥45.00 * 1200 * 20 * 2020-12

封面说明: 高山冰缘带是地表海拔最高的植被带, 是大多数植物分布的边缘地带。这里海拔高, 难以到达, 植物多样性调查存在较多空白。特殊的海拔高度、强烈的紫外线、极端昼夜温差、贫瘠的基质, 从而形成了独一无二的冰缘带区系。横断山高山冰缘带是目前已知最丰富的高山植物区系, 特有性高。经过长期演化, 植物多为低矮、嗜寒喜旱、花色艳丽、多年生草本。约有 10% 的物种演化出一系列特殊适应结构, 例如: 具有垫状结构的囊种草, 温室结构的塔黄, 绵毛结构的绵头雪兔子; 兼具垫状结构和绵毛结构的中甸丛菔等。值得重视的是, 高山冰缘带植物具有普遍存在的特殊抗逆基因和较高的观赏价值, 有待于深入研究和加强保护以及合理开发利用。

照片示: 横断山高山冰缘带代表性植物。**1.** 囊种草; **2.** 囊距紫堇; **3.** 中甸丛菔; **4.** 塔黄; **5.** 绵头雪兔子; **6.** 拟秀丽绿绒蒿。照片由徐波提供。(相关内容详见本期正文 1824~1832 页徐波等的文章)

1	2	3
4	5	6

CONTENTS

Chemistry and Biochemistry

- Chemical components and bioactivity from the ethyl acetate of *Siegesbeckia glabresce* LIU Hua, JIN Yongliang, ZHANG Jiyue, ZHU Lingli, SHENG Tianlu, LIU Feng(1699)
 Purification and anti-inflammatory activity of total flavonoids from *Amomum paratsao-ko* CHAI Ling, CHEN Mingsheng, YUAN Jiantong, FENG Jun, LIU Buming(1706)
 Screening of antimicrobial activity of 19 Chinese herbal medicines ethanol extracts *in vitro* ZHANG Tiehuan, WU Yuxia, DIAN Zuohong, ZUO Guoying(1712)
 Description of fatty acid biosynthesis pathway based on quinoa transcriptome SHI Xiaodong, SUN Menghan, WU Qi, WU Xiaoyong, ZHAO Gang(1721)
 Preparation and identification of antiserum against HcPR10 from *Halostachys caspica* ZHANG Hua, YANG Tao, HENG Youqiang, WANG Yan(1732)
 Analysis of allelochemicals in water extracts of plant and rhizospheric soil of *Hydrocotyle vulgaris* ZHOU Xu, HU Yaping, GE Xiaomin, CHEN Shuifei, MA Fangzhou, DING Hui(1740)
 Alkaloid content and synthesis related gene expression of *Fritillaria thunbergii* in different producing areas WU Qiuli, JI Yuanye, DONG Lili, SHEN Xiaoxia, WANG Zhian, WANG Zhonghua(1755)

Physiology and Molecular Biology

- Effects of water stress on photosynthetic characteristics of *Camellia tunghinensis* seedlings TANG Jianmin, CHAI Shengfeng, ZOU Rong, CHEN Zongyou, SHI Yancai, JIANG Yunsheng, WEI Xiao(1764)
 Bioinformatics analysis of coding protein of AC2 gene of Saudi tomato yellow leaf curl virus ZHU Xiaolin, WEI Xiaohong, WANG Baoqiang, FENG Yue, ZHAO Yaodong(1773)
 Effects of NaHCO₃ stress on morphological indices and photosynthetic parameters of purple root *Eichhornia crassipes* CHENG Beibei, CHEN Shengyan, YUE Liran(1781)
 Correlation analysis on expression of genes related to rubber biosynthesis regulation of rubber tree YANG Shuguang, YANG Xiuguang, ZHAO Yue, SHI Minjing, LI Yan, DENG Xiaomin, CHAO Jinquan, TIAN Weimin(1790)
 Bioinformatics analysis of AP2 transcription factor in *Auxenochlorella protothecoides* FU Chun, TANG Yi, JIANG Na, YANG Yaojun(1800)
 Cloning and expression analysis of calcium-dependent protein kinase genes in *Rehmannia glutinosa* YUAN Zengyan, SONG Xiaofeng, ZHU Yunhao(1816)

Ecology and Geography

- New record to alpine subnival belt of Northwest Yunnan XU Bo, CHEN Guangfu(1824)
 New records of *Caloplaca* and *Ramboldia* from China WANG Chunxiao, SUN Meijie, ZHAO Zuntian(1833)
 Effects of soil nitrogen heterogeneity and parasitism by *Pedicularis* species on growth and root spatial distribution of *Polypogon monspeliensis* TIAN Yuqing, SUI Xiaolin, ZHANG Ting, LI Yanmei, LI Airong(1838)
 Predicting the potential distribution of original plants of mainstream varieties of Tibetan medicine “Bangjian” TANG Yi, DING Rong, FU Lin, GU Rui, DENG Wei, SUN Hongbing(1849)
 Patterns of species diversity in herbaceous communities at different altitude gradients and their relationships with environmental factors in Lüliang Mountains in Shanxi Province, China ZHANG Shixiong, QIN Ruimin, YANG Xiaoyan, WEN Jing, XU Manhou(1860)
 Using UAV images to explore quantitative characteristics and influencing factors of forest gaps in *Castanopsis kawakamii* natural forest LU Yaoshun, HE Zhongsheng, LUO Lijie, LIU Jinfu, SHI Youwen, SHEN Caixia(1869)
 Soil microbe quantity and enzyme activity characteristics of *Eucalyptus* plantations of different forest ages in North Guangxi DUAN Chunyan, HE Chengxin, SHEN Yuyi, TENG Qiumei, XU Guangping, LUO Yajin, ZHOU Longwu, GU Daxing, HE Wen, HUANG Kechao(1877)

Cover images: Selective presentation of alpine subnival belts plants from the Hengduan Mountains. 1. *Thylacospermum caespitosum*; 2. *Corydalis benecincta*; 3. *Solms-laubachia zhongdianensis*; 4. *Rheum nobile*; 5. *Saussurea laniceps*; 6. *Meconopsis pseudovenusta*. Cover images are provided by XU Bo. (For detail, please see the text by XU Bo et al. on page 1824–1832)

1	2	3
4	5	6