

三、研究生培养质量提升材料

1. 研究生承担的创新项目

表 4 研究生承担创新项目汇总表

| 序号 | 主持人 | 项目名称 | 项目类型 | 立项年份 |
|----|-----|---|------|---------|
| 1 | 余冬雯 | 纳米二氧化钛调控紫花苜蓿耐盐性的生理与分子机制研究 | 创新项目 | 2026-06 |
| 2 | 冯帆 | 宁夏中部干旱区甜高粱刈割后套作拉巴豆氮素利用特征及其互作机制 | 创新项目 | 2026-06 |
| 3 | 罗汶婧 | 解磷促生型合成菌群驱动盐碱土改良与紫花苜蓿磷高效利用的研究 | 创新项目 | 2026-06 |
| 4 | 刘昊臻 | 紫花苜蓿种子萌发期贮藏物质动员对盐碱胁迫的应答机制研究 | 创新项目 | 2026-06 |
| 5 | 沙煜舒 | 紫花苜蓿谷氨酰胺合成酶基因多态性研究 | 创新项目 | 2026-06 |
| 6 | 禹一箭 | 碱性盐干旱胁迫对燕麦光合特性与抗氧化系统及其基因表达的影响 | 创新项目 | 2026-06 |
| 7 | 刘佳原 | 增温对荒漠草原灌丛化过程中植物叶片功能形状的影响 | 创新项目 | 2026-06 |
| 8 | 陈燕 | 围封与补播对荒漠草地土壤有机碳积累及稳定性的影响 | 创新项目 | 2025-04 |
| 9 | 韩梦洁 | 荒漠草原灌丛化对植物光合碳分配过程的影响机制研究 | 创新项目 | 2025-04 |
| 10 | 朱青青 | 荒漠草原植被恢复的空斑调控机理研究 | 创新项目 | 2025-04 |
| 11 | 马永龙 | 紫花苜蓿 DIR 基因家族鉴定及关键基因抗旱性功能研究 | 创新项目 | 2025-04 |
| 12 | 王博瑞 | 溶磷关键基因 <i>pqqE</i> 介导耐盐溶磷菌 AWH-NS6 调控盐碱地紫花苜蓿生长和耐盐性的研究 | 创新项目 | 2025-04 |
| 13 | 管思雨 | 极端降水变化下荒漠草原群落植物叶片结构与功能性状的权衡关系 | 创新项目 | 2025-04 |
| 14 | 晁嘉潞 | 紫花苜蓿 GASA 基因家族鉴定与功能验证 | 创新项目 | 2025-04 |
| 15 | 彭九洲 | 盐碱地紫花苜蓿耐盐促生菌种筛选及合成生物菌群的构建 | 创新项目 | 2025-04 |

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| 16 | 姜海鑫 | 补播修复下荒漠草原植物群落变化及其影响因素 | 创新项目 | 2024-04 |
| 17 | 付茂兴 | 枯草芽孢杆菌 TH72 高效降解柠条青贮饲料木质纤维素研究 | 创新项目 | 2024-04 |
| 18 | 冯琴 | 小黑麦后嵌入不同形态燕麦与箭筈豌豆混播技术研究 | 创新项目 | 2023-04 |
| 19 | 张浩 | 荒漠草原短花针茅天然群落植被物种水分利用策略对降水变化的响应 | 创新项目 | 2022-06 |
| 20 | 洪乐乐 | 基于遥感的宁夏盐池县草地封育前后净初级生产力时空变化及其对气候因子响应 | 创新项目 | 2021-07 |
| 21 | 韩翠 | 降水量变化及氮添加下荒漠草原固碳特征研究 | 创新项目 | 2021-07 |
| 22 | 倪旺 | 小偃麦表面乳酸菌的分离鉴定及对青贮品质的影响 | 创新项目 | 2021-07 |
| 23 | 李志丽 | 荒漠草原人为灌丛转变过程土壤氮素与微生物酶响应 | 创新项目 | 2020-10 |
| 24 | 刘进娣 | 季节性轮牧对荒漠草原土壤种子库特征的影响 | 创新项目 | 2020-10 |
| 25 | 沙栢平 | 滴灌条件下水肥耦合苜蓿生产技术研究 | 创新项目 | 2019-04 |
| 26 | 马晓静 | 宁夏东部风沙区沙化草地土壤碳氮分异特征 | 创新项目 | 2019-04 |
| 27 | 贾希洋 | 不同平茬密度对荒漠草原柠条林间植被土壤的影响 | 创新项目 | 2018-05 |
| 28 | 陶利波 | 封育对宁夏荒漠草原植物-土壤有机碳及其 $\delta^{13}C$ 值的影响 | 创新项目 | 2017-04 |
| 29 | 米楠 | 基于草畜平衡的荒漠草原可持续利用模式研究 | 培优项目 | 2016-04 |
| 30 | 仲俊涛 | 盐池县草地生态系统服务及补偿机制 | 培优项目 | 2016-04 |
| 31 | 吴旭东 | 荒漠草原不同退化程度土壤碳稳定性评价 | 培优项目 | 2014-04 |
| 32 | 卞莹莹 | 荒漠草原区农林牧复合结构与模式优化研究 | 培优项目 | 2013-04 |

宁夏大学部门公文

研究生院〔2026〕25号

2026年宁夏大学研究生创新项目立项公示

各研究生培养单位:

根据《关于申报2026年宁夏大学研究生创新项目的通知》(研究生院〔2026〕19号)相关要求,经个人申报、各培养单位初审评审、研究生院审核审定,我校共立项校级研究生创新项目238项。其中,学校经费资助项目161项,培养单位自筹经费资助项目77项(具体名单详见附件)。现将立项名单予以公示。

公示时间:2026年6月15日--6月18日

联系人:徐老师 联系电话:2061097

附件:2026年宁夏大学研究生创新项目拟立项名单

研究生院

2026年6月15日

| 2026年宁夏大学研究生创新项目拟立项名单 | | | | | | | | | | | |
|-----------------------|----------|-------------------------------------|-----|------------|-----------|-------|-------------------------|---------|---------|--------------|------|
| 序号 | 所在学院 | 项目名称 | 申请人 | 学号 | 专业 | 年级 | 项目参加者 | 指导教师 | 申报经费(元) | 预期目标 | 备注 |
| 1 | 农学院 | 葡萄精神结构基因组DroCDS1鉴定与根系发育的功能研究 | 苏磊 | 1202****13 | 作物学 | 2024级 | 肖东浩, 杨九菊, 唐海江 | 罗炳科 | 6000 | 发表学术论文1篇 | 学校资助 |
| 2 | 农学院 | m6A结合蛋白OeMTC3鉴定水稻耐盐性的分子机制研究 | 董世博 | 1202****14 | 作物学 | 2024级 | 王春瑞, 李思, 董银丽 | 马瑾 | 6000 | 发表学术论文1篇 | 学校资助 |
| 3 | 农学院 | 基于无人机图像特征的玉米综合长势指标构建及综合长势预测研究 | 潘永洁 | 1202****63 | 作物学 | 2025级 | 陈伯文, 杨皓研, 王烁 | 贾彪 | 6000 | 发表学术论文1篇 | 学校资助 |
| 4 | 农学院 | 种植密度对玉米根际微生物群落结构的影响 | 刘颖林 | 1202****63 | 农艺与种业(作物) | 2024级 | 海艺蕊, 刘明熙, 肖颖 | 孙颖 | 6000 | 发表学术论文1篇 | 学校资助 |
| 5 | 农学院 | 长期化肥减量对小麦-大豆轮作系统中大豆生长及根瘤菌的影响 | 郭启睿 | 1202****67 | 农业资源与环境 | 2025级 | 马金芳, 周慧 | 王西娜 | 6000 | 发表学术论文1篇 | 学校资助 |
| 6 | 农学院 | 基于多组学联合分析外源农药残留代谢产物降解产物代谢研究 | 寇慧仪 | 1202****63 | 资源利用与植物保护 | 2024级 | 刘有策, 陈雨晴, 马晓慧, 朱嘉玉, 马惠珍 | 王祺 | 6000 | 发表学术论文1篇 | 学校资助 |
| 7 | 农学院 | 活性木质素酚类OxO对盐渍化土壤微生物及玉米生长的影响 | 贺雪燕 | 1202****66 | 资源利用与植物保护 | 2025级 | 魏斌, 马琳, 杨利春 | 王亚群, 王祺 | 6000 | 发表学术论文1篇 | 学校资助 |
| 8 | 农学院 | 植物源杀虫剂——新型植物碱类衍生物的研究 | 吴娟 | 1202****24 | 农业昆虫与害虫防治 | 2024级 | 薛建林, 陈修伯 | 王伟 | 6000 | 发表学术论文1篇 | 学校资助 |
| 9 | 农学院 | 枸杞木质素细胞发育的关键转录因子筛选及其功能研究 | 姜博雅 | 1202****02 | 农业昆虫与害虫防治 | 2025级 | 杨飞航 | 李静卿 | 6000 | 发表学术论文1篇 | 学校资助 |
| 10 | 农学院 | BdD1-1C1介导球藻白僵菌拮抗适应性及致病机制研究 | 张瑞娜 | 1202****65 | 资源利用与植物保护 | 2025级 | 孙根池 | 朱生发 | 6000 | 发表学术论文1篇 | 学校资助 |
| 11 | 农学院 | 宁夏农业社会化服务水平测度及提升路径研究 | 尤永馨 | 1202****27 | 农村发展 | 2025级 | 张文华, 马一帆, 任俊辰, 陈升 | 王琳琪 | 3000 | 发表学术论文1篇 | 学校资助 |
| 12 | 农学院 | 农村数字基础设施对城乡收入差距的影响研究 | 张雅琪 | 1202****95 | 农村发展 | 2025级 | 陈盼, 郭斌 | 韩秀丽 | 3000 | 发表学术论文1篇 | 学校资助 |
| 13 | 林业与草业学院 | 硝态氮氧化还原性对紫花苜蓿耐盐性的生理与分子机制研究 | 余冬霞 | 1202****02 | 兽医学 | 2024级 | 王颖彤, 董玉花, 雷亚霞, 王子涵 | 李贵霞 | 6000 | 发表学术论文1篇 | 学校资助 |
| 14 | 林业与草业学院 | 宁夏中部干旱区耐盐碱作物作伴生固氮菌的生理特性及其互作机制 | 冯敏 | 1202****70 | 农艺与种业(草业) | 2024级 | 孙超凡, 李耀文, 马少燕 | 邓建斌 | 6000 | 发表学术论文1篇(T1) | 学校资助 |
| 15 | 林业与草业学院 | 耐盐花生型合欢固氮菌对土壤盐渍化与紫花苜蓿固氮效率的影响 | 罗文娟 | 1202****67 | 农艺与种业(草业) | 2024级 | 王耀斌, 肖德斌, 李小明 | 李慧英 | 6000 | 发表学术论文1篇 | 学校资助 |
| 8 | 农学院 | 宁夏地区酿酒葡萄霜霉病病原菌株的鉴定 | 王兴哲 | 1202****30 | 农业昆虫与害虫防治 | 2024级 | 杨庆科, 李兴魁, 梁朝慧, 彭宇阳 | 郭沛斐 | 6000 | 发表学术论文1篇 | 学院自筹 |
| 9 | 农学院 | 枸杞木虱对葡萄霜霉病病原的传毒能力 | 郭慧静 | 1202****03 | 资源利用与植物保护 | 2024级 | | 郭文慧 | 6000 | 发表学术论文1篇 | 学院自筹 |
| 10 | 农学院 | 山新核二酰基脂肪酸 Fd4g-XM1-7 基因抗病功能研究 | 郑永怡 | 1202****10 | 资源利用与植物保护 | 2024级 | 刘静, 李春雨, 李永梅, 张琦, 王 | 于泽丰 | 6000 | 发表学术论文1篇 | 学院自筹 |
| 11 | 农学院 | 数字经济赋能葡萄酒城农业绿色转型:协同困境、差异收益与驱动机制研究 | 万春雨 | 1202****03 | 农村发展 | 2025级 | 张静雅, 李冉 | 杨海娟 | 3000 | 发表学术论文1篇 | 学院自筹 |
| 12 | 农学院 | 社会资本、风险感知与农户葡萄套种意愿:基于宁夏葡萄酒产区数据的实证研究 | 唐金翔 | 1202****91 | 农村发展 | 2025级 | 李佳萍, 王婧琪, 罗航少 | 马艳艳 | 3000 | 发表学术论文1篇 | 学院自筹 |
| 13 | 林业与草业学院 | 紫花苜蓿种子的发育期对贮藏物动员与代谢途径的生理机制研究 | 刘国栋 | 1202****91 | 农艺与种业(草业) | 2024级 | 冯朝霞, 赵士斌, 张慧斌, 符雨晨, 邵奇 | 孙宇江 | 6000 | 发表学术论文1篇 | 学院自筹 |
| 14 | 林业与草业学院 | 紫花苜蓿自源黄酮合成途径基因多态性研究 | 沙煜舒 | 1202****70 | 兽医学 | 2024级 | 谢康迪, 王小梅, 曹晓霞, 曹小慧 | 高雪芹 | 6000 | 发表研究论文1篇 | 学院自筹 |
| 15 | 林业与草业学院 | 碱性盐、干旱胁迫对紫花苜蓿高光合特性与抗氧化系统及其基因表达的影响 | 高一新 | 1202****76 | 农艺与种业(草业) | 2024级 | 杨宇帆, 李雅宁, 马特科, 白佳丽 | 张金青 | 6000 | 发表学术论文1篇 | 学院自筹 |
| 16 | 林业与草业学院 | 宁夏干旱沙区典型植物类型土壤水分时空变化特征及植株承载力分析 | 刘佳原 | 1202****79 | 农艺与种业(草业) | 2024级 | 张淑霞, 谢直霞, 刘颖颖 | 王国岳 | 6000 | 发表学术论文1篇 | 学院自筹 |
| 17 | 林业与草业学院 | 宁夏干旱沙区典型植物类型土壤水分时空变化特征及植株承载力分析 | 张英茹 | 1202****93 | 林业 | 2025级 | 王龙, 田佳乐, 杨雅馨 | 曹飞 | 6000 | 发表学术论文1篇 | 学院自筹 |
| 18 | 葡萄酒与园艺学院 | 酿酒葡萄品种和栽培模式对葡萄果实着色和糖酸含量的影响 | 李静娟 | 1202****67 | 园艺学 | 2024级 | 李静娟, 林娟, 陈秀琴 | 单守明 | 6000 | 发表相关论文1篇(T1) | 学院自筹 |
| 19 | 葡萄酒与园艺学院 | 葡萄GLTR家族成员协同调控耐盐性的功能分析 | 郭亚楠 | 1202****75 | 园艺学 | 2024级 | 张斌, 田悦, 孟书峰 | 郭磊 | 6000 | 发表相关论文1篇(T1) | 学院自筹 |
| 20 | 葡萄酒与园艺学院 | '马瑟兰'葡萄VCSR基因生物信息学分析及干旱胁迫下的功能验证 | 高阳旭 | 1202****80 | 园艺学 | 2024级 | 李丹丹, 黄亦杨, 袁慧 | 李林福 | 6000 | 发表相关论文1篇(T1) | 学院自筹 |

宁夏大学部门公文

研究生院〔2025〕19号

2025年宁夏大学研究生创新项目立项公示

各研究生培养单位:

根据《关于申报2025年宁夏大学研究生创新项目及参加中国研究生创新实践系列大赛的通知》(研究生院〔2025〕11号)要求,经个人申报、各培养单位组织评审、研究生院审定,决定立项校级研究生创新项目184项,其中:131项由宁夏大学经费资助,53项由研究生所在培养单位自筹经费资助(详见附件),现予以公示。

公示时间:2025年4月29日—5月7日

联系人:徐惠娟

联系电话:2061097

附件:2025年宁夏大学研究生创新项目立项名单

研究生院

2025年4月30日

研究生院

2025年4月30日印发

(共印3份)

— 1 —

| 序号 | 所在学院 | 一级学科/专业领域 | 项目名称 | 申请人 | 学号 | 专业 | 年级 | 项目参加者 | 指导教师 | 资助经费(元) | 预期成果 | 备注 |
|----|-----------|-----------|------------------------------------|-----|--------------|-----------|-------|-----------------------|------|---------|-------------------|------|
| 3 | 文学院 | 中国语言文学 | 双红文艺传播媒介与中国现代文学物理与建构 | 王新洋 | 12024E+10 | 以语言文学 | 2024级 | 冯鑫 | 刘智 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 4 | 文学院 | 学科教学(语文) | AI赋能与人文写作:宁夏地区语文教师角色重构实践探索 | 马静 | 12024E+10 | 学科教学(语文) | 2024级 | 王宝, 魏翠翠, 杨晓霞 | 王琳琳 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 5 | 外国语学院 | 外国语言文学 | AIGC生成式文学的叙事特征研究 | 唐一鑫 | 12023130414 | 外国语言文学 | 2023级 | 王瑞, 史诗语 | 李洁 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 6 | 外国语学院 | 外国语言文学 | DeepSeek与英汉翻译不说的风格建构:叙事建构与句法策略 | 曹淑娟 | 12022E+10 | 外国语言文学 | 2023级 | 刘家芝 | 李洁 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 7 | 马克思主义学院 | 马克思主义理论 | 基于马克思“教育结合”思想的职业教育产教融合机制创新研究 | 杨莎莎 | 12023E+10 | 马克思主义基本理论 | 2023级 | 田少, 白婧婧, 周子玉 | 王志鸿 | 2300 | 发表学术论文1篇 | 自筹经费 |
| 8 | 马克思主义学院 | 马克思主义理论 | 马克思主义交往理论视域下的“三大全球倡议” | 白婧婧 | 12023E+10 | 马克思主义基本理论 | 2023级 | 周子玉, 田少, 杨涛 | 王志鸿 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 9 | 马克思主义学院 | 马克思主义理论 | 数字资本主义语境下意识形态传播的新机制研究 | 刘祖东 | 12023E+10 | 马克思主义基本理论 | 2023级 | | 毛升 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 10 | 马克思主义学院 | 马克思主义理论 | 《资本论》运行:局部工人在资本体系中的多维阐释 | 余洋 | 12023E+10 | 马克思主义基本理论 | 2023级 | 杨小刚 | 余伟知 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 11 | 马克思主义学院 | 马克思主义理论 | “行走的思政课”培育大学生家国情怀研究 | 郝静 | 12023E+10 | 思想政治教育 | 2023级 | 张景勃, 马伟, 崔晓, 马慧娟 | 崔晓 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 12 | 马克思主义学院 | 马克思主义理论 | 习近平总书记教育青年群体回应的情感动员机制研究 | 高国睿 | 12023E+10 | 思想政治教育 | 2023级 | 王丹, 马慧娟, 崔建东 | 崔建东 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 13 | 马克思主义学院 | 马克思主义理论 | 高校思政理论课数字化转型升级及风险防范研究——以宁夏大学为例 | 马小燕 | 12023130237 | 思想政治教育 | 2023级 | 吴岩松, 高国睿, 马伟 | 高国睿 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 14 | 马克思主义学院 | 马克思主义理论 | 思政引领力的生成机理:科学内涵及提升路径研究 | 杜梦露 | 12024E+10 | 思想政治教育 | 2024级 | 孙晓路, 袁庄, 郝静, 马伟 | 刘智 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 15 | 马克思主义学院 | 马克思主义理论 | 宁夏地区红色文化资源赋能乡村振兴的路径研究 | 李雪薇 | 12023E+10 | 思想政治教育 | 2023级 | 张景勃, 李雪薇, 魏国 | 徐静 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 16 | 马克思主义学院 | 马克思主义理论 | 宁夏回族自治区生态文明建设 | 李敏 | 12024E+10 | 思想政治教育 | 2024级 | 周子玉, 李敏娟, 曹淑娟 | 林雅芳 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 17 | 马克思主义学院 | 马克思主义理论 | 文化自信视域下非遗的数字化传播路径的创新探索——以宁夏回族自治区为例 | 王秀婷 | 120241302372 | 思想政治教育 | 2024级 | 马伟, 马友发 | 陈宇楠 | 2500 | 发表学术论文1篇 | 自筹经费 |
| 18 | 马克思主义学院 | 马克思主义理论 | 马克思主义科技观指导下智慧农业的伦理困境与治理策略研究 | 田少 | 12023E+10 | 马克思主义基本理论 | 2023级 | 陈宇楠, 白婧婧, 周子玉 | 刘淑芳 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 19 | 马克思主义学院 | 马克思主义理论 | 生态治理现代化背景下“双碳”目标下的生态治理策略研究 | 姚兰 | 12024E+10 | 马克思主义基本理论 | 2024级 | 曹淑娟, 袁永刚, 李志 | 李志 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 20 | 马克思主义学院 | 马克思主义理论 | 生态治理现代化背景下“双碳”目标下的生态治理策略研究 | 李树刚 | 12024E+10 | 马克思主义基本理论 | 2024级 | 曹淑娟, 石泽平 | 王丛昭 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 21 | 马克思主义学院 | 马克思主义理论 | 习近平生态文明思想对马克思主义生态观的发展 | 沈博 | 12023E+10 | 马克思主义基本理论 | 2023级 | 杨燕 | 毛升 | 3000 | 发表学术论文1篇 | 自筹经费 |
| 22 | 农学院 | 资源利用与植物保护 | 有机肥发酵智能化改造与远程监控系统研发 | 马兰兰 | 12023E+10 | 资源利用与植物保护 | 2023级 | 郭磊, 李惠娟 | 李惠娟 | 6000 | 发表学术论文1篇 | 自筹经费 |
| 23 | 农学院 | 资源利用与植物保护 | 不同植被恢复对宁夏中部旱草盖的反馈效应研究 | 李廷婷 | 12024131490 | 资源利用与植物保护 | 2024级 | 郭磊, 李惠娟, 刘文明 | 郭磊 | 6000 | 发表学术论文1篇 | 自筹经费 |
| 24 | 农学院 | 资源利用与植物保护 | 山东鲁南地区葡萄炭疽病抗性风险评估及机理研究 | 李兴娜 | 12024E+10 | 资源利用与植物保护 | 2024级 | 杨广斌, 马欣 | 郝沛芝 | 5000元 | 发表学术论文1篇 | 自筹经费 |
| 25 | 林业与草原学院 | 农业与林业(农业) | 封育与补播对荒漠草地土壤有机碳积累及稳定性影响 | 曹燕 | 12023E+10 | 农业与林业(农业) | 2023级 | 闫冬梅, 李旭 | 李志刚 | 6000 | 发表SCI论文1篇 | 自筹经费 |
| 26 | 林业与草原学院 | 农业与林业(农业) | 荒漠草原退化对植物生物量分配过程的影响机理研究 | 曹慧洁 | 12023E+10 | 农业与林业(农业) | 2023级 | 马海峰, 刘国栋, 李会, 刘国栋, 李会 | 王国会 | 6000 | 发表SCI论文1篇 | 自筹经费 |
| 27 | 林业与草原学院 | 农业与林业(农业) | 荒漠草原植被恢复的土壤理化性质研究 | 朱晋青 | 12023E+10 | 农业与林业(农业) | 2023级 | 王学军, 冯彦杰, 李会, 李会 | 王旭 | 6000 | 发表SCI论文1篇 | 自筹经费 |
| 28 | 林业与草原学院 | 农业 | 花斑病病原菌基因组鉴定及关键基因转录功能研究 | 王永坚 | 12023131555 | 农业 | 2023级 | 杨金, 余冬冬 | 李海霞 | 6000 | 发表SCI论文1篇 | 自筹经费 |
| 29 | 林业与草原学院 | 农业与林业(农业) | 宁夏旱地土壤AWH-N56调控土壤碳汇功能研究 | 王博瑞 | 12023E+10 | 农业与林业(农业) | 2023级 | 罗文, 马慧娟, 曹淑娟 | 李惠娟 | 6000 | 发表SCI论文1篇 | 自筹经费 |
| 19 | 所在学院 | 一级学科/专业领域 | 项目名称 | 申请人 | 学号 | 专业 | 年级 | 项目参加者 | 指导教师 | 资助经费(元) | 预期成果 | 备注 |
| 19 | 地理科学与规划学院 | 地理学 | 基于生态系统的绿洲城市生态安全格局构建与生态韧性提升——以银川市为例 | 李旭 | 1202313097 | 地理学 | 2023级 | 刘子敏, 赵丽芳, 文瑞 | 文瑞 | 6000 | 发表学术论文2-3篇 | 学校资助 |
| 14 | 地理科学与规划学院 | 地理学 | 基于作物季长的旱地土壤微生物群落结构及其碳源驱动的碳汇功能研究 | 马宇然 | 120231311372 | 自然地理学 | 2024级 | 高亚娟 | 王芳 | 6000 | 发表学术论文1篇 | 学校资助 |
| 15 | 农学院 | 农业昆虫与害虫防治 | 植物抗虫蛋白介导的甘蓝根结根腐病研究 | 胡晓峰 | 12023E+10 | 农业昆虫与害虫防治 | 2023级 | 田少, 冯彦杰, 李会 | 曹彦霞 | 6000 | 发表学术论文1篇 | 学校资助 |
| 16 | 农学院 | 农业资源与环境 | 生防胶木木犀及西瓜枯萎病病原的互作关系研究 | 王亚杰 | 12024E+10 | 农业资源与环境 | 2024级 | 杨露露, 江帆, 冯彦杰 | 魏斌 | 6000 | 发表学术论文1篇 | 学校资助 |
| 17 | 农学院 | 资源利用与植物保护 | 高原牧草物种多样性对放牧胁迫及复合胁迫作用影响 | 冯柏楠 | 12023E+10 | 资源利用与植物保护 | 2023级 | 李星龙 | 李惠娟 | 6000 | 申请发明专利1项;发表学术论文1篇 | 学校资助 |
| 18 | 农学院 | 资源利用与植物保护 | 菌株抗菌VOCs/RVGLs-AE标记菌株筛选与调控网络研究 | 马惠慧 | 12024E+10 | 资源利用与植物保护 | 2024级 | 李花, 韩俊超 | 刘博 | 6000 | 发表学术论文1篇 | 学校资助 |
| 19 | 农学院 | 农业与林业 | 不同种植密度对玉米茎秆木质素合成代谢的调控 | 李丽娟 | 12023E+10 | 农业与林业 | 2023级 | 任玲娟, 赵晓兵 | 邵冬南 | 6000 | 发表学术论文1篇 | 学校资助 |
| 20 | 农学院 | 农村发展 | 高标准农田工程设施管护模式的绩效研究 | 单植娟 | 12023E+10 | 农村发展 | 2023级 | 武雪晴 | 李立群 | 3000 | 发表学术论文1篇 | 学校资助 |
| 21 | 农学院 | 农村发展 | 产生性资本如何影响生计?——生态认知的中介作用 | 连萍 | 12024E+10 | 农村发展 | 2024级 | 陈泽宇, 严超超, 王瑞娟 | 马德胜 | 3000 | 发表学术论文1篇 | 学校资助 |
| 12 | 林业与草原学院 | 林业 | 白刺灌丛沙丘改良过程中的植物群落演替特征 | 杨小会 | 12024131619 | 林业 | 2023级 | 赵元, 杨金, 高亚娟 | 张萍 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 13 | 林业与草原学院 | 林业 | 宁夏黄河流域生态安全格局构建与生态韧性提升 | 杨改良 | 12024E+10 | 林业 | 2024级 | 张敏, 王丽林 | 李旭 | 6000 | 发表学术论文1篇 | 学校资助 |
| 14 | 林业与草原学院 | 林业 | 放牧强度对植物根际微生物群落结构的影响 | 韩颖 | 12024E+10 | 林业 | 2024级 | 韩颖, 曹杰, 杨萍 | 马亚平 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 15 | 林业与草原学院 | 农业 | 木变化下荒漠草原植物群落叶结构与功能性的研究 | 曹思雨 | 12023E+10 | 农业 | 2023级 | 曹思雨, 曹文娟, 胡海英 | 胡海英 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 16 | 林业与草原学院 | 农业 | 基于高通量测序的土壤微生物群落结构与功能研究 | 戚成刚 | 12024E+10 | 农业 | 2024级 | 戚成刚, 曹文娟, 冯彦杰 | 冯彦杰 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 17 | 林业与草原学院 | 农业 | 植物根系分泌物对土壤微生物群落结构的影响 | 彭九阳 | 12024E+10 | 农业 | 2024级 | 冯彦杰, 马亚平 | 卢海 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 18 | 葡萄酒与园艺学院 | 园艺学 | 长期学组合分析的解耦抗逆分子机制解析与调控网络 | 杨嘉旭 | 12024E+10 | 园艺学 | 2024级 | 何娟娟, 李博 | 程国海 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 19 | 葡萄酒与园艺学院 | 农业与林业(园艺) | 信号分子MYB5和MYB25互作调控葡萄果实的分子机制 | 郝照东 | 12024E+10 | 农业与林业(园艺) | 2024级 | 郝照东, 曹孟波 | 杨怡娟 | 5049元 | 发表SCI论文1篇 | 学校资助 |
| 20 | 葡萄酒与园艺学院 | 园艺学 | 园林小气候TMY10A 基因克隆及其抗旱功能研究 | 张新庆 | 12024E+10 | 园艺学 | 2024级 | 靳永新, 曹智勇 | 尹瑞 | 6000 | 发表学术论文1篇 | 学校资助 |
| 21 | 葡萄酒与园艺学院 | 农业与林业(园艺) | 基于多组学分析的蓝藻调控代谢途径及抗旱功能研究 | 李承勇 | 12023E+10 | 农业与林业(园艺) | 2023级 | 赵志杰, 王旭 | 尹瑞 | 6000 | 发表学术论文1篇 | 学校资助 |
| 72 | 生态环境学院 | 材料与化工 | 多途径耦合强化部分还原化/厌氧氨氧化机理研究 | 王娜 | 12023E+10 | 环境化学与材料 | 2023级 | 郝晓, 张洪涛, 曹彦霞 | 吕然 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 73 | 生态环境学院 | 生态学 | 贺兰山不同海拔土壤微生物群落变化特征研究 | 文昌昌 | 12024E+10 | 生态学 | 2024级 | 郝晓, 曹彦霞, 曹彦霞 | 曹彦霞 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 74 | 生态环境学院 | 材料与化工 | 土壤重金属对植物根系生长及养分吸收的影响 | 曹文文 | 12023E+10 | 环境化学与材料 | 2023级 | 曹彦霞, 曹彦霞 | 曹彦霞 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 75 | 生态环境学院 | 材料与化工 | 基于Mamba模型与神经网络的高光谱影像变化检测算法研究 | 曹彦霞 | 12023E+10 | 计算机技术 | 2023级 | 曹彦霞, 曹彦霞 | 曹彦霞 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 76 | 信息工程学院 | 电子信息 | 基于边缘计算的智能感知系统性能优化研究 | 曹彦霞 | 12023E+10 | 计算机技术 | 2023级 | 曹彦霞, 曹彦霞 | 曹彦霞 | 6000 | 发表SCI论文1篇 | 学校资助 |
| 77 | 信息工程学院 | 计算机科学与技术 | 基于多模态融合的视频异常检测多任务学习方法研究 | 王祥志 | 12023E+10 | 计算机科学与技术 | 2023级 | 曹彦霞, 曹彦霞 | 曹彦霞 | 6000 | 发表SCI论文2-3篇 | 学校资助 |
| 78 | 信息工程学院 | 计算机科学与技术 | 基于多模态融合的视频异常检测多任务学习方法研究 | 曹彦霞 | 12023E+10 | 计算机科学与技术 | 2023级 | 曹彦霞, 曹彦霞 | 曹彦霞 | 6000 | 发表SCI论文2-3篇 | 学校资助 |
| 79 | 信息工程学院 | 计算机科学与技术 | 基于多模态融合的视频异常检测多任务学习方法研究 | 曹彦霞 | 12023E+10 | 计算机科学与技术 | 2023级 | 曹彦霞, 曹彦霞 | 曹彦霞 | 6000 | 发表SCI论文2-3篇 | 学校资助 |

宁夏大学部门公文

研究生院〔2024〕16号

关于2024年宁夏大学研究生创新项目立项公示

各研究生培养单位：

根据《关于开展2024年宁夏大学硕士研究生创新项目》(研究生院〔2024〕8号)要求,经个人申报、各培养单位组织评审、研究生院审定,决定立项校级研究生创新项目93项,其中:64项项目由宁夏大学经费资助,29项项目由研究生所在培养单位自筹经费资助(详见附件),现予以公示。

公示时间:2024年4月9日-4月15日

联系人:徐惠娟

联系电话:2061097

附件:

2024年宁夏大学研究生创新项目立项名单

研究生院
2024年4月9日

研究生院

2024年4月9日印发

(共印3份)

— 1 —

| 序号 | 所在学院 | 专业 | 项目名称 | 申请人 | 学号 | 年级 | 项目参加者 | 指导教师 | 职称 | 预期目标 | 资助经费(元) | 备注 | |
|----|-----------|-----------|------------------------------------|-----|-------------|-------|----------------|------|-----|-------------|----------|-------|------|
| 63 | 食品科学与工程学院 | 食品科学与工程 | 射频辅助冷冻对滩羊肉质特性的影响 | 王一霖 | 12023132146 | 2023级 | 杨中卿、马志明、浦奥飞 | 刘贵珊 | 教授 | 发表学术论文1篇 | 10000 | 学校资助 | |
| 64 | 食品科学与工程学院 | 食品科学与工程 | 中式肉制品炒制过程中油水界面气泡爆裂及其抑制的方法 | 马洋 | 12023132186 | 2023级 | 刘慧芳、马小琴、张亚铭 | 刘源 | 教授 | 发表SCI论文1篇 | 8326 | 学校资助 | |
| 1 | 电子与电气工程学院 | 电子科学与技术 | 考虑CVAR的含EV的虚拟电厂主从博弈调度策略 | 杨娜 | 12022130640 | 2022级 | 马鑫、张元敏、李植 | 杨国华 | 教授 | 发表论文1篇 | 10000 | 学院自筹 | |
| 2 | 电子与电气工程学院 | 通信工程 | 电磁超材料调控THz波束的成形和聚焦的研究 | 马涛 | 12023130652 | 2023级 | 喻海波、蒋欣 | 孙学宏 | 教授 | 发表论文1篇 | 10000 | 学院自筹 | |
| 3 | 电子与电气工程学院 | 电子科学与技术 | 基于深度学习的作物幼苗表型监测及生长模型构建 | 李波洋 | 12023130607 | 2023级 | 徐琴、蔡玉琴 | 刘大铭 | 教授 | 发表论文1-2篇 | 9445 | 学院自筹 | |
| 4 | 信息工程学院 | 计算机科学与技术 | 基于智能迭代学习调控的穿戴式机械肢体运动功能重建FES系统研究与设计 | 刘士勤 | 12023131991 | 2023级 | 杨光 | 鲍学亮 | 讲师 | 发表论文1篇 | 6000 | 学院自筹 | |
| 5 | 信息工程学院 | 计算机科学与技术 | 基于图神经网络的知识图谱多跳推理方法研究 | 李瑞 | 12021131652 | 2022级 | 陈显恩、秦晶 | 李贺峰 | 副教授 | 发表论文1-2篇 | 6000 | 学院自筹 | |
| 6 | 信息工程学院 | 计算机科学与技术 | 基于改进MobileViT-SSDNet的茴香伴生杂草检测 | 朱子欣 | 12023131984 | 2023级 | 唐浩航、李昂 | 刘瑞 | 副教授 | 发表SCI论文1-2篇 | 6000 | 学院自筹 | |
| 7 | 数学统计学院 | 数学 | 图中过特定边(弧)的不交圈 | 刘思乐 | 12022130563 | 2022级 | 张宏伟、刘耕滔、朱芳 | 陈刚 | 副教授 | 发表论文1-2篇 | 5000 | 学院自筹 | |
| 8 | 数学统计学院 | 数学 | 与q-导算子相关的几类解析函数的泛函不等式 | 黄安 | 12023130515 | 2023级 | | 龙品红 | 副教授 | 发表论文1-2篇 | 5000 | 学院自筹 | |
| 9 | 农学院 | 作物学 | 单细胞分辨率下玉米根尖转录组图谱与缺铁胁迫响应 | 杨亚莉 | 12023131393 | 2023级 | | 孙颖 | 副教授 | 发表SCI论文1篇 | 10000 | 学院自筹 | |
| 10 | 农学院 | 农业资源与环境 | 不同氮肥对生防木霉M3菌株拮抗西瓜枯萎病菌的影响 | 杨嘉妮 | 12023131405 | 2023级 | 蒋娟、全卓 | 顾欣 | 教授 | 发表论文1篇 | 10000 | 学院自筹 | |
| 11 | 农学院 | 农业昆虫与害虫防治 | 蛴螬轮枝菌内生定殖番茄对烟粉虱的抑制作用 | 李金鹏 | 12022131383 | 2022级 | 田浩然、颜晓曦 | 贾霞霞 | 教授 | 发表论文1篇 | 10000 | 学院自筹 | |
| 12 | 农学院 | 农村发展 | 冷冻蔬菜节水灌溉工程互联技术 | 赵中鹏 | 12023131534 | 2023级 | 甲奥 段力文 | 藏志勇 | 副教授 | 发表论文1-2篇 | 10000 | 学院自筹 | |
| 13 | 葡萄酒与园艺学院 | 园艺学 | 鱼菜共生系统中pH对氮循环微生物活性及鱼产量和品质的影响 | 陈启超 | 12023131653 | 2022级 | 徐佳鑫、侯轩慧 | 叶林 | 教授 | 发表论文1-2篇 | 10000 | 学院自筹 | |
| 14 | 葡萄酒与园艺学院 | 园艺学 | 发酵型果酒与米酒产品开发 | 朱超 | 12023131652 | 2023级 | 朱佳祺 | 张军翔 | 教授 | 发表论文1-2篇 | 5000 | 学院自筹 | |
| 15 | 林业与草业学院 | 草业 | 补播修复下荒漠草原植物群落变化及其影响因素 | 姜雨鑫 | 12022131412 | 2022级 | 李福强、黄明、马婷婷、马斌学 | 马红彬 | 教授 | 发表SCI论文1篇 | 10000 | 学院自筹 | |
| 16 | 林业与草业学院 | 林业 | 野生酸枣MYB家族成员鉴定与表达分析 | 丁旭斌 | 12023131591 | 2023级 | | 张婷 | 宋丽华 | 教授 | 发表论文1-2篇 | 10000 | 学院自筹 |
| 17 | 生态环境学院 | 生态学 | 近20年黄河上游宁夏段植被覆盖时空演变及驱动机制分析 | 邱思涵 | 12023131059 | 2023级 | 杨秋琳、马洁琴、李永刚 | 米丽娜 | 副教授 | 发表论文1-2篇 | 10000 | 学院自筹 | |
| 18 | 生态环境学院 | 生态学 | 典型草原不同封育年限土壤碳库微生物群落变化特征研究 | 李慧 | 12023131057 | 2023级 | 赵娅娟、魏佳妮、孙范楠、杨玲 | 冯丹波 | 副教授 | 发表论文1篇 | 10000 | 学院自筹 | |
| 19 | 外国语学院 | 外国语言文学 | 世界主义视角下《巴别塔》中的共同体想象 | 陈慧雨 | 12022130434 | 2022级 | 孙月蕊、马瑞、石文慧 | 胡笑瑛 | 教授 | 发表学术论文1篇 | 5000 | 学院自筹 | |

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|----|----------|---------|---|-----|-------------|-------|-------------|-----|-----|--------------------|-------|------|
| 21 | 马克思主义学院 | 马克思主义理论 | “一带一路”倡议下的价值及育人路径研究 | 马鹏飞 | 12022130167 | 2022级 | 王宇 | 张艳 | 副教授 | 发表学术论文1篇 | 5000 | 学校资助 |
| 22 | 马克思主义学院 | 马克思主义理论 | 中华民族现代文明理论体系建构研究 | 邓姝婧 | 12022130184 | 2022级 | 方方一心 | 李斌 | 教授 | 发表学术论文2篇 | 5000 | 学校资助 |
| 23 | 马克思主义学院 | 马克思主义理论 | 党的自我革命永远在路上——基于生成、内涵和实践的三维阐释 | 杨小娟 | 12023130227 | 2023级 | 倪华 | 钱睿德 | 副教授 | 发表学术论文1篇 | 5000 | 学校资助 |
| 24 | 马克思主义学院 | 马克思主义理论 | 习近平生态文明思想引领下的美丽中国建设研究 | 张景怡 | 12023130240 | 2023级 | 郝卿、冯燕翔、张金鑫 | 范琳琳 | 教授 | 发表学术论文1篇 | 5000 | 学校资助 |
| 25 | 新闻传播学院 | 新闻与传播 | 使用与满足：微短剧出圈的受众心理分析 | 吴承宇 | 12023132117 | 2023级 | 葛晨婧、易方、杨凌宇 | 谢明辉 | 教授 | 发表学术论文1篇 | 5000 | 学校资助 |
| 26 | 音乐学院 | 舞蹈 | 向美而行 艺术未来——宁夏美育浸润行动的创新发展路径探究 | 李卓然 | 12023131829 | 2023级 | 谢雨欣、高嘉楠 | 金晖 | 副教授 | 舞蹈展演、报告或论文 | 5000 | 学校资助 |
| 27 | 美术学院 | 环境设计 | 设计赋能乡村振兴——宁夏北部地区农村综合体发展路径与规划设计 | 杨孟宇 | 12023131907 | 2023级 | 李君福、张翰雨、孙磊文 | 查娜 | 副教授 | 以调研报告以及科技制作的形式进行汇报 | 4500 | 学校资助 |
| 28 | 农学院 | 作物学 | 盐碱地玉米氮代谢对土壤水平的响应研究 | 刘威帆 | 12022131346 | 2022级 | 黄森锋、王成虎 | 吴娜 | 教授 | 发表学术论文1篇 | 10000 | 学校资助 |
| 29 | 农学院 | 农业资源与环境 | 深松结合腐熟秸秆对旱作马铃薯水肥利用效率的调控研究 | 刘妙妙 | 12023131403 | 2023级 | 张悦德、张旭 | 侯贤清 | 教授 | 发表学术论文1篇 | 10000 | 学校资助 |
| 30 | 农学院 | 农业资源与环境 | 中国麻科1新种的形态和线粒体基因组分析 | 胡亚荣 | 12023131408 | 2023级 | | 苗颖 | 副教授 | 发表学术论文1篇 | 10000 | 学校资助 |
| 31 | 农学院 | 农村发展 | 宁夏奶产业“产、管、销”链条、创新融合发展的路径研究 | 尹家康 | 12023131529 | 2023级 | 冯一帆、马莉、董源 | 陈刚 | 副教授 | 发表学术论文1篇 | 10000 | 学校资助 |
| 32 | 林业与草业学院 | 草业 | 精原浆饲料蛋白对羔羊产肉性能及胴体品质的影响研究 | 白奕兴 | 12023131561 | 2023级 | 史金旺、郭晓娟 | 尹强 | 讲师 | 发表SCI论文1篇 | 10000 | 学校资助 |
| 33 | 林业与草业学院 | 林业 | 基于VOL-0.8的哈巴湖国家级自然保护区植被识别研究 | 任瑶 | 12023131611 | 2023级 | 吴国伟、冯亚娟 | 田佳 | 副教授 | 发表学术论文1-2篇 | 10000 | 学校资助 |
| 34 | 葡萄酒与园艺学院 | 园艺学 | 基于分子标记技术的葡萄根癌病多样性分析 | 杨朝 | 12023131695 | 2023级 | 马晓娟、郑斌 | 程国新 | 副教授 | 发表学术论文1篇 | 5000 | 学校资助 |
| 35 | 葡萄酒与园艺学院 | 园艺学 | 基于CRISPR-Cas9技术的“黑果”葡萄JcAT1基因敲除及参与抗寒耐旱相关基因的表达分析 | 马芳 | 12023131650 | 2023级 | | 徐伟荣 | 教授 | 发表学术论文1篇 | 9953 | 学校资助 |
| 36 | 生态环境学院 | 生态学 | 荒漠草原植物养分吸收和养分利用效率对变化的响应 | 苏柳玉 | 12023131060 | 2023级 | 邢彬彬、尹星元 | 安慧 | 研究员 | 发表学术论文1篇 | 10000 | 学校资助 |
| 37 | 生态环境学院 | 材料科学与工程 | 共存盐碱土对铅在氧化锰和磁铁矿表面吸附行为影响研究——基于原位XPS和分子动力学模拟 | 张玲 | 12023131090 | 2023级 | 杨佳丽 | 王莹 | 讲师 | 发表学术论文1篇 | 10000 | 学校资助 |
| 38 | 经济管理学院 | 理论经济学 | 政府创新补贴对企业创新的影响——基于创新生态系统的分析 | 高月 | 12022130048 | 2022级 | 李天成、冯晓娟、郭昱 | 杨国涛 | 教授 | 发表论文1-2篇 | 4980 | 学校资助 |
| 39 | 经济管理学院 | 管理学 | 数字化转型与绿色治理耦合协调及对企业绩效的影响研究 | 马睿琦 | 12022130072 | 2022级 | 张慧、刘博茹 | 李立明 | 讲师 | 发表论文1篇 | 5000 | 学校资助 |
| 40 | 经济管理学院 | 工商管理学 | 群体主理组合类型对消费者购买意愿和行为的影响研究——基于个体性视角的多模态分析视角下在线同伴对多媒体学习的的多模态分析视角下在线同伴对多媒体学习的影响、学习风格的调节作用 | 谢杰 | 12022130069 | 2023级 | 周敬豪 | 冯蛟 | 教授 | 发表论文1篇 | 5000 | 学校资助 |
| 41 | 教师教育学院 | 心理学 | | 赵文静 | 12022130328 | 2022级 | 赵茜 | 吴萍 | 教授 | 发表论文1篇 | 5000 | 学校资助 |

宁夏大学部门公文

研究生院〔2023〕6号

关于2023年研究生学术论坛项目和研究生创新项目评审结果公示

各研究生培养单位:

根据《关于开展2023年研究生学术论坛和研究生创新项目申报工作的通知》(研究生院〔2023〕3号)文件要求,经个人申报、各培养单位组织评审、研究生院审定,“塞上清声”法学研究生学术沙龙等33项拟立项为2023年校级研究生学术论坛项目(详见附件1);“马克思主义视域下网络对女性解放的影响——基于宁夏南部山区调查研究”等83项为2023年校级研究生创新项目,其中:63项项目由宁夏大学经费资助,20项项目由研究生所在培养单位自筹经费资助(详见附件2),现予以公示。

公示时间:2023年4月7日至2023年4月14日

联系人:徐惠娟

联系电话:2061097

附件:

1.2023年宁夏大学研究生学术论坛项目立项名单

2023年研究生创新项目立项名单

| 序号 | 培养单位 | 一级学科 | 项目名称 | 申请人 | 学号 | 专业 | 年级 | 项目参加者 | 指导教师 | 职称 | 预期目标 | 备注 |
|----|---------|---------|--|-----|------------|-------------|-------|-----------------|------|------|----------|------|
| 1 | 法学院 | 哲学 | 马克思主义视域下网络对女性解放的影响——基于宁夏南部山区调查研究 | 冯璐 | 120****002 | 外国哲学 | 2022级 | 朱宜锦 | 吕耀军 | 教授 | 发表论文1篇 | 学校资助 |
| 2 | 法学院 | 法学 | 美好生活权的法律内涵与法治路径构建 | 马富清 | 120****035 | 诉讼法学 | 2022级 | 杜维康 | 王丽婷 | 副教授 | 发表论文1篇 | 学校资助 |
| 3 | 法学院 | 法学 | 我国地理标志法律保护制度思考——以宁夏葡萄酒“双碳”目标下绿色产业政策提升企业绿色全要素不同语言风格下社交媒体影响者类型对消费者 | 白小飞 | 120****020 | 民商法学 | 2021级 | 吕家伟、马文静、柳长江、杜维康 | 张云雁 | 副教授 | 发表论文1篇 | 学校资助 |
| 4 | 经济管理学院 | 理论经济学 | “双碳”目标下绿色产业政策提升企业绿色全要素不同语言风格下社交媒体影响者类型对消费者 | 刘星源 | 120****057 | 理论经济学 | 2021级 | 刘星源、张鑫、高月、李天成 | 杨国涛 | 教授 | 发表论文1篇 | 学校资助 |
| 5 | 经济管理学院 | 工商管理 | 不同语言风格下社交媒体影响者类型对消费者 | 田宏荣 | 120****062 | 工商管理 | 2021级 | 于恒 | 朱丽娟 | 教授 | 发表论文1篇 | 学校资助 |
| 6 | 经济管理学院 | 理论经济学 | 宁夏数字经济高质量发展及对策研究 | 唐艺婧 | 120****054 | 理论经济学 | 2022级 | 姚金语、周俊、张俊俊 | 石荣 | 副教授 | 发表论文1篇 | 学校资助 |
| 7 | 民族与历史学院 | 中国史 | 中华民族共同体视域下家谱叙事研究——以河南“杞梁”史料为例 | 李诗琦 | 120****489 | 中国古代史 | 2021级 | 王俊俊 | 彭向前 | 研究员 | 发表论文1篇 | 学校资助 |
| 8 | 民族与历史学院 | 中国史 | 明清之际珠江三角洲“杞梁”史料考述 | 何国铎 | 120****279 | 中国近现代史 | 2022级 | 赵作社 | 张启龙 | 准聘教授 | 发表论文1篇 | 学校资助 |
| 9 | 民族与历史学院 | 民族学 | 宁夏城市社区青年中华民族共同体意识实践路径 | 马程浩 | 120****136 | 民族社会学 | 2022级 | 马文丽、靳燕雄、董朝升、卢孙 | 王丽宏 | 副教授 | 发表论文1篇 | 学校资助 |
| 10 | 民族与历史学院 | 民族学 | 宁夏城市社区青年中华民族共同体意识实践路径研究 | 马志鹏 | 120****034 | 民族学 | 2021级 | 李玲慧、刘籽、肖娜 | 冯杰文 | 教授 | 发表论文2篇 | 学校资助 |
| 11 | 马克思主义学院 | 马克思主义理论 | 新时代消除贫困扎实推进共同富裕的实践与启示 | 程静强 | 120****172 | 思想政治教育 | 2021级 | 马红玲、周雅楠、白如君、杨楠 | 张艳 | 副教授 | 发表论文1篇 | 学校资助 |
| 12 | 马克思主义学院 | 马克思主义理论 | “闻字模式”对新时代扎实推进共同富裕的未来 | 马红玲 | 120****158 | 思想政治教育 | 2022级 | 相梓梓、龚艾、张沛涵 | 范映洲 | 教授 | 发表论文1篇 | 学校资助 |
| 13 | 文学院 | 中国语言文学 | 《明经世文编》序言及章句研究 | 汤佳逸 | 120****266 | 中国古典文献学 | 2021级 | 袁小婷、唐宇 | 田富军 | 教授 | 发表论文1篇 | 学校资助 |
| 14 | 文学院 | 中国语言文学 | 《陈余从考》训诂研究 | 边江鹤 | 120****241 | 汉语言文字学 | 2021级 | 王译婕 | 刘鸿雁 | 教授 | 发表论文1-2篇 | 学校资助 |
| 15 | 教育学院 | 教育学 | 乡村幼儿园田园课程体系构建的实证研究 | 张岩岩 | 120****425 | 学前教育 | 2022级 | 赵雪冬、白静、海梅 | 马娥 | 副教授 | 发表论文1-2篇 | 学校资助 |
| 16 | 教育学院 | 心理学 | 居民垃圾分类态度的框架效应研究:社会规范 | 杨帆 | 120****314 | 心理学 | 2021级 | 关晋、梁西峰 | 屈学萍 | 副教授 | 发表论文1篇 | 学校资助 |
| 17 | 外国语学院 | 外国语言文学 | 多模态话语视域下政务新媒体中国形象构建:基于语料库的大学英语六级阅读篇章的历时研 | 陈雨薇 | 120****423 | 外国语言学及应用语言学 | 2021级 | 王玉琳、张梦洋、李晓河 | 周璇 | 教授 | 发表论文1篇 | 学校资助 |
| 18 | 外国语学院 | 外国语言文学 | 《明经世文编》序言及章句研究 | 侯一捷 | 120****431 | 外国语言学及应用语言学 | 2021级 | 陈鑫、程伟轩、开丽梅 | 吴蓉 | 教授 | 发表论文1篇 | 学校资助 |

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|----|--------------|----------|--------------------------------|-----|------------|-----------|-------|-----------------|-----|-----------|-------------------------------|------|
| 39 | 土木与水利工程学院 | 水利工程 | 宁夏清水河河岸带土壤重金属 | 付永亮 | 120****189 | 水利工程 | 2022级 | 刘双羽、赵增锋、蒙俊杰、王楚 | 邱小琼 | 教授 | 发表论文1篇 | 学校资助 |
| 40 | 土木与水利工程学院 | 水利工程 | 基于生态水文学机理的流域水源涵养能力评估 | 马世龙 | 120****131 | 水利工程 | 2022级 | 刘子西、黑正军、陈东成、席睿 | 唐莲 | 教授 | 发表论文1-2篇 | 学校资助 |
| 41 | 土木与水利工程学院 | 土木工程 | 寒区非饱和和微孔隙土体基于性能的大底需多塔楼复合被动控制体系 | 李盛 | 120****909 | 土木工程 | 2021级 | 康鑫锐、单龙、程银银、吕欣、陈 | 李宏波 | 副教授 | 发表论文1-2篇 | 学校资助 |
| 42 | 土木与水利工程学院 | 土木工程 | 基于性能的大底需多塔楼复合被动控制体系 | 巨雷 | 120****112 | 土木工程 | 2022级 | 胡响、吕欣、陈洋、贺佳慧 | 张尚荣 | 副教授 | 发表论文1-2篇 | 学校资助 |
| 43 | 机械工程学院 | 机械工程 | 复合材料补结构在位随形铺贴机构 | 惠继求 | 120****269 | 机械 | 2022级 | 苏宝强、郭雪楠、吴天皓 | 宿友亮 | 教授 | 申请发明专利1项,发表学术论文1篇 | 学校资助 |
| 44 | 机械工程学院 | 机械工程 | 激光塔顶AICrFeNiTi高合金涂层层的组织性 | 范航天 | 120****263 | 机械 | 2022级 | 张正、吴思源、王刚 | 康少付 | 副教授 | 发表论文1篇 | 学校资助 |
| 45 | 机械工程学院 | 机械工程 | 铜丝绳芯输送带断丝检测研究方法 | 李泽旭 | 120****278 | 机械 | 2022级 | 李泽旭、王月嘉、仲吉浩、刘建昊 | 郝洪涛 | 教授 | 申请国家发明专利1项,发表学术论文1篇,发表SCI论文1篇 | 学校资助 |
| 46 | 农学院 | 作物学 | 白粉菌侵染小麦微囊菌的调控研究 | 王双宇 | 120****141 | 作物遗传育种 | 2021级 | 崔原璞、王昭露 | 李清峰 | 副教授 | 发表SCI论文1篇 | 学校资助 |
| 47 | 农学院 | 兽医学 | 羊痘与羊口疮鉴别诊断与免疫防控技术的研究 | 王玲玲 | 120****694 | 兽医 | 2022级 | 高乐、王玮 | 李继东 | 副教授 | 发表SCI论文1篇 | 学校资助 |
| 48 | 农学院 | 畜牧学 | EGCG作用于p38MAPK缓解H2O2诱导小鼠炎症反应 | 马学成 | 120****187 | 畜牧学 | 2021级 | 尹春丽、曹佩佩、马燕芬 | 研究员 | 发表SCI论文1篇 | 学校资助 | |
| 49 | 农学院 | 农学 | 小豆荚后嵌入不同形态燕麦与苜蓿燕麦混播技术 | 冯琴 | 120****210 | 农学 | 2021级 | 冯琴、明雪花、张译丹 | 兰刚 | 教授 | 发表SCI论文1篇 | 学校资助 |
| 50 | 农学院 | 植物保护 | 不同寄主菌根条件下番茄潜叶蛾幼虫肠道细菌 | 薛育 | 120****384 | 农业昆虫与害虫防治 | 2022级 | 薛育、丁嘉欣、王海旭、樊春祥 | 王新谱 | 教授 | 发表SCI论文1篇 | 学校资助 |
| 51 | 农学院 | 农艺与种业 | 基于遥感影像的高山混表识别研究——以岷县为例 | 任元龙 | 120****497 | 农艺与种业 | 2022级 | 任元龙、李浩、马强 | 王晓卓 | 讲师 | 发表SCI论文1篇 | 学校资助 |
| 52 | 音乐学院 | 艺术 | “诗乐张弛”——中国传统文化的现代形式音乐 | 张克元 | 120****540 | 音乐(作曲) | 2021级 | 王昱哲、陈果、孙安、李晓燕 | 马冬雅 | 教授 | 举办音乐会的形式进行成果 | 学校资助 |
| 53 | 体育学院 | 体育硕士 | 银川市老年人患肌少症与运动行为习惯相互影响 | 底宁 | 120****808 | 社会体育指导 | 2022级 | 唐银、张立伟、祝志辉 | 胡亦新 | 主任医师 | 发表SCI论文1篇 | 学校资助 |
| 54 | 美术学院 | 艺术 | “红动宁夏”——一带一路文化创意产业园 | 刘清 | 120****619 | 视觉传达设计 | 2021级 | 李与飞、李凌圣、舒展、钱正阳 | 王胜泽 | 教授 | 完成设计相关设计10个系列,50余款 | 学校资助 |
| 55 | 阿拉伯学院(中国阿拉伯) | 外国语言文学 | 全球文明倡议下的阿阿关系研究 | 杨娜娜 | 120****857 | 阿拉伯语言文学 | 2022级 | 黄志嘉 | 白楠 | 副教授 | 发表SCI论文1篇 | 学校资助 |
| 56 | 信息工程学院 | 计算机技术 | 基于多变量推理的不确定性知识图谱表示学习 | 胡德洲 | 120****933 | 计算机技术 | 2022级 | 王云丽、李瑞、高文馨、李健宜 | 李贵峰 | 副教授 | 发表SCI论文1-2篇 | 学校资助 |
| 57 | 信息工程学院 | 计算机科学与技术 | 多层次语义交互对齐在弱语义文本视频跨模态 | 陈磊 | 120****643 | 计算机科学与技术 | 2021级 | 王磊鑫、刁怡萌、吕晓华 | 刘立波 | 教授 | 发表SCI论文1-2篇 | 学校资助 |

宁夏大学部门公文

研究生院〔2022〕15号

2022年研究生学术论坛项目和研究生创新项目 评审结果公示

各培养单位:

根据《关于开展2022年研究生学术论坛和研究生创新项目申报工作的通知》(研究生院〔2022〕11号)文件要求,经个人申报、各培养单位组织评审、研究生院审定,“人类命运共同体理论的哲学基础与思想创新”等33项拟立项为校级研究生学术论坛项目(详见附件1);“大数据背景下互联网领域经营者集中申报及审查标准研究”等91项为2022年校级研究生创新项目,其中:62项项目由宁夏大学经费资助,29项项目由研究生所在培养单位自筹经费资助(详见附件2),现予以公示。

公示时间:2022年6月28日至2022年6月30日

联系人:徐惠娟

联系电话:2061097

附件:

1.2022年宁夏大学研究生创新论坛项目立项名单

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|----|--------------------|----------|--|-----|------------|-----------|-------|----------------|--------|-----|-------|---|
| 29 | 化学化工学院 | 化学 | 低配过氧金属单分子催化反应性能研究 | 李玉柱 | 1202****46 | 化学 | 2020级 | 俞斌斌、曹光鹏 | 刘翔宇 | 副教授 | 10000 | 在SCQ期刊发表中科院二区以上论文1篇 |
| 30 | 化学化工学院 | 材料与化工 | 多根驱动微纳机器人的可控形变及其生物相容性研究 | 唐晓燕 | 1202****60 | 材料与化工 | 2021级 | 冲雨 | 孙辉 | 副教授 | 10000 | 发表高水平论文1篇 |
| 31 | 地理科学与规划学院 | 地理学 | 气候变化影响下葡萄酒业气候舒适度分析与设计——以宁夏贺兰山东麓葡萄酒产区为例 | 杨志刚 | 1202****28 | 旅游开发与规划管理 | 2021级 | 韩晋、胡易蛟、孟海鹏 | 杨春 | 副教授 | 10000 | 发表研究论文一篇 |
| 32 | 地理科学与规划学院 | 地理学 | 宁夏贺兰山东麓葡萄酒产区土壤盐渍化治理及改良研究 | 李凌云 | 1202****72 | 自然地理学 | 2020级 | 吴海朝 | 高礼 | 副教授 | 10000 | 完成相关实验安排,得出数据与结论,发表核心期刊论文一篇 |
| 33 | 生态环境学院 | 生态学 | 降水变化下荒漠区植物多样性及其影响研究 | 王耀俊 | 1202****92 | 生态学 | 2021级 | 李春环、李斌、刘重霄 | 黄柏堂 | 研究员 | 10000 | 发表1-2篇期刊论文,研究报告1篇 |
| 34 | 生态环境学院 | 生态学 | 基于遥感技术的红寺滩区土壤盐渍化空间格局研究 | 牛东强 | 1202****88 | 生态学 | 2021级 | 申健香、杨竹青、张伊 | 齐拓野、王至 | 副教授 | 10000 | 发表1-2篇期刊论文,研究报告1篇 |
| 35 | 生命科学学院 | 生物学 | 中药复方多糖对肠道AKT1通路调节作用的研究 | 俞车冬 | 1202****04 | 生物学 | 2021级 | 张恒宏、徐鑫鑫、崔雷雷、卓婧 | 李乐 | 教授 | 10000 | 1.发表论文1篇 |
| 36 | 生命科学学院 | 生物学 | 黄芩苷干预金黄色葡萄球菌生物膜形成的分子机制 | 海珍珍 | 1202****50 | 生物学 | 2020级 | 张海波、崔明玉 | 周学章 | 教授 | 10000 | 1.发表论文1篇 |
| 37 | 生命科学学院 | 生物学 | FUOX1抑制剂及抑制剂对天竺葵GAP的分子机制 | 张钰宏 | 1202****21 | 生物学 | 2020级 | 张浩、曹嘉鑫、成德顺、张全安 | 王玉刚 | 教授 | 10000 | 1.发表论文1篇 |
| 38 | 土木与水利工程学院 | 土木水利 | 基于膨胀珍珠岩多孔材料的微生物降解土壤修复性能研究 | 韩强强 | 1202****53 | 土木工程 | 2021级 | 韩强强、陈伟 | 姜鲁 | 讲师 | 10000 | 发表高质量论文2篇,申请发明专利1项 |
| 39 | 土木与水利工程学院 | 土木工程 | 体融及机械磁控微纳合作用对自修复再生混凝土力学性能的影响 | 郑伟强 | 1202****76 | 结构工程 | 2020级 | 王青浩、李淑娟、赵夏 | 金宝宏 | 教授 | 10000 | 发表1-2篇国内外高水平论文 |
| 40 | 土木与水利工程学院 | 水利工程 | 湖沼作用下水质净化系统对红碱滩盐碱地土壤修复及盐度的影响 | 刘均涛 | 1202****98 | 水利工程 | 2020级 | 侯短坤、李阳阳、郭露 | 李王成 | 教授 | 10000 | 发表高质量论文1-2篇 |
| 41 | 土木与水利工程学院 | 水利工程 | 典型微生物群落结构及其驱动因子研究 | 刘以刚 | 1202****27 | 水利工程 | 2021级 | 李欣、万水鹏、蒙俊杰、胡凯 | 邵小瑜 | 教授 | 10000 | 发表核心期刊以上研究论文1篇;申请相关专利1项。 |
| 42 | 机械工程学院 | 机械工程 | 智能导航机器人电池管理系统的设计 | 康文 | 1202****71 | 机械 | 2021级 | 马心如、李冰洋、温瑞、夏振宇 | 朱学军 | 教授 | 10000 | 发表论文(CSCD源ID)、申请软著,参加1-2个省级或国家级比赛 |
| 43 | 机械工程学院 | 机械工程 | AGV智能视觉避障生产线上自主控制技术 | 张龙 | 1202****21 | 机械 | 2021级 | 杨玉坤、陶东雷、刘宇 | 韩惠涛 | 教授 | 10000 | 发表核心期刊论文1篇 |
| 44 | 机械工程学院 | 机械工程 | 铁基非晶合金激光熔覆纳米尺研究 | 包皓 | 1202****49 | 机械 | 2021级 | 王明 | 王明 | 讲师 | 9600 | 发表高水平论文1篇 |
| 45 | 农学院 | 兽医学 | 黄皮素及金属离子对大肠杆菌生物膜形成的影响 | 罗应鑫 | 1202****61 | 兽医 | 2021级 | 康耀文、罗小凤、李阳 | 王桂琴 | 教授 | 10000 | 发表SCI论文1篇 |
| 46 | 农学院 | 畜牧学 | FoxO1基因调控牛脂肪细胞增殖、分化和脂代谢的作用机制研究 | 宋明洋 | 1202****93 | 畜牧 | 2021级 | 姜超、曹林、杨东辉 | 钱大为 | 副教授 | 10000 | 发表1-2篇核心期刊以上期刊论文1-2篇,参与大会汇报1次,参加国内学术会议1次 |
| 47 | 农学院 | 农业 | 辣椒素基因Sf2对盐胁迫的响应 | 苏海青 | 1202****84 | 农艺与种业 | 2021级 | 马小红、马惠珍 | 程国新 | 讲师 | 10000 | 发表1-2篇核心期刊以上期刊论文1篇,参加国内学术会议1次 |
| 48 | 农学院 | 园艺学 | CO2浓度升高处理下宁夏枸杞根际微生物群落(LS-GAL)多样性及功能多样性分析 | 冯学刚 | 1202****56 | 园艺学 | 2021级 | 李延飞、刘廷欣、陆博 | 曹兵 | 教授 | 10000 | 发表SCI/SSCI/15%及以上论文1篇 |
| 49 | 农学院 | 林业 | 增温干旱条件下宁夏枸杞根际微生物群落(LS-GAL)多样性及功能多样性分析 | 陆博 | 1202****88 | 林业 | 2021级 | 张悦、陈改霞、冯常瑞 | 宋丽华 | 教授 | 10000 | 发表SCI/SSCI/15%及以上论文1篇 |
| 50 | 农学院 | 草学 | 荒漠草原植物叶片木质素和木质素衍生物对土壤微生物多样性的影响 | 张燕 | 1202****08 | 草学 | 2021级 | 马敏、马凤华 | 胡海英 | 教授 | 10000 | 在一级学报上发表文章1篇 |
| 51 | 音乐学院 | 艺术 | 西北民族原创合唱音乐会 | 史桂奎 | 1202****39 | 音乐(作曲) | 2022级 | 张龙元、马晶晶、王斌 | 雷兴明 | 教授 | 5000 | 1.创作5首具有西北特色的合唱作品;2.策划并指挥合唱队排练与演出,并筹备音乐会,如因不可抗力无法举行,就录制、制作成录音文件 |
| 52 | 体育学院 | 法学 | 宁夏体育非物质文化遗产的整理与传播 | 黄观芝 | 1202****13 | 民族传统体育学 | 2020级 | 崔鹏、黄水芬、覃卓成 | 孔德强 | 副教授 | 5000 | 调研报告1篇 |
| 53 | 艺术学院 | 艺术 | “我改红墙”——宁夏红色线路设计 | 黄丹 | 1202****16 | 艺术设计 | 2021级 | 黄丹 | 张恒 | 副教授 | 5000 | 相关调研报告红色旅游线路设计相关文档 |
| 54 | 阿拉伯学院(中国阿拉伯国家研究中心) | 外国语言文学 | 苏丹水资源治理与展望 | 马桂娟 | 1202****28 | 阿拉伯语言文学 | 2021级 | 刘金分、陈悦、高晶、李雷 | 白皓 | 副教授 | 5000 | 学术论文 |
| 55 | 信息工程学院 | 计算机科学与技术 | 具有分布式实时海量数据的隐私保护方法研究 | 杨博 | 1202****42 | 计算机科学与技术 | 2020级 | 张博宇、王林 | 马德军 | 副教授 | 10000 | 1-2篇学术论文 |
| 56 | 信息工程学院 | 计算机科学与技术 | 基于深度学习的图像文本跨模检索 | 李天彪 | 1202****39 | 计算机科学与技术 | 2020级 | 陈嘉、甄景琛、李庆斌 | 刘立波 | 教授 | 10000 | 发表中文核心期刊1篇 |

2021年

创新项目

关于公布2021年研究生创新项目立项名单的通知

发布人: 培养科 发布时间: 2021-07-06 点击量: 4302

各培养单位:

根据《关于开展2021年研究生创新项目申报工作的通知》，依据《宁夏大学研究生创新项目资助计划实施细则（试行）》，通过在校研究生申报，各培养单位组织评审，宁夏大学研究生院审定，现对2021年研究生创新项目立项名单公布如下：

经评审，确定92个项目获2021年研究生创新项目立项资助，其中：61个项目由宁夏大学经费资助，31个项目由研究生所在培养单位自筹经费资助；名单详见《2021年宁夏大学研究生创新项目立项名单》（附件）。获创新项目资助的个人和团队应努力钻研，开拓创新，合理使用经费，按期达成预期目标。

各培养单位与指导教师要高度重视研究生创新项目，对项目的执行过程要进行严格的监督和指导，确保通过创新项目的实施来提高研究生的培养质量、创新能力和学术水平。

附件：2021年宁夏大学研究生创新项目立项名单

公示期：2021年7月6日-2021年7月9日

研究生院联系电话：0951-2061097

宁夏大学研究生院

2021年7月6日

附件【2021年宁夏大学研究生创新项目立项名单.pdf】

| | | | | | | | | | | | |
|----|-----------|--|-----|------------|-------------|------------|-------|-------------|--------|-----|--------|
| 27 | 法学院 | 发展伦理视域下宁夏黄河流域生态保护与高质量发展先行区建设新发展理念研究 | 向水慧 | G1P2021027 | 12019130008 | 伦理学 | 2020级 | 李雪玉、慕琦 | 潘志宇 | 教授 | 学校经费资助 |
| 28 | 法学院 | 宁夏地区枸杞地理标志保护研究 | 杨园园 | G1P2021028 | 12020130025 | 民法学 | 2020级 | 牛存龙、韩玉彪、马瑞杰 | 赵耀洁 | 副教授 | 学校经费资助 |
| 29 | 法学院 | 黄河水利灌溉文化的生态人类学研究——以宁夏利通区为例 | 马小丽 | G1P2021029 | 12020130038 | 民族学 | 2020级 | 马小丽 | 冯杰文 | 副教授 | 学校经费资助 |
| 30 | 外国语学院 | 苏珊·洛里·帕克斯戏剧的陌生化研究 | 刘淑群 | G1P2021030 | 12018130272 | 英语语言文学 | 2019级 | | 胡克琛 | 教授 | 学校经费资助 |
| 31 | 农学院 | 水稻前期耐盐相关基因OsJAZ3的功能验证与基因型筛选 | 宋佳伟 | G1P2021031 | 2020111083 | 作物学 | 2020级 | 朱春艳、白天亮、冯培媛 | 田菲 | 副教授 | 学校经费资助 |
| 32 | 农学院 | 宁夏苦豆子内生真菌多样性及生防作用研究 | 王若彤 | G1P2021032 | 12020131121 | 农业昆虫与害虫防治 | 2020级 | 张强强、金婧、李玲 | 陶诗雯 | 教授 | 学校经费资助 |
| 33 | 农学院 | 鸡滑液囊支原体抗原文库的构建 | 孙佳琳 | G1P2021033 | 12020131141 | 临床兽医 | 2020级 | 孙佳琳、肖晋芳、李明哲 | 何生虎 | 教授 | 学校经费资助 |
| 34 | 农学院 | 宁夏推进枸杞产业高质量发展路径研究 | 周静 | G1P2021034 | 12020131449 | 农村发展 | 2020级 | 马兰、吴钰、李曜英 | 葛志军 | 教授 | 学校经费资助 |
| 35 | 农学院 | 基于感应的宁夏设施蔬菜保鲜冷藏冷链生产力的智能化及其对气候因子响应 | 洪乐娟 | G1P2021035 | 12019130897 | 数学 | 2019级 | 高华斌、张鹏、董新雷 | 沈皓 | 教授 | 学校经费资助 |
| 36 | 农学院 | 低氮日粮对滩羊血液生化指标和代谢组学的影响 | 林瑞麒 | G1P2021036 | 12020131132 | 畜牧学 | 2020级 | 李庆敏、谢玉杰、马秀花 | 周玉香 | 教授 | 学校经费资助 |
| 37 | 生命科学学院 | 基于MaxEnt模型的罗山国家级自然保护区羚牛生境适宜性评价 | 王灏 | G1P2021037 | 12019130643 | 动物学 | 2019级 | 赵富强、袁鹏、周春梅 | 杨贵军 | 教授 | 学校经费资助 |
| 38 | 生命科学学院 | Fe ²⁺ 通过线粒体途径参与调控KCl诱导巨噬细胞凋亡的作用研究 | 肖照乾 | G1P2021038 | 12019130064 | 生物化学与分子生物学 | 2019级 | 徐雅楠、耿雪、严娜 | 吴晓玲 | 教授 | 学校经费资助 |
| 39 | 生命科学学院 | 氟尼辛葡甲胺对克柔念珠菌中HSP90调控机制的研究 | 蔡明玉 | G1P2021039 | 12020130797 | 动物病原生物学 | 2020级 | 马文英、张海龙 | 周学非 | 教授 | 学校经费资助 |
| 40 | 生态环境学院 | 微生物诱导碳酸钙技术固化铜尾矿 | 常道发 | G1P2021040 | 12020130849 | 恢复生态学 | 2020级 | 谢莉 | 宋乃平 | 教授 | 学校经费资助 |
| 41 | 生态环境学院 | 基于模型和数据融合的贺兰山森林生态系统碳储量模型 | 田静 | G1P2021041 | 12020130858 | 恢复生态学 | 2020级 | 袁洪武、吴宏明、乔成龙 | 杜庆通 | 研究员 | 学校经费资助 |
| 42 | 食品与葡萄酒学院 | 贺兰山东麓五个子产区非酿酒酵母中非醇酵母菌株分离鉴定及多样性研究 | 冯丹丹 | G1P2021042 | 12020131852 | 食品加工与安全 | 2020级 | 王雪荣 | 孙悦 | 副教授 | 学校经费资助 |
| 43 | 数学统计学院 | 两类发展方程基于L00方法的高精度紧致差分格式 | 王赫康 | G1P2021043 | 12020130511 | 计算数学 | 2020级 | 刘圣恩、吴碧玲、吴钰 | 葛永斌 | 教授 | 学校经费资助 |
| 44 | 数学统计学院 | 倾斜腔体内双流混合热对流的直接数值模拟 | 周娜 | G1P2021044 | 12020130512 | 计算数学 | 2020级 | 杨建青 | 赵秉新 | 副教授 | 学校经费资助 |
| 45 | 数学统计学院 | 分阶阶对流扩散问题的无网格方法研究 | 巨月娟 | G1P2021045 | 12020130609 | 计算数学 | 2020级 | 王安、刘菲兵 | 刘智水 | 副教授 | 学校经费资助 |
| 46 | 马克思主义学院 | 自媒体时代历史虚无主义思潮对高校思政实效性的影响及对策研究 | 陈亚迪 | G1P2021046 | 12020130161 | 思想政治教育 | 2020级 | 孙晓宇、王毓环 | 王焕芳 | 教授 | 学校经费资助 |
| 47 | 马克思主义学院 | 党史学习教育视域下铸牢中华民族共同体意识研究——以宁夏大学为例 | 孙博文 | G1P2021047 | 12020130163 | 思想政治教育 | 2020级 | 王晨阳、王美童、余花 | 高映洲 | 教授 | 学校经费资助 |
| 48 | 体育学院 | 宁夏民族民间传统体育数字化博物馆创建研究 | 柳庆 | G1P2021048 | 12019131199 | 民族传统体育文化 | 2019级 | 王沛伟、胡非凡、方慧聪 | 马兆明 | 副教授 | 学校经费资助 |
| 49 | 土木与水利工程学院 | 传统建筑榫卯节点应力监测研究 | 蒙丹晨 | G1P2021049 | 12019130702 | 结构工程 | 2019级 | 余坤、唐佳鑫、徐文栋 | 杨文伟 | 教授 | 学校经费资助 |
| 50 | 土木与水利工程学院 | 西北典型气候环境下硫酸盐结垢析移技术研究 | 徐盼盼 | G1P2021050 | 12020130879 | 土木水利 | 2020级 | 宋俊杰、陈小龙 | 杨淑娜 | 副教授 | 学校经费资助 |
| 51 | 土木与水利工程学院 | 荒漠环境下硫酸盐渍土盐渍压力与微观结构的响应研究 | 刘曦群 | G1P2021051 | 12020130894 | 水工结构工程 | 2020级 | 雷廷、李峻、周鑫磊 | 张卫兵 | 教授 | 学校经费资助 |
| 52 | 土木与水利工程学院 | 基于回水再利用的农田排水暗管外包建材结构选型试验研究 | 马明涛 | G1P2021052 | 12020130896 | 水工结构工程 | 2020级 | 李杰、张广川、王蔚 | 王红雨 | 教授 | 学校经费资助 |
| 53 | 西医学研究院 | 宁夏民间红色故事调查、整理与研究 | 梁鑫磊 | G1P2021053 | 12020130408 | 中国古代史 | 2020级 | 马浩强、马淑婷 | 党锐峰、杨波 | 教授 | 学校经费资助 |
| 54 | 信息工程学院 | 基于深度学习的ECG激励信号检测系统 | 王博 | G1P2021054 | 12020131670 | 电子信息 | 2020级 | 王博、郑兴建 | 葛永琪 | 副教授 | 学校经费资助 |
| 55 | 信息工程学院 | 基于差分自编码器的可微模型压缩研究 | 马明 | G1P2021055 | 12020131664 | 电子信息 | 2020级 | 韩昊、王娜娜、王龙霸 | 余振华 | 副教授 | 学校经费资助 |

2013 年

创新项目

关于公布2013年度宁夏大学博士学位论文培优计划终期考核结果的通知

发布人: 综合科 发布时间: 2015-04-30 点击量: 1427

关于公布2013年度宁夏大学博士学位论文培优计划终期考核结果的通知

各培养单位:

为激发我校博士研究生的学术创新能力,提高博士研究生的培养质量,争取全国优秀百篇博士论文提名,学校2013年特制订研究生博士学位论文培优计划。2015年4月24日,研究生院按期对获得项目资助的博士研究生阶段性学术成果进行终期考核。参加此次答辩的博士生有3名,经专家小组考核,3位博士生均通过考核,现将考核结果公布(见附件)。

通过博士学位论文培优计划的实施,切实提高了博士研究生的学术科研能力,收到了良好的效果。期望我校研究生以获资助博士生为榜样,潜心学术研究,不断提升自己的学术能力与创新能力。

研究生院
2015年4月29日

宁夏大学 2013 年博士研究生学位论文培优计划终期考核结果

| 申请人 | 培养单位 | 研究课题名称 | 指导老师 | 考核结果 |
|-----|--------|------------------------|------|------|
| 下莹莹 | 农学院 | 荒漠草原区农林牧复合结构与模式优化研究 | 宋乃平 | 良好 |
| 杨娟 | 数计学院 | 准晶压电材料中周期缺陷静力学与动力学问题研究 | 李星 | 合格 |
| 张笑峰 | 西夏学研究院 | 《天盛律令》驿传门类整理 | 杜建录 | 合格 |

2. 博士研究生发表国际顶刊

博士研究生张会丽发表国际顶刊以第一作者身份在《Science》发表学术论文并获2023年“中国科学十大进展”之一。由宁夏大学作为第二完成单位参与的项目“农作物耐盐碱机制解析及应用”成果入选2023年度“中国科学十大进展”之一

<https://www.nsf.gov.cn/publish/portal0/tab440/info91951.htm>



2023年度“中国科学十大进展”发布

日期 2024-02-29 来源: 高技术研究发展中心办公室 作者: 【大中小】 【打印】 【关闭】



2024年2月29日，国家自然科学基金委员会发布了2023年度“中国科学十大进展”，分别为：人工智能大模型为精准天气预报带来新突破、揭示人类基因组暗物质驱动衰老的机制、发现大脑“有形”生物种的存在及其节律调控机制、农作物耐盐碱机制解析及应用、新方法实现单碱基到超大片段DNA精准操纵、揭示人类细胞DNA复制起始新机制、“拉索”发现史上最亮伽马暴的极窄喷流和十亿电子伏特光子、玻色编码纠错延长量子比特寿命、揭示光感受调节血糖代谢机制、发现锂硫电池界面电荷存储聚集反应新机制。2023年度“中国科学十大进展”主要分布在生命科学和医学、人工智能、量子、天文、化学能源等科学领域。



“中国科学十大进展”遴选活动旨在深入贯彻习近平总书记关于科技创新的重要论述，落实党中央国务院关于基础研究重大决策部署，坚持“四个面向”，坚持目标导向和自由探索“两条腿”走路，宣传我国基础研究重大进展，弘扬科学家精神，激励广大科技工作者的科学热情，开展科学普及，提升全民科学素养，为推动我国基础研究高质量发展，加快实现高水平科技自立自强夯实根基。

“中国科学十大进展”遴选活动自2005年启动已成功举办19届。本次活动由国家自然科学基金委员会主办，国家自然科学基金委员会高技术研究中心（基础研究管理中心）和科学传播与成果转化中心承办，《中国基础科学》《科技导报》《中国科学院院刊》《中国科学基金》《科学通报》协办，分为推荐、初选、终选、审议4个环节。《中国基础科学》等推荐了2022年12月1日至2023年11月30日期间正式发表的600多项科学研究成果，由近100位相关学科领域专家从中遴选出30项成果，在此基础上邀请了包括中国科学院院士、中国工程院院士在内的2100多位基础研究领域高水平专家对30项成果进行投票，评选出10项重大科学研究成果，经国家自然科学基金委员会咨询委员会审议，最终确定了入选2023年度“中国科学十大进展”的成果名单。

3. 获自治区和校级优秀学位论文

表 5 研究生获省级和校级优秀毕业论文清单

| 序号 | 获奖项目名称 | 奖项级别 | 获奖人 | 层次 | 获奖时间 |
|----|--|------|-----|----|---------|
| 1 | 季节性放牧对荒漠草原土壤碳转化关键过程的调控机制 | 省部级 | 陆琪 | 博士 | 2024-03 |
| 2 | 荒漠草原灌丛人为转变过程中土壤碳氮耦合特征及机制 | 省部级 | 赵亚楠 | 博士 | 2023-04 |
| 3 | 基于 ACPS 的宁夏引黄灌区紫花苜蓿水氮精准调控技术研究 | 省部级 | 刘瑞 | 博士 | 2020-04 |
| 4 | 宁夏典型草原土壤微生物特征对不同管理方式的响应 | 省部级 | 沈艳 | 博士 | 2012-04 |
| 5 | 宁夏荒漠草原景观柠条种实害虫的空间生态位 | 省部级 | 张大治 | 博士 | 2011-05 |
| 6 | 宁夏针茅属植物种子性状与功能权衡关系研究 | 省部级 | 杨博 | 硕士 | 2024-03 |
| 7 | 无芒雀麦耐盐性评价与耐盐转录组学分析 | 省部级 | 宋文学 | 硕士 | 2024-03 |
| 8 | 菌酶联用对不同留茬高度甜高粱青贮品质、微生物群落结构及体外瘤胃发酵特性的影响 | 省部级 | 尤璟涛 | 硕士 | 2023-04 |
| 9 | 降水变化下荒漠草原生物多样性与生态系统多功能性的联系及调控机制研究 | 省部级 | 尉剑飞 | 硕士 | 2023-04 |
| 10 | 宁夏东部风沙区沙化草地土壤团聚体及碳氮分异特征 | 省部级 | 马晓静 | 硕士 | 2020-04 |
| 11 | 不同恢复措施下宁夏黄土丘陵区典型草原土壤性状及其质量评价 | 省部级 | 周瑶 | 硕士 | 2018-05 |
| 12 | 植被与土壤演替及生态环境质量评价研究 | 省部级 | 毛思慧 | 硕士 | 2013-04 |
| 13 | 青贮玉米/拉巴豆间作优势及氮素调控系统生产力机制研究 | 校级 | 王斌 | 博士 | 2025-04 |
| 14 | 内生嗜线虫镰刀菌效应蛋白筛选及其 FnEG8 蛋白激发紫花苜蓿防 | 校级 | 闫思远 | 博士 | 2025-04 |

| | | | | | |
|----|---|----|-----|----|---------|
| | 御反应的分子机理 | | | | |
| 15 | 基于多组学的旱作紫花苜蓿生物 衰退机制解析及减缓措施研究 | 校级 | 马媛媛 | 博士 | 2025-04 |
| 16 | 枸杞副产物及活性成分对苜蓿青 贮品质及抗生素抗性基因的调控 机制研究 | 校级 | 张雅君 | 博士 | 2025-04 |
| 17 | 不同放牧时间下荒漠草原生态系 统多功能性变化及其驱动机制 | 校级 | 刘卓 | 博士 | 2025-04 |
| 18 | 温带干旱山地生态系统土壤微生物 对化学计量特征及多功能性的 调控机制 | 校级 | 杨壹 | 博士 | 2024-03 |
| 19 | 苦豆子内生真菌多样性及其促进 宿主活性成分合成积累的机制研 究 | 校级 | 鞠明岫 | 博士 | 2024-03 |
| 20 | 补播修复下荒漠草原植被变化及 其驱动机制 | 校级 | 姜海鑫 | 硕士 | 2025-04 |
| 21 | 贺兰山不同植被类型岩羊可食植 物组成、营养分布及载畜量评估— 以苏峪口为例 | 校级 | 王文强 | 硕士 | 2025-04 |
| 22 | 短期施肥对荒漠草原表层土壤有 机碳组分及其稳定性的影响 | 校级 | 曹颖 | 硕士 | 2025-04 |
| 23 | 灌枝覆盖与氮添加对荒漠草地凋 落物分解及土壤碳氮的影响 | 校级 | 蔺雄奎 | 硕士 | 2024-03 |
| 24 | 降水量变化对荒漠草原植物群落 物种水分利用 2 策略的影响 | 校级 | 张浩 | 硕士 | 2025-04 |
| 25 | 乡土牧草补播对荒漠草地土壤性 状及生态系统多功能性的影响 | 校级 | 王博 | 硕士 | 2025-04 |
| 26 | 外源褪黑素与钙离子交互对紫花 苜蓿耐盐性的影响 | 校级 | 李小红 | 硕士 | 2025-04 |

宁夏大学部门公文

研究生院〔2025〕16号

关于转发《自治区学位委员会办公室关于公布2024年全区优秀博士、硕士学位论文评选结果的通知》的通知

各单位：

现将《自治区学位委员会办公室关于公布2024年全区优秀博士、硕士学位论文评选结果的通知》予以转发。

自治区学位办委托教育部学位中心组织专家评议并审核，共评选出2024年度自治区优秀博士学位论文11篇、优秀硕士学位论文30篇，其中我校优秀博士学位论文7篇、优秀硕士学位论文20篇。希望全体研究生、研究生指导教师以获奖同学和指导教师为榜样，进一步提高学位论文质量。

附件：

- 《自治区学位委员会办公室关于公布2024年全区优秀博士、硕士学位论文评选结果的通知》
- 2024年自治区优秀博士学位论文名单
- 2024年自治区优秀硕士学位论文名单

研究生院

2025年4月23日

2024年宁夏回族自治区博士学位论文评优通讯评议结果（按平均成绩排列）

| 作者姓名 | 导师姓名 | 论文题目 | 一级学科代码 / 专业学位类别 代码 | 一级学科名称 / 专业学位类别 名称 | 通讯评议结果 | | | | | |
|------|------|-------------------------------------|--------------------------|--------------------------|--------|-----|-----|-----|-----|------|
| | | | | | 专家一 | 专家二 | 专家三 | 专家四 | 专家五 | 平均分 |
| 陆琪 | 马红彬 | 季节性放牧对荒漠草原土壤碳转化关键过程的调控机制 | 0909 | 草学 | 99 | 90 | 88 | | | 92.3 |
| 王国坤 | 谢鹏 | 流行性乙型脑炎合并周围神经损伤的临床和分子机制研究 | 1002 | 临床医学 | 88 | 95 | 93 | | | 92 |
| 许博 | 裴秀英 | 人脐带间充质干细胞外泌体抑制颗粒细胞铁死亡改善化疗 | 1001 | 基础医学 | 85 | 91 | 94 | | | 90 |
| 谢军 | 李凤军 | 功能梯度球结构的场耦合力学分析 | 0701 | 数学 | 89 | 90 | 90 | | | 89.7 |
| 方鹏 | 杜建录 | 西夏文《贤智集》研究 | 0304 | 民族学 | 88 | 79 | 95 | | | 87.3 |
| 张娟 | 王玉龙 | 三维钴基复合材料催化氧化煤化工废水中苯并三氮唑的 | 0815 | 水利工程 | 89 | 89 | 83 | | | 87 |
| 李梦媛 | 王玉娟 | 钙结合蛋白S100A4对BCG诱导巨噬细胞焦亡的调控作用研 | 0710 | 生物学 | 87 | 93 | 79 | | | 86.3 |
| 邱江伟 | 张毓洪 | 农村居民膳食质量、生活方式及脂肪因子对代谢综合征的 | 1004 | 公共卫生与预防 | 83 | 84 | 89 | | | 85.3 |
| 燕江波 | 金群华 | S11t3 通过 MAPK和PI3K-AKT 信号抑制破骨细胞分化的机 | 1002 | 临床医学 | 91 | 76 | 87 | | | 84.7 |
| 禹保军 | 顾亚玲 | mRNA m6A修饰对静息肌肉脂肪沉积的作用机制研究 | 0905 | 畜牧学 | 78 | 89 | 87 | | | 84.7 |
| 高海燕 | 刘小鹏 | 干旱半干旱地区水-能源-粮食纽带关系及其多维风险研 | 0815 | 水利工程 | 79 | 88 | 82 | | | 83 |

制表时间：2025年03月11日

11

2024年宁夏回族自治区硕士学位论文评优通讯评议结果（按平均成绩排列）

| 单位名称 | 作者姓名 | 导师姓名 | 论文题目 | 一级学科代码 / 专业学位类别 代码 | 一级学科名称/ 专业学位类别名称 | 通讯评议结果 | | | | | |
|--------|------|------|---------------------------------|--------------------------|---------------------|--------|-----|-----|-----|-----|-------|
| | | | | | | 专家一 | 专家二 | 专家三 | 专家四 | 专家五 | 平均分 |
| 宁夏大学 | 范龙文 | 董瑞新 | 考虑磁致效应的跨断层错带微扰响应及易损性研究 | 0814 | 土木工程 | 97 | 94 | 95 | | | 95.33 |
| 宁夏大学 | 张盼盼 | 胡玉冰 | 明清时期宁夏地区自然灾害与社会响应研究 | 0501 | 中国语言文学 | 96 | 95 | 94 | | | 95 |
| 北方民族大学 | 石丹 | 张景敏 | 田V模型的动力学行为与控制研究 | 0701 | 数学 | 88 | 95 | 95 | | | 92.67 |
| 北方民族大学 | 张国军 | 陈文 | 结构测量平差的构造和矩阵补充方法研究 | 0701 | 数学 | 90 | 93 | 95 | | | 92.67 |
| 宁夏大学 | 袁恩同 | 马燕芬 | SIRT-3介导多胺降解酶对土壤上皮细胞氧化应激的研究 | 0951 | 农业 | 93 | 90 | 95 | | | 92.67 |
| 宁夏医科大学 | 陈雪 | 杨霞 | 基于高通量测序和深度学习分析不同粒径聚苯乙烯纳米颗粒 | 1004 | 公共卫生与预防医学 | 90 | 97 | 95 | | | 92.33 |
| 宁夏大学 | 潘云鸣 | 苏秋燕 | 时变非线性偏微分方程的 ω -S11快速迭代算法 | 0701 | 数学 | 90 | 90 | 97 | | | 92.33 |
| 北方民族大学 | 谢海燕 | 王凯 | 降香类天然产物对细菌的构建及其靶向抑制性能研究 | 0817 | 化学工程与技术 | 90 | 91 | 96 | | | 92.33 |
| 宁夏大学 | 白静云 | 丁广德 | 煤油煤油煤油颗粒沉积及气相反应特性研究 | 0817 | 化学工程与技术 | 89 | 94 | 94 | | | 92.33 |
| 宁夏大学 | 崔春琳 | 张爱琴 | 新时代宁夏黄河文化传承路径研究——以三所小学为例 | 0401 | 教育学 | 95 | 92 | 88 | | | 91.67 |
| 北方民族大学 | 王鑫贵 | 陈治洪 | 石墨烯/金属氧化物异质结的界面电子调控及其催化性能 | 0856 | 材料与化工 | 94 | 90 | 91 | | | 91.67 |
| 宁夏大学 | 刘敬敏 | 郑学勤 | 宁夏地区土壤微生物与植物根系生长和水分利用效率的 | 0859 | 日本农林 | 86 | 83 | 92 | | | 91.33 |
| 北方民族大学 | 田彦礼 | 郭艳华 | 文学地理学视域下全代诗歌研究 | 0501 | 中国语言文学 | 89 | 90 | 94 | | | 91 |
| 宁夏大学 | 李文斌 | 王芳 | 宁夏旱区枸杞-覆盆子植物复合种植体系土壤有机碳库及 | 0705 | 地理学 | 89 | 92 | 92 | | | 91 |
| 宁夏师范学院 | 陈娟 | 田富宝 | 晚明散文《志微集》整理研究 | 0501 | 中国语言文学 | 88 | 94 | 91 | | | 91 |
| 宁夏大学 | 韩雪 | 赵多平 | 西北地区非物质文化遗产产业园关注与景观吸引力的时空 | 0705 | 地理学 | 91 | 92 | 89 | | | 90.67 |
| 宁夏大学 | 许玲玲 | 马晓斌 | 新时代乡村职业化形象研究——以景县、甘肃为例 | 0401 | 教育学 | 97 | 91 | 89 | | | 90.67 |
| 宁夏大学 | 朱文宇 | 侯彦奇 | 宁夏生态脆弱性评价与脆弱性风险分析 | 0909 | 草学 | 91 | 90 | 91 | | | 90.67 |
| 北方民族大学 | 谢伟霞 | 范维娟 | 埃博拉病毒对细胞内信号转导及免疫机制研究 | 0713 | 生态学 | 94 | 91 | 87 | | | 90.67 |
| 北方民族大学 | 石坤 | 张多勇 | 宋代都城遗址考古及其变迁研究 | 0602 | 中国史 | 90 | 89 | 93 | | | 90.67 |
| 宁夏大学 | 魏国鹤 | 马云 | 基于组学筛选调控奶牛产乳量相关的关键基因及其功能解 | 0951 | 农业 | 93 | 88 | 90 | | | 90.33 |
| 宁夏大学 | 高鹏飞 | 郑娟 | Ca基电催化剂的制备及中酸氢氧化物催化性能的研究 | 0703 | 化学 | 95 | 87 | 89 | | | 90.33 |
| 宁夏大学 | 陈建兴 | 侯静 | 聚酰胺纤维对家兔人力全身运动决策及疲劳影响研究 | 1203 | 农林经济管理 | 94 | 86 | 91 | | | 90.33 |
| 宁夏大学 | 王相燕 | 赵新峰 | 组蛋白乙酰化修饰调节羊胎母细胞成熟的作用及机制 | 0710 | 生物学 | 90 | 88 | 93 | | | 90.33 |
| 北方民族大学 | 左改霞 | 高岳林 | 非结构化算法的改进与应用 | 0701 | 数学 | 92 | 90 | 89 | | | 90.33 |
| 宁夏大学 | 李鑫茂 | 谭亚利 | 气候变暖背景下宁夏引黄灌区春小麦产量、灌溉用水量及 | 0815 | 水利工程 | 87 | 91 | 92 | | | 90 |
| 宁夏大学 | 李小红 | 李淑霞 | 外源激素与钙离子交互对紫花苜蓿品质的影响 | 0951 | 农业 | 97 | 91 | 82 | | | 90 |
| 宁夏大学 | 高宇梁 | 冯祥 | 预氧化处理对生物炭的产率、质量及其在土壤修复中的 | 0856 | 材料与化工 | 91 | 87 | 92 | | | 90 |
| 宁夏大学 | 樊雪宁 | 张宝宝 | 宁夏全域供能碳排放的时空异质性和减排策略研究 | 0856 | 材料与化工 | 90 | 87 | 93 | | | 90 |
| 宁夏大学 | 杨博 | 李小伟 | 宁夏干旱区植物多样性与功能多样性关系研究 | 0909 | 草学 | 96 | 90 | 84 | | | 90 |

参评论文数合计：218

宁夏回族自治区人民政府

学位委员会办公室文件

宁学位办〔2024〕2号

自治区学位委员会办公室关于公布2023年全区优秀硕士学位论文评选结果的通知

各研究生培养单位：

根据《国务院学位委员会、教育部关于印发〈博士硕士学位论文抽检办法〉的通知》(学位〔2014〕5号)和我区2023年博士学位论文评优工作安排，经各高校初评、公示和推荐，自治区学位办委托教育部学位中心组织专家评议并审核，决定将宁夏大学赵亚楠《荒漠草原灌丛人为转变过程中土壤碳氮耦合特征及机制》等9篇博士学位论文、宁夏医科大学彭婷玮《不同形貌的介孔二氧化硅纳米材料对肝细胞癌细胞免疫应答的影响》等177篇硕士学位论文评为2023年度自治区优秀博士、硕士学位论文(具

体名单见附件)。

优秀学位论文评选工作是提高研究生教育与培养质量的重要抓手，希望各研究生培养单位持续加强学科内涵建设，完善质量监督保障体系，全面提高研究生教育培养质量。

附件：2023年宁夏回族自治区硕士学位论文评优通讯评议结果(按平均成绩排列)



(此件公开发布)

2023年宁夏回族自治区博士学位论文评优通讯评议结果(按平均成绩排列)

Table with 6 columns: 单位名称, 作者姓名, 导师姓名, 论文题目, 一级学科代码/专业学位类别代码, 一级学科名称/专业学位类别名称, 评议结果. Lists 10 doctoral theses from various universities in Ningxia.

2023年宁夏回族自治区硕士学位论文评优通讯评议结果(按平均成绩排列)

Table with 6 columns: 单位名称, 作者姓名, 导师姓名, 论文题目, 一级学科代码/专业学位类别代码, 一级学科名称/专业学位类别名称, 评议结果. Lists 40 master's theses from various universities in Ningxia.

Table with 6 columns: 单位名称, 作者姓名, 导师姓名, 论文题目, 一级学科代码/专业学位类别代码, 一级学科名称/专业学位类别名称, 评议结果. Lists 10 master's theses from various universities in Ningxia.

宁夏回族自治区人民政府学位委员会办公室

宁政学办〔2021〕5号

自治区政府学位委员会办公室关于公布2020年全区优秀博士硕士学位论文评选结果的通知

各研究生培养单位：

根据《国务院学位委员会 教育部关于印发〈博士硕士学位论文抽检办法〉的通知》（学位〔2014〕5号）和我区2020年博士学位论文评阅工作的有关安排，经各高校初评、公示和推荐，自治区学位办委托教育部学位中心组织专家评议审核，确定宁夏医科大学梁诗阔《阿曼托双黄酮通过调控NLRP3炎症小体活化影响癫痫发生的作用研究》等6篇博士学位论文、宁夏大学马晓静《宁夏东部风沙区沙化草地土壤团聚体及碳氮分异特征》等50篇硕士学位论文为2020年度自治区优秀论文（具体名单见附件），现予公布。

优秀博士学位论文评选工作是提高研究生教育与培养质量的重要抓手，希望各研究生培养单位持续加强学科内涵建设，完善质量监督保障体系，全面提高研究生教育培养质量。

附件：1. 2020年自治区优秀博士学位论文名单 2. 2020年自治区优秀硕士学位论文名单



（此件依申请公开）

宁夏大学部门公文

研究生院〔2020〕26号

宁夏大学2020年区级优秀博士硕士学位论文推荐名单公示

各单位：

接宁夏回族自治区学位委员会办公室通知，2020年区级优秀博士硕士学位论文评选推荐工作已完成，现将拟推荐2020年区级优秀博士硕士学位论文名单公示：（见附件）

附件：宁夏大学2020年拟推荐区级优秀博士硕士学位论文名单

公示时间：2020年10月30日-2020年11月3日

举报联系单位、联系人及举报电话：

纪委：魏泰邦 2061117（内线6117）

研究生院学位科：汤伟 2061959（内线6959）

研究生院
2020年10月30日

研究生院 2020年10月30日印发

宁夏大学2020年推荐区级优秀博士硕士学位论文名单

| 序号 | 学生姓名 | 导师姓名 | 论文题目 |
|----|------|------|--|
| 1 | 许峰 | 郎伟 | 新时期以来宁夏文学批评研究（1978-2018） |
| 2 | 何高琴 | 冯秀芳 | 几类偏微分方程不适定问题的恒等逼近算子正则化方法 |
| 3 | 焦炳忠 | 孙兆军 | 地下渗灌入渗特性及对旱区枣树节水增产效应研究 |
| 4 | 刘瑞 | 张亚红 | 基于ACPS的宁夏引黄灌区紫花苜蓿水氮精准调控技术研究 |
| 5 | 郭亚男 | 何生虎 | 宁夏地区牛支原体分型鉴定及其对牛外周血单核巨噬细胞的功能影响研究 |
| 6 | 陈昊 | 江兆涛 | 监察调查人员出庭说明情况问题研究 |
| 7 | 孙婧 | 冯杰文 | 凤城现代变容群体的社会资本叙事—以银川某农机公司为例 |
| 8 | 马莹莹 | 潘忠宇 | 论价值的统一性——德沃金政治伦理思想研究 |
| 9 | 罗媛月 | 张会萍 | 易地扶贫搬迁对移民就业的影响——基于宁夏不同安置方式的农户调查 |
| 10 | 李娟 | 杨韶艳 | 中国与欧亚经济联盟建立自贸区的经济效应和现实路径选择—基于GTAP模型的研究 |
| 11 | 邓思嘉 | 张彤 | 银川新华百货营运资金管理研究 |
| 12 | 李君璇 | 董晓芳 | A跨国公司财务共享服务中心的构建研究 |
| 13 | 李峰 | 梁尚明 | 流动的陌生人——银川市城中村人际互动研究 |
| 14 | 仇美荣 | 梁旭辉 | 《神圣家族》群众史观探析——兼论“两个维护”的合法性 |
| 15 | 张方 | 惠继东 | 洛夫克拉夫特“克苏鲁神话”的叙事特色研究 |
| 16 | 扶静 | 赵彦龙 | 《彭阳清代契约档案》整理与研究 |
| 17 | 何庭勇 | 张詠 | 刘咸焯明史研究述论 |
| 18 | 李兆玲 | 赵红 | 王君阅读对话教学研究 |
| 19 | 方锦坤 | 陈春霞 | 文体学视域下的中学文言文教学研究 |
| 20 | 田雪阳 | 丁凤琴 | 道德概念净脏隐喻及其对清洁产品消费决策的影响 |
| 21 | 张悦 | 张爱琴 | 教研员实践性知识生成的个案研究 |
| 22 | 何兴菊 | 马晓玲 | 初中信息技术教材比较研究——以人教版和宁夏版为例 |
| 23 | 王志会 | 陶玉凤 | 基于Excel的高中物理单元教学设计——以《匀变速直线运动的研究》为例 |
| 24 | 尹婷婷 | 李少华 | 中国英语的社会语言学研究 |
| 25 | 徐柳 | 郭鸿雁 | “产出导向法”在大学英语写作教学中的实证研究 |
| 55 | 南春苗 | 张帅 | 不同工况下球阀镍基自熔性合金涂层的耐腐蚀性能研究 |
| 56 | 李旺 | 王冠 | 不可压缩流体流道拓扑优化设计 |
| 57 | 张喜康 | 刘敦华 | 基于蛋白质组的枸杞果实生长过程中类胡萝卜素合成代谢相关酶的研究 |
| 58 | 冯小芳 | 顾亚玲 | 宁夏地区安格斯牛生长性状遗传参数估计及育种目标确定 |
| 59 | 赵宇晨 | 王新谱 | 中国蚊形甲亚科部分类群分类研究（鞘翅目：蚊形甲科） |
| 60 | 郭芳芸 | 曹兵 | 大气CO ₂ 浓度升高对宁夏枸杞果实不同发育期糖分积累影响 |
| 61 | 马晓静 | 许冬梅 | 宁夏东部风沙区沙化草地土壤团聚体及碳氮分异特征 |
| 62 | 闫鹏科 | 王锐 | 贺兰山东麓酿酒葡萄精准营养诊断研究 |
| 63 | 楚乐乐 | 罗成科 | 盐胁迫下OsDSR2 RNAi转基因水稻的生理特性、农艺性状及转录组学分析 |
| 64 | 刘博 | 张桂杰 | GAA与RP-Met协同对舍饲滩羊生产性能、肉质、糖代谢关键酶及瘤胃发酵的影响 |
| 65 | 远蓉蓉 | 刘宁 | 新时期藏族题材在油画艺术创作中的形式语言研究 |
| 66 | 田晓萍 | 姜克银 | 中华优秀传统文化对埃及跨文化传播的现状、问题与对策研究 |
| 67 | 杜英杰 | 李海波 | MOF衍生纳米碳基复合材料的制备及储锂的若干关键问题研究 |
| 68 | 尹佳杰 | 罗发亮 | 聚苯二甲酸乙二醇酯的结晶行为及力学性能的调控 |
| 69 | 骆诗剑 | 罗民 | MOF衍生过渡金属氧化物/碳电催化剂及其固氮性能研究 |
| 70 | 史朋程 | 郭庆杰 | 典型西部煤炭化学链热解制备轻质芳烃研究 |

宁夏大学2018年区级优秀硕士学位论文推荐名单公示

发布人: 发布时间: 2018-07-19 点击量: 5832

各单位:

接宁夏回族自治区学位委员会办公室通知, 2018年区级优秀硕士学位论文评选推荐工作已完成, 现将拟推荐2018年区级优秀硕士学位论文名单公示: (见附件)

附件: 宁夏大学2018年拟推荐区级优秀硕士学位论文名单

公示时间: 2018年7月18日-2018年7月22日

举报联系单位、联系人及举报电话:

纪检委: 陈少念 2061977 (内线: 6977)

研究生院: 汤伟 2061959 (内线: 6959)

研究生院
2018年7月18日

附件【宁夏大学2018年拟推荐区级优秀硕士学位论文名单.doc】

| | | | |
|----|-----|-----|--|
| 26 | 施琳娜 | 文琦 | 黄土高原多维贫困空间异质性及减贫效应分析-以彭阳县为例 |
| 27 | 骆佳 | 王玉炯 | 双特异性磷酸酶 5 在 BCG 感染诱导巨噬细胞 (RAW264.7) 自噬中的调控作用 |
| 28 | 吴习习 | 李敏 | NOD2 在绵羊肺炎支原体诱导巨噬细胞自噬中的作用机制 |
| 29 | 徐蕊 | 郑蕊 | 枸杞 LMYB103 基因在植物器官发育中的功能初探 |
| 30 | 刘可 | 杜灵通 | 荒漠草原人工柠条林多时间尺度蒸散特征研究 |
| 31 | 赵自阳 | 李王成 | 宁夏中部干旱带枣树适应性生长与冠幅和降雨量响应关系研究 |
| 32 | 潘鹏 | 崔自治 | 冬灌区黄土的反冻结效应 |
| 33 | 刘学智 | 李王成 | 宁夏中部干旱带降雨和砂土混合覆盖对压砂地土壤水分蒸发的影响 |
| 34 | 代英鹏 | 王昱潭 | 基于真彩色图像的灵武长枣实时定位方法研究 |
| 35 | 马超 | 王冠 | 停放效应与热处理工艺对铝合金性能及变形行为的影响研究 |
| 36 | 柳巧琪 | 代红军 | 外源 ABA 和 6-BA 处理对美乐葡萄果实花色苷合成影响的研究 |
| 37 | 卜宁霞 | 刘敦华 | 发酵鸡肉干的研制及其品质控制研究 |
| 38 | 周瑶 | 马红彬 | 不同恢复措施下宁夏黄土丘陵区典型草原土壤性状及其质量评价 |
| 39 | 徐灿 | 康建宏 | 滴灌水肥一体化不同施氮量对玉米淀粉形成及产量的影响 |
| 40 | 苏英周 | 郑涛 | 体验式设计在当代景观环境中的应用研究 |
| 41 | 刘潇 | 马兆明 | 我国西部地区高校武术与民族传统体育 (本科) 专业建设研究 |
| 42 | 满自娟 | 金忠杰 | 伊萨·纳欧里《边界外的一家》中的象征主义研究 |
| 43 | 单其德 | 刘宽冠 | 二茂铁修饰的四核银簇的制备、结构表征及其应用 |
| 44 | 于旭飞 | 张建利 | Fe 基催化剂的可控亲疏水性及其费托合成性能 |
| 45 | 马强 | 王政 | 类沸石咪唑骨架膜的制备及其分离性能研究 |

2013年宁夏大学区级优秀博、硕士学位论文评选结果公示

发布人: 学位科 发布时间: 2013-11-25 点击量: 3674

2013年宁夏大学区级优秀博、硕士学位论文评选结果公示

今接宁夏回族自治区学位委员会办公室通知, 2013年自治区优秀博、硕士学位论文评选工作已完成, 现将自治区拟表彰名单公示:

附件: 2013年宁夏大学区级优秀博、硕士学位论文拟表彰名单

公示时间: 2013年11月25日-2013年11月30日

如有异议请联系自治区学位办: 方老师 6030409

研究生院
二〇一三年十一月二十五日

附件【2013年宁夏大学区级优秀博、硕士学位论文名单.doc】

| | | | | | | | | | | | | |
|--------|-------|--------|-----|------------|------|-------|-------|-------|-------|---------|-----|----|
| 毛思慧 | 戚富莲 | 陈蕾 | 马晓霞 | 马晓莉 | 齐晓龙 | 辛一科 | 米楠 | 王鹏 | 肖龙 | 沈晖 | 许伟伟 | 姓名 |
| 课程与教学论 | 应用心理学 | 课程与教学论 | 人类学 | 生物化学与分子生物学 | 法学理论 | 人文地理学 | 凝聚态物理 | 电路与系统 | 水利水工程 | 中国少数民族史 | 专业 | |
| 硕士 | 硕士 | 硕士 | 硕士 | 硕士 | 硕士 | 硕士 | 硕士 | 硕士 | 博士 | 博士 | 级别 | |

附件:

2013年宁夏大学区级优秀博、硕士学位论文拟表彰名单 (26人)

2012年宁夏大学区级优秀博、硕士学位论文评选结果公示

发布人: 培养科 发布时间: 2012-11-02 点击量: 4114

2012年宁夏大学区级优秀博、硕士学位论文评选结果公示

今接宁夏回族自治区学位委员会办公室通知, 2012年自治区优秀博、硕士学位论文评选工作已完成, 现将评选结果名单公示, 名单见附件。

公示时间: 2012年11月2日-2012年11月8日

如有异议请联系研究生院学位办: 汤伟 2061959 (内线: 6959)

研究生院
二〇一二年十一月二日

附件【优秀博、硕士学位论文名单.doc】

2011年宁夏大学区级优秀博、硕士学位论文评选结果公示

发布人: 学位科 发布时间: 2011-11-15 点击量: 3793

2011年宁夏大学区级优秀博、硕士学位论文评选结果公示

今接宁夏回族自治区学位委员会办公室通知, 2011年自治区优秀博、硕士学位论文评选工作已完成, 现将评选结果公示如下:

| 姓名 | 专业 | 备注 |
|-----|-----------|----|
| 佟健荣 | 中国少数民族史 | 博士 |
| 景何仿 | 水利水电工程 | 博士 |
| 张大治 | 草业科学 | 博士 |
| 倪全学 | 政治经济学 | 硕士 |
| 王柳 | 人类学 | 硕士 |
| 何振华 | 马克思主义基本原理 | 硕士 |
| 王璿 | 汉语言文学 | 硕士 |
| 朱禧蕾 | 中国现当代文学 | 硕士 |
| 杨佳 | 专门史 | 硕士 |
| 贺晓娟 | 课程与教学论 | 硕士 |
| 张莉 | 应用心理学 | 硕士 |
| 阮得羽 | 英语语言文学 | 硕士 |
| 王旭 | 数学 | 硕士 |
| 王凯 | 计算机软件与理论 | 硕士 |
| 胡楠 | 凝聚态物理 | 硕士 |

| 姓名 | 专业 | 学位类型 |
|-----|-----------|------|
| 沈艳 | 草业科学 | 博士 |
| 唐莲 | 水利水电工程 | 博士 |
| 王朝晖 | 中国少数民族史 | 博士 |
| 李超 | 英语语言文学 | 硕士 |
| 徐丽红 | 民族学 | 硕士 |
| 张艳 | 汉语言文学 | 硕士 |
| 卢有明 | 中国现当代文学 | 硕士 |
| 杨志兰 | 中国现当代文学 | 硕士 |
| 王耀儒 | 专门史 | 硕士 |
| 董妍 | 固体力学 | 硕士 |
| 吕冬妮 | 凝聚态物理 | 硕士 |
| 彭嘉虎 | 电路与系统 | 硕士 |
| 宿友亮 | 机械制造及其自动化 | 硕士 |
| 周筠 | 作物栽培学与耕作学 | 硕士 |
| 曹志 | 临床兽医学 | 硕士 |
| 倪鼎东 | 果树学 | 硕士 |
| 杨小波 | 食品科学 | 硕士 |
| 冯娜 | 水利水电工程 | 硕士 |

附件:

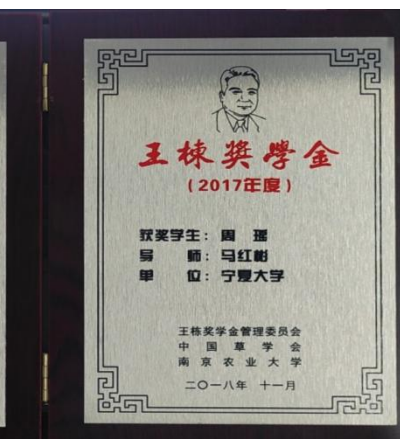
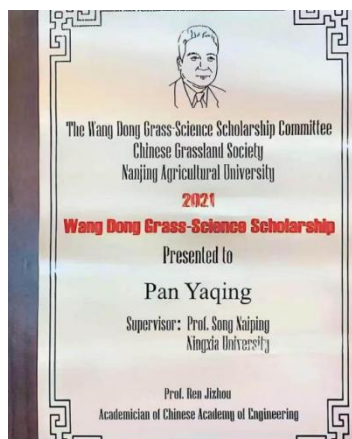
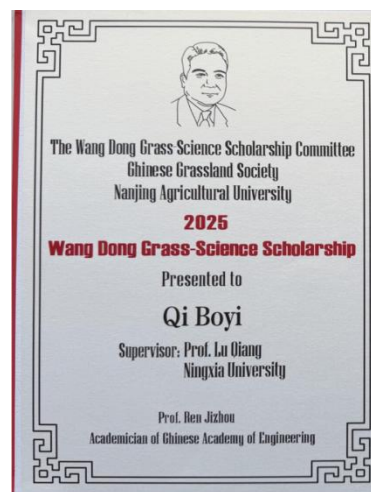
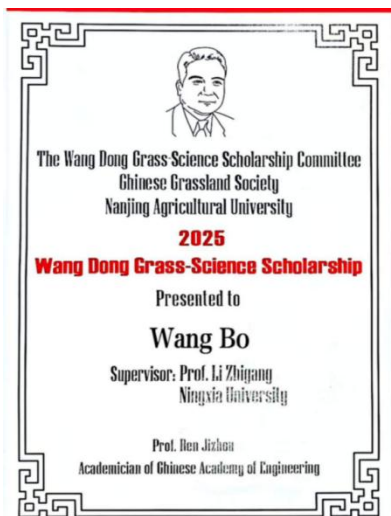
2012年宁夏大学区级优秀博、硕士学位论文获得者名单(46人)

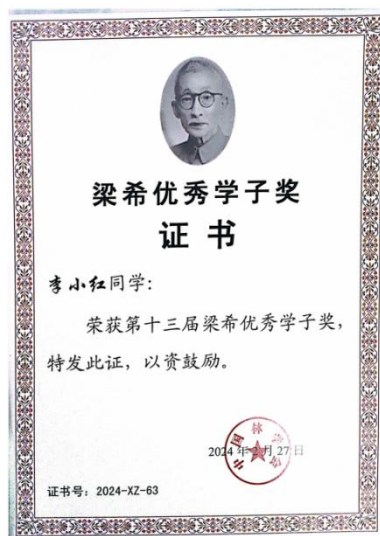


4. 研究生获行业领域最高荣誉清单

表 6 研究生获行业领域荣誉清单

| 序号 | 获奖项目名称 | 授予机构 | 获奖人 | 指导教师 | 奖项级别 | 获奖时间 |
|----|----------------------|-------|-----|------|------|---------|
| 1 | 中国草学会“王栋”奖 | 中国草学会 | 王博 | 李志刚 | 国家级 | 2025-11 |
| 2 | 中国草学会“王栋”奖 | 中国草学会 | 齐波毅 | 卢强 | 国家级 | 2025-11 |
| 3 | 中国草学会“王栋”奖 | 中国草学会 | 潘雅清 | 宋乃平 | 国家级 | 2023-11 |
| 4 | 中国草学会“王栋”奖 | 中国草学会 | 周瑶 | 马红彬 | 国家级 | 2017-11 |
| 5 | 中国林学会“梁希优秀学子”奖 | 中国林学会 | 李小红 | 李淑霞 | 国家级 | 2024-02 |
| 6 | 中国林学会“梁希优秀学子”奖 | 中国林学会 | 王博 | 李志刚 | 国家级 | 2023-08 |
| 7 | 中国科协青年人才托举工程-博士生专项计划 | 中国科协 | 王斌 | 兰剑 | 国家级 | 2024-02 |
| 8 | 中国科协青年人才托举工程-博士生专项计划 | 中国科协 | 张振杰 | 王红梅 | 国家级 | 2024-02 |





5. 研究生获学科竞赛奖

表 7 研究生获学科竞赛获奖部分清单

| 序号 | 项目名称 | 奖项 | 获奖人 | 指导 | 授予机构 | 获奖时间 |
|----|---------------------------|-----|-----|----------|----------------------------|---------|
| 1 | 中国草学会 2024 年会研究生论坛 报告一等奖 | 国家级 | 罗叙 | 谢应忠, 李建平 | 中国草学会 | 2024-04 |
| 2 | 全国饲草料生产劳动和技能竞赛“个人二等奖” | 国家级 | 李满有 | 兰剑 | 农业农村部畜牧兽医局、中国农林水利气象工会全国委员会 | 20268 |
| 3 | 草原生态管理与草原生物多样性国际学术研讨会 二等奖 | 国家级 | 王博 | 李志刚 | 中国草学会 | 2024-11 |
| 4 | 第十八届中国好创意暨全国数字艺术设计大赛二等奖 | 国家级 | 杨壹 | 邱开阳、谢应忠 | 中国电子视像行业协会等 | 2024-08 |
| 5 | 中国草学会 2024 年会研究生论坛 报告二等奖 | 国家级 | 王晶 | 伏兵哲 | 中国草学会 | 2024-04 |
| 6 | 中国研究生乡村振兴科技强农+创新实践大赛二等奖 | 国家级 | 杨博 | 张桂杰 | 中国学位与研究生教育学会 | 2021-09 |
| 7 | 中国草学会 2024 年会研究生论坛 报告三等奖 | 国家级 | 李雯 | 马红彬 | 中国草学会 | 2024-04 |
| 8 | 中国草学会 2024 年会研究生论坛 报告三等奖 | 国家级 | 曹颖 | 沈艳 | 中国草学会 | 2024-04 |

| | | | | | | |
|----|---|-----|---------------------|--------------------------|---|---------|
| 9 | 中国草学会 2022/2023 年会三 等奖 | 国家级 | 王博 | 李志刚 | 中国草学会 | 2023-04 |
| 10 | 草原生态管理与 草原生物多样性 国际学术研讨会 三等奖 | 国家级 | 王晶 | 伏兵哲 | 甘肃农业大 学,中国草学 会 | 2024-11 |
| 11 | 第十八届“挑战杯” 全国大学生课外 学术科技作品竞 赛三等奖 | 国家级 | 李小聪, 张硕,张 焱清等 | 邱开 阳, 禹 文杰, 李学斌 | 共青团中央、 中国科协、教 育部、中国社 科院、全国学 联 | 2025-07 |
| 13 | 草原生态管理与 草原生物多样性 国际学术研讨会 三等奖 | 国家级 | 朱青青 | 沈艳 | 甘肃农业大 学,中国草学 会 | 2024-11 |
| 14 | 草原生态管理与 草原生物多样性 国际学术研讨会 三等奖 | 国家级 | 宋珂辰 | 胡海英 | 甘肃农业大 学,中国草学 会 | 2024-11 |
| 15 | 草原生态管理与 草原生物多样性 国际学术研讨会 三等奖 | 国家级 | 张译尹 | 胡海英 | 甘肃农业大 学,中国草学 会 | 2024-11 |
| 16 | 全区饲草料生产 劳动和技能竞赛 “一等奖” | 省部级 | 李满有 | 兰剑 | 宁夏回族自治 区农业农村厅畜牧兽 医局、宁夏回 族自治区农林水财轻工 工会 | 2025-08 |
| 17 | 自治区研究生创 新学术论坛二等 奖 | 省部级 | 郭磊 | 宋乃平 | 宁夏自治区 教育厅 | 2013-09 |

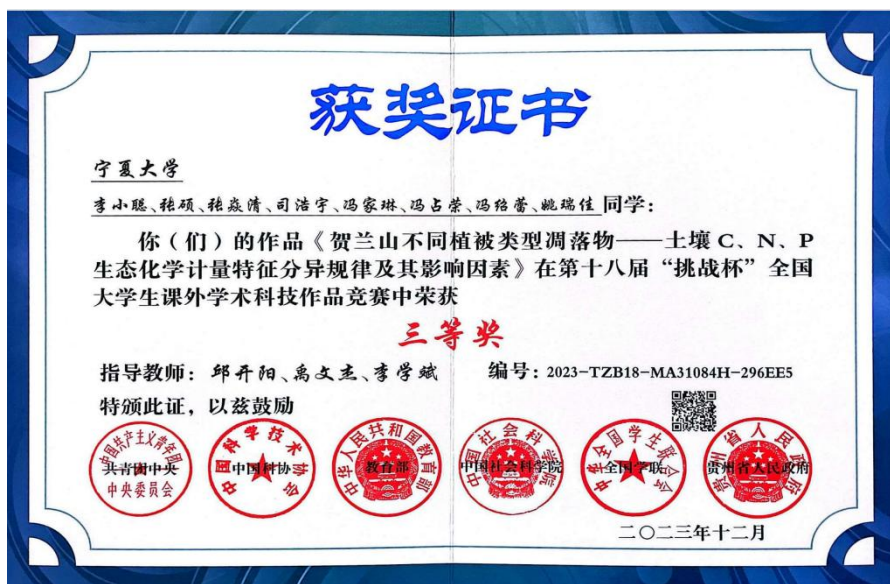
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|----|------------------------------|-----|-------------|-----------|------------------|---------|
| 18 | 中国国际大学生创新创业大赛(互联网+)银奖 | 省部级 | 潘永祥、潘利国、郑梦馨 | 张桂杰、卢强 | 宁夏自治区团委, 教育厅, 科协 | 2024-09 |
| 19 | 中国国际大学生创新创业大赛(互联网+)银奖 | 省部级 | 付茂兴、潘永祥、李鹅 | 卢强、张桂杰、黄帅 | 宁夏自治区团委, 教育厅, 科协 | 2024-10 |
| 20 | 生态文明与农业高质量发展学术论坛墙报一等奖 | 省部级 | 郭苗苗 | 顾沛雯 | 宁夏草原学会, 宁夏大学 | 2024-10 |
| 21 | 宁夏回族自治区"草木葱茏"研究生暨青年学者学术论坛一等奖 | 省部级 | 陈彦硕 | 王红梅 | 宁夏草原学会 | 2022-12 |
| 22 | 宁夏回族自治区"草木葱茏"研究生暨青年学者学术论坛一等奖 | 省部级 | 尉剑飞 | 李建平 | 宁夏草原学会 | 2022-12 |
| 23 | 宁夏回族自治区"草木葱茏"研究生暨青年学者学术论坛一等奖 | 省部级 | 王晶 | 伏兵哲 | 宁夏草原学会 | 2022-12 |
| 24 | 宁夏回族自治区"草木葱茏"研究生暨青年学者学术论坛一等奖 | 省部级 | 马媛媛 | 沈艳 | 宁夏草原学会 | 2022-12 |
| 25 | 宁夏回族自治区"草木葱茏"研究生暨青年学者学术论坛一等奖 | 省部级 | 王博 | 李志刚 | 宁夏草原学会 | 2022-12 |
| 26 | 宁夏回族自治区"草木葱茏"研究生暨青年学者学术论坛一等奖 | 省部级 | 马霜 | 胡海英 | 宁夏草原学会 | 2022-12 |

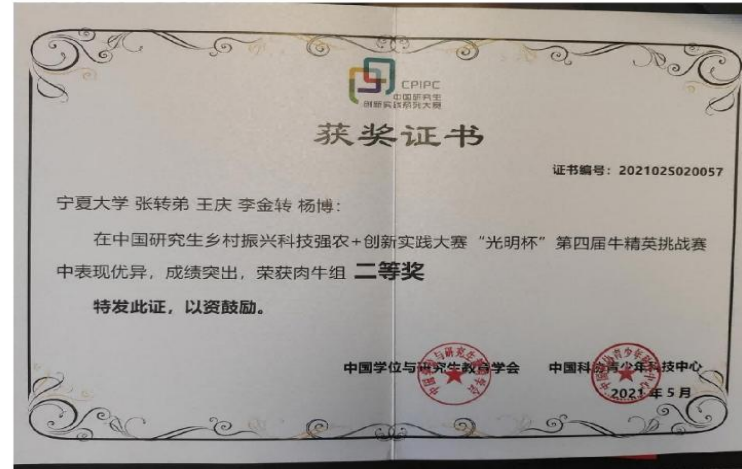
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| 27 | 宁夏回族自治区 "草木葱茏" 研究生暨青年学者学术论坛一等奖 | 省部级 | 程燕明 | 马红彬 | 宁夏草原学会 | 2022-12 |
| 28 | 宁夏回族自治区 "草木葱茏" 研究生暨青年学者学术论坛二等奖 | 省部级 | 张振杰 | 王红梅 | 宁夏草原学会 | 2022-12 |
| 29 | 宁夏回族自治区 "草木葱茏" 研究生暨青年学者学术论坛二等奖 | 省部级 | 冯琴 | 兰剑 | 宁夏草原学会 | 2022-12 |
| 30 | 宁夏回族自治区 "草木葱茏" 研究生暨青年学者学术论坛二等奖 | 省部级 | 蔺雄奎 | 李志刚 | 宁夏草原学会 | 2022-12 |
| 31 | 宁夏回族自治区 "草木葱茏" 研究生暨青年学者学术论坛二等奖 | 省部级 | 马菁 | 马红彬 | 宁夏草原学会 | 2022-12 |
| 32 | 宁夏回族自治区 "草木葱茏" 研究生暨青年学者学术论坛二等奖 | 省部级 | 程云龙 | 许兴 | 宁夏草原学会 | 2022-12 |
| 33 | 宁夏回族自治区 "草木葱茏" 研究生暨青年学者学术论坛二等奖 | 省部级 | 霍新茹 | 沈艳 | 宁夏草原学会 | 2022-12 |
| 34 | 宁夏草原学会研究生学术论坛一等奖 | 省部级 | 刘卓 | 马红彬 | 宁夏草原学会 | 2023-10 |
| 35 | 宁夏草原学会研究生学术论坛一等奖 | 省部级 | 李雯 | 马红彬 | 宁夏草原学会 | 2023-10 |

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|----|---------------------------------|-----|-----|-----|-------------|---------|
| 36 | 宁夏草原学会研究生学术论坛一等奖 | 省部级 | 马菁 | 马红彬 | 宁夏草原学会 | 2023-10 |
| 37 | 宁夏草原学会研究生学术论坛一等奖 | 省部级 | 史金红 | 卢强 | 宁夏草原学会 | 2023-10 |
| 38 | 宁夏草原学会研究生学术论坛一等奖 | 省部级 | 马静利 | 沈艳 | 宁夏草原学会 | 2022-12 |
| 39 | 宁夏草原学会研究生学术论坛二等奖 | 省部级 | 聂明鹤 | 沈艳 | 宁夏草原学会 | 2023-10 |
| 40 | 宁夏草原学会研究生学术论坛二等奖 | 省部级 | 李小红 | 李淑霞 | 宁夏草原学会 | 2023-10 |
| 41 | 宁夏草原学会研究生学术论坛二等奖 | 省部级 | 冯琴 | 兰剑 | 宁夏草原学会 | 2023-10 |
| 42 | 第二届 "生态文明与农业高质量发展" 研究生学术论坛墙报二等奖 | 省部级 | 龚昕 | 马红彬 | 宁夏草原学会 | 2025-10 |
| 43 | 第二届 "生态文明与农业高质量发展" 研究生学术论坛墙报二等奖 | 省部级 | 黄业芸 | 马红彬 | 宁夏草原学会 | 2025-10 |
| 44 | 第二届 "生态文明与农业高质量发展" 研究生学术论坛墙报二等奖 | 省部级 | 骆欣怡 | 马红彬 | 宁夏草原学会 | 2025-10 |
| 45 | "自治区人才服务行动计划" 研究生学术论坛一等奖 | 省部级 | 赵亚楠 | 王红梅 | 宁夏科协、宁夏草原学会 | 2021-12 |

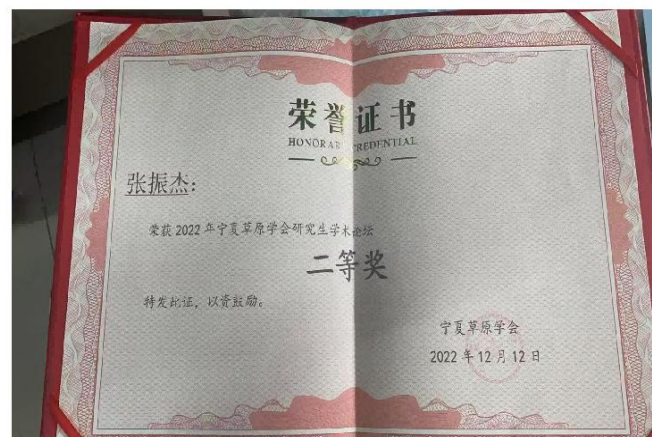
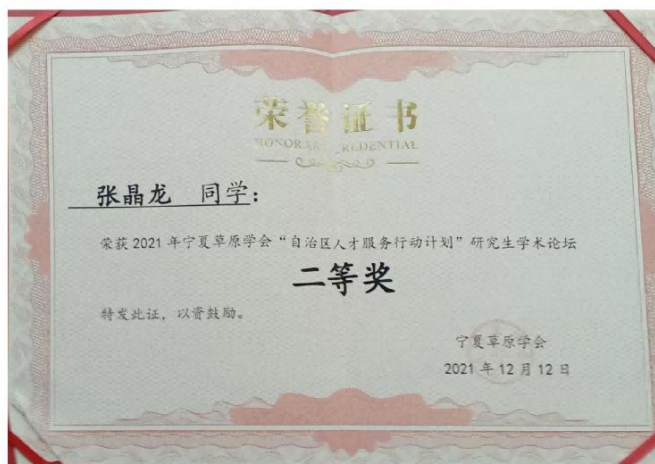
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|----|--------------------------|-----|-----|-----|-------------|---------|
| 46 | "自治区人才服务行动计划" 研究生学术论坛一等奖 | 省部级 | 王誉陶 | 李建平 | 宁夏科协、宁夏草原学会 | 2021-12 |
| 47 | "自治区人才服务行动计划" 研究生学术论坛一等奖 | 省部级 | 许爱云 | 曹兵 | 宁夏科协、宁夏草原学会 | 2021-12 |
| 48 | "自治区人才服务行动计划" 研究生学术论坛一等奖 | 省部级 | 尤璟涛 | 张桂杰 | 宁夏科协、宁夏草原学会 | 2021-12 |
| 49 | "自治区人才服务行动计划" 研究生学术论坛二等奖 | 省部级 | 陆琪 | 马红彬 | 宁夏科协、宁夏草原学会 | 2021-12 |
| 50 | "自治区人才服务行动计划" 研究生学术论坛二等奖 | 省部级 | 刘学琴 | 王新谱 | 宁夏科协、宁夏草原学会 | 2021-12 |
| 51 | "自治区人才服务行动计划" 研究生学术论坛二等奖 | 省部级 | 张鹏 | 沈艳 | 宁夏科协、宁夏草原学会 | 2021-12 |
| 52 | "自治区人才服务行动计划" 研究生学术论坛二等奖 | 省部级 | 刘进娣 | 马红彬 | 宁夏科协、宁夏草原学会 | 2021-12 |
| 53 | "自治区人才服务行动计划" 研究生学术论坛二等奖 | 省部级 | 李志丽 | 王新谱 | 宁夏科协、宁夏草原学会 | 2021-12 |
| 54 | "自治区人才服务行动计划" 研究生学术论坛二等奖 | 省部级 | 王晶 | 伏兵哲 | 宁夏科协、宁夏草原学会 | 2021-12 |
| 55 | "自治区人才服务行动计划" 研究生学术论坛二等奖 | 省部级 | 张晶龙 | 黄帅 | 宁夏科协、宁夏草原学会 | 2021-12 |

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|----|--------------------------------|-----|--------|------------|--------------|---------|
| 56 | "挑战杯" 全区大学生课外科技作品竞赛(自然科学类) 二等奖 | 省部级 | 高锦月、赵莹 | 王红梅、李志刚、杨鑫 | 宁夏自治区团委, 教育厅 | 2021-06 |
|----|--------------------------------|-----|--------|------------|--------------|---------|



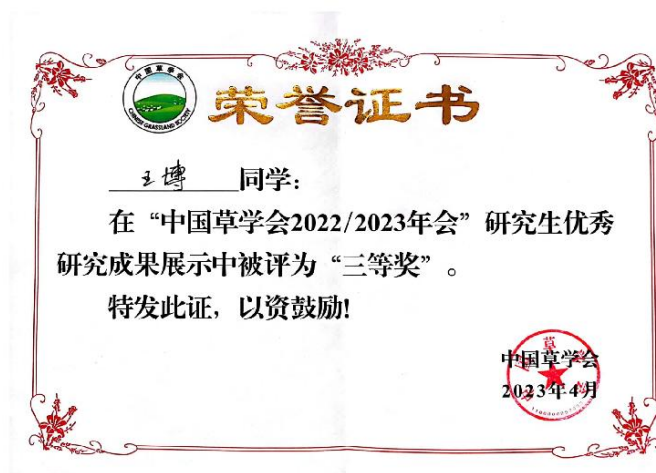


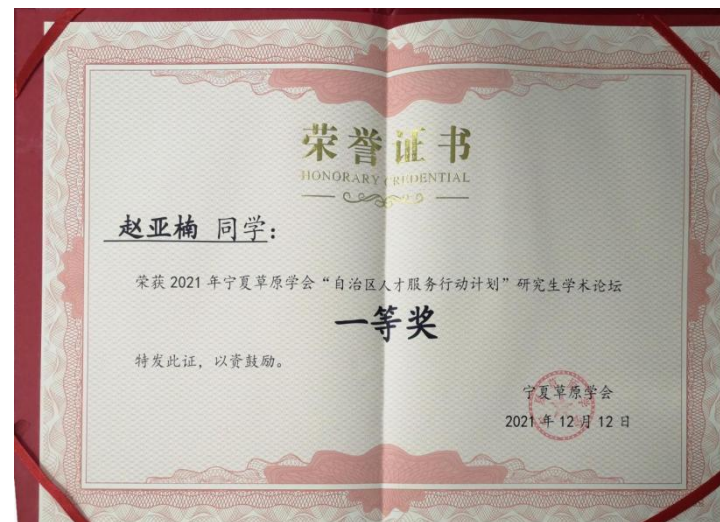


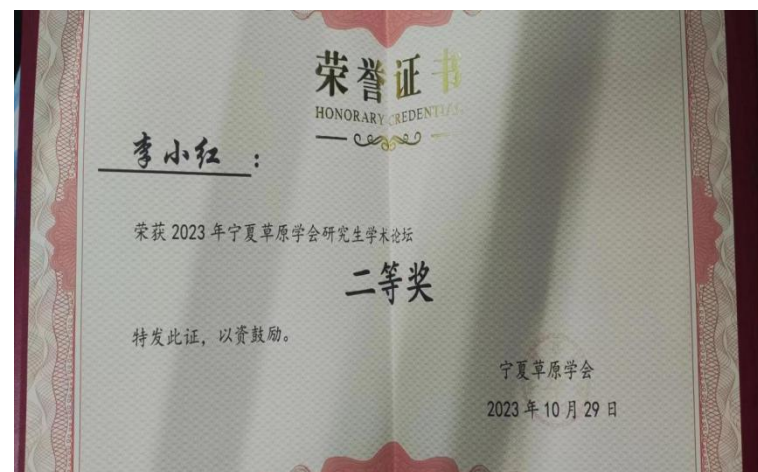












6. 宁夏自然科学优秀学术论文奖

表 8 宁夏自然科学优秀学术论文部分清单（二等奖及以上）

| 序号 | 获奖项目名称 | 数量 | 获奖人 | 授予机构 | 获奖时间 |
|----|----------------------|-----|-----------------------------------|------|---------|
| 1 | 第十八届宁夏自然科学优秀学术论文一等奖 | 4 | 郭帅奇、李雯、 马媛媛、 夏天波 | 宁夏科协 | 2025-12 |
| 2 | 第十八届宁夏自然科学优秀学术论文二等奖 | 6 | 宋文学、王斌 张浩、张振杰、 马婷婷、杨钧 | 宁夏科协 | 2025-12 |
| 3 | 第十七届宁夏自然科学优秀学术论文一等奖 | 2 | 洪乐乐、宋鲜 梅 | 宁夏科协 | 2023-12 |
| 4 | 第十七届宁夏自然科学优秀学术论文二等奖 | 5 | 陆琪、鞠明秀、 赵亚楠、赵芳、 王园 | 宁夏科协 | 2023-12 |
| 5 | 第十六届宁夏自然科学优秀学术论文一等奖 | 3 | 刘学琴、周瑶、 刘学琴 | 宁夏科协 | 2021-12 |
| 6 | 第十六届宁夏自然科学优秀学术论文二等奖 | 6 | 郭天斗、陆琪、 赵亚楠、常海 涛、许喆、聂 明鹤 | 宁夏科协 | 2021-12 |
| 8 | 第十五届宁夏自然科学优秀学术论文 1 项 | 二等奖 | 周瑶 | 宁夏科协 | 2019-11 |
| 9 | 第十四届宁夏自然科学优秀学术论文 1 项 | 一等奖 | 饶丽仙 | 宁夏科协 | 2017-11 |

宁夏科学技术协会

自治区科协关于公布第十八届宁夏自然科学 优秀学术论文评议结果的通知

各有关全区学会、协会、研究会，各有关单位：

为进一步繁荣学术交流，加快推进基础研究，夯实科技自立自强根基，促进创新型人才成长，提高科技成果转化和产业化水平，更好地为宁夏经济社会高质量发展服务，自治区科协组织开展了第十八届宁夏自然科学优秀学术论文评议工作。经初选、复审、终选、会议研究、公示等程序，评议出各等次优秀学术论文534篇，其中一等72篇、二等158篇、三等304篇。现将评议结果予以公布。

希望入选论文作者再接再厉，坚定创新自信，发扬求真务实、勇攀高峰的科学钻研精神，努力在新起点上展现新作为、创造新业绩；全区广大科技工作者要深入贯彻落实习近平总书记关于科技创新重要论述和考察宁夏重要讲话精神，坚持“四个面向”，大力弘扬科学家精神，自觉履行高水平科技自立自强的使命担

当，为我区科技进步和创新发展作出更大贡献。

附件：第十八届宁夏自然科学优秀学术论文评议结果



宁夏回族自治区 科学技术协会文件

宁科协发学字〔2023〕57号

关于公布第十七届宁夏自然科学优秀学术论文 推选结果的通知

各全区学会、协会、研究会，各有关单位：

为进一步繁荣学术交流，加快推进基础研究，夯实科技自立自强根基，促进创新型人才成长，提高科技成果转化和产业化水平，更好地为宁夏经济社会高质量发展服务，自治区科协组织开展了第十七届宁夏自然科学优秀学术论文推选工作。经初选、复审、终选、终审、公示、会议确定等程序，推选出各等次优秀学术论文441篇，其中一等65篇、二等131篇、三等245篇。现将推选结果予以公布。

希望入选论文作者再接再厉，坚定创新自信，发扬求真务实、勇攀高峰的科学钻研精神，努力在新起点上展现新作为、创造新业绩；全区广大科技工作者要深入贯彻落实习近平总书记关于科技创新重要论述精神，坚持四个面向，大力弘扬科学家精神，自觉履行高水平科技自立自强的使命担当，为我区科技进步和创新发展作出更大贡献。

附件：第十七届宁夏自然科学优秀学术论文推选结果

宁夏回族自治区科学技术协会

2023年12月20日

宁夏回族自治区 科学技术协会文件

宁科协发学字〔2021〕57号

关于公布第十六届宁夏自然科学优秀学术论文 推选结果的通知

各全区学会、协会、研究会，各有关单位：

为激发原始创新、推动科技进步，促进创新型人才成长，营造良好学术生态，激励科技工作者投身学术科研事业，潜心科学研究，把学术科研成果固化并与同行交流，更好地为宁夏经济社会高质量发展服务，按照《第十六届宁夏自然科学优秀学术论文推选方案》，自治区科协组织开展了第十六届宁夏自然科学优秀学术论文推选工作。此次推选共收到各全区学会审核报送符合参选条件论文 1682 篇，初选推荐一二三等优秀论文 445 篇。经初选、

复审、终选、终审、公示、会议确定等程序，推选出各等次优秀学术论文 347 篇，其中一等 50 篇、二等 100 篇、三等 197 篇。现将推选结果予以公布（见附件）。

希望优秀论文作者再接再厉，发扬求真务实、勇攀高峰的科学钻研精神，继续攻坚克难、开拓创新，取得更多高水平学术科研成果。希望各全区学会能够积极搭建各类学术交流平台，服务科技工作者成长成才，为推动科技进步和创新，服务宁夏高质量发展作出新的更大贡献。

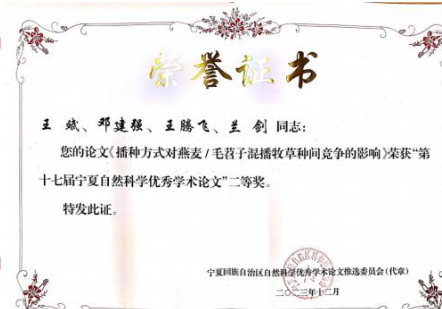
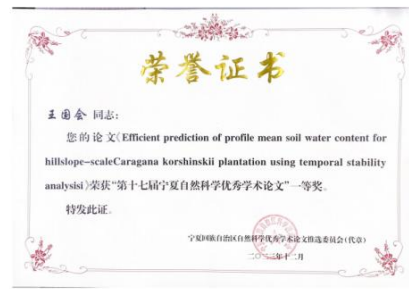
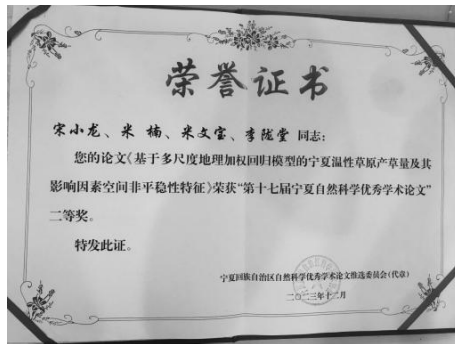
附件：第十六届宁夏自然科学优秀学术论文推选结果

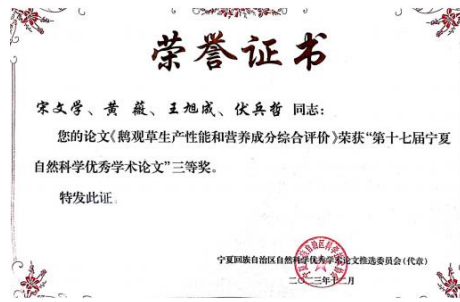


部分获奖证书









7. 研究生获国家奖学金及优秀毕业生情况

表 9 研究生国家奖学金及优秀毕业生汇总表

| 序号 | 获奖名称 | 获奖人姓名 | 获奖年份 | 培养层次 |
|----|-------|-------|---------|-------|
| 1 | 国家奖学金 | 王博 | 2025-10 | 博士 |
| 2 | 国家奖学金 | 郭帅奇 | 2025-10 | 博士 |
| 3 | 国家奖学金 | 王斌 | 2024-10 | 博士 |
| 4 | 国家奖学金 | 张振杰 | 2024-10 | 博士 |
| 5 | 国家奖学金 | 刘秉青 | 2023-10 | 博士 |
| 6 | 国家奖学金 | 吴梦瑶 | 2023-10 | 博士 |
| 7 | 国家奖学金 | 吴梦瑶 | 2022-10 | 博士 |
| 8 | 国家奖学金 | 鞠明岫 | 2022-10 | 博士 |
| 9 | 国家奖学金 | 潘雅清 | 2021-10 | 博士 |
| 10 | 国家奖学金 | 周瑶 | 2020-10 | 博士 |
| 11 | 国家奖学金 | 张会丽 | 2019-10 | 博士 |
| 12 | 国家奖学金 | 傅理 | 2018-10 | 博士 |
| 13 | 国家奖学金 | 王兴 | 2017-10 | 博士 |
| 14 | 国家奖学金 | 米楠 | 2016-10 | 博士 |
| 15 | 国家奖学金 | 齐波毅 | 2025-10 | 学术型硕士 |
| 16 | 国家奖学金 | 连佳丽 | 2025-10 | 学术型硕士 |
| 17 | 国家奖学金 | 王真 | 2023-10 | 学术型硕士 |
| 18 | 国家奖学金 | 李胜楠 | 2023-10 | 学术型硕士 |
| 19 | 国家奖学金 | 谢沁宓 | 2022-10 | 学术型硕士 |
| 20 | 国家奖学金 | 尤璟涛 | 2022-10 | 学术型硕士 |
| 21 | 国家奖学金 | 陈蔚 | 2020-10 | 学术型硕士 |
| 22 | 国家奖学金 | 王誉陶 | 2019-10 | 学术型硕士 |
| 23 | 国家奖学金 | 聂明鹤 | 2018-10 | 学术型硕士 |
| 24 | 国家奖学金 | 刘金龙 | 2018-10 | 学术型硕士 |
| 25 | 国家奖学金 | 张会丽 | 2017-10 | 学术型硕士 |
| 26 | 国家奖学金 | 周瑶 | 2017-10 | 学术型硕士 |
| 27 | 国家奖学金 | 马玉龙 | 2025-10 | 专业型硕士 |
| 28 | 优秀毕业生 | 王斌 | 2025-06 | 博士 |

| | | | | |
|----|-------|-----|---------|-------|
| 29 | 优秀毕业生 | 周瑶 | 2018-05 | 博士 |
| 30 | 优秀毕业生 | 张会丽 | 2018-05 | 博士 |
| 31 | 优秀毕业生 | 麻冬梅 | 2014-05 | 博士 |
| 32 | 优秀毕业生 | 龚昕 | 2026-06 | 学术型硕士 |
| 33 | 优秀毕业生 | 姜海鑫 | 2025-06 | 学术型硕士 |
| 34 | 优秀毕业生 | 宋文学 | 2024-06 | 学术型硕士 |
| 35 | 优秀毕业生 | 张浩 | 2024-06 | 学术型硕士 |
| 36 | 优秀毕业生 | 蔺雄奎 | 2024-06 | 学术型硕士 |
| 37 | 优秀毕业生 | 尉剑飞 | 2023-05 | 学术型硕士 |
| 38 | 优秀毕业生 | 尤璟涛 | 2023-05 | 学术型硕士 |
| 39 | 优秀毕业生 | 谢沁宥 | 2023-05 | 学术型硕士 |
| 40 | 优秀毕业生 | 潘雅清 | 2022-05 | 学术型硕士 |
| 41 | 优秀毕业生 | 田娜 | 2020-05 | 学术型硕士 |
| 42 | 优秀毕业生 | 赵亚楠 | 2019-05 | 专业型硕士 |
| 43 | 优秀毕业生 | 张蕊 | 2018-05 | 学术型硕士 |
| 44 | 优秀毕业生 | 周静静 | 2017-05 | 学术型硕士 |
| 45 | 优秀毕业生 | 陈晶 | 2015-05 | 学术型硕士 |
| 46 | 优秀毕业生 | 白春艳 | 2026-06 | 专业型硕士 |
| 47 | 优秀毕业生 | 李明宇 | 2019-05 | 专业型硕士 |

宁夏大学文件

宁大校发〔2026〕2号

关于表彰2024-2025学年本科生国家奖学金、 本科生国家励志奖学金、研究生国家奖学金 获奖学生的决定

各单位：

根据2024-2025学年本科生国家奖学金、本科生国家励志奖学金、研究生国家奖学金评选工作要求，按照公开、公平、公正、择优原则，经学生本人申请，各书院初审，学校学生资助管理工作组（研究生、本科生奖助学金评审委员会）评审、公示、推荐，报自治区教育厅、教育部审定，我校邱春雨等53名学生获得2024-2025学年本科生国家奖学金（名单见附件1）、杨红丽等633名学生获得2024-2025学年本科生国家励志奖学金（名单见附件2）、丁玉彬等167名学生获得2024-2025学年研究生国家奖学金（名单见附件3），现予以表彰。

附件3

宁夏大学2024-2025学年 研究生国家奖学金获奖学生名单

一、博士研究生（27名）

| | | | | |
|------|--|--|--|--|
| 守正书院 | 丁玉彬 薛钰 | 张森森 | 李瑞宁 | 邓孟青 |
| 求是书院 | 邵研 刘洪顺 | 刘浩玮 | 李辉 | 刘天胜 |
| 励行书院 | 刘强 崔佳锐 朱涛 | 乔亚蕊 宋雅萍 张轩硕 | 俞沁含 赵薇 侯洪飞 | 吴霜 王川川 |
| 润泽书院 | 王博 | 郭帅奇 | 周磊 | |
| 鼎新书院 | 宋文龙 | 张瑞 | 李建荣 | |
| 励行书院 | 马丽娜 王正兴 别雪 杨成贵 王子夜 徐文婧 陈猷 程蒙恩 | 李案本 杨丽娟 韩蕊 周子昂 李根 姚常杰 王若梅 杜姣燕 | 李治刚 田进理 孙宇 魏佳仪 刘子毓 张甲 龙环 | 徐倩 沙志行 杨龙 金万红 陈颖龙 倪成 马红瑞 |
| 润泽书院 | 张璇 马玉龙 洪自强 郭静静 | 齐波毅 连佳丽 苏明 陈希 | 吴国伟 曹玲芳 李月琪 摆俊龙 | 崔雯婧 马纪龙 李广宇 唐致云 |

宁夏大学2020年研究生国家奖学金评审结果公示

发布人： 发布时间：2020-10-30 点击量： 5720

各单位：

根据《宁夏大学研究生国家奖学金评审管理办法》的文件精神，经研究生个人申请，各培养单位研究生国家奖学金评审委员会评审，研究生院（党委研工部）审核，校研究生奖助学金评审委员会审定，决定刘志月等8名博士研究生、李文婷等58名硕士研究生获得宁夏大学2020年研究生国家奖学金(名单见附件)。现予以公示。

公示时间：2020年10月30日~11月5日

监督电话：2061170

研究生院（党委研工部）
2020年10月30日

附件【宁夏大学2020年研究生国家奖学金获奖学生名单.pdf】

宁夏大学2020年研究生国家奖学金获奖学生名单

| 序号 | 姓名 | 性别 | 学院 | 专业 | 学号 | 培养层次 | 备注 |
|----|-----|----|-----------|---------------|-------------|------|----|
| 1 | 刘志月 | 女 | 西夏学研究院 | 中国少数民族史 | 12018140032 | 博士 | |
| 2 | 郭莉萍 | 女 | 教育学院 | 民族心理与民族教育 | 12018140026 | 博士 | |
| 3 | 白韶璞 | 男 | 法学院 | 民族地区公共管理 | 12018140008 | 博士 | |
| 4 | 周瑶 | 女 | 农学院 | 草学 | 12018140073 | 博士 | |
| 5 | 黄增文 | 男 | 农学院 | 动物遗传育种与繁殖 | 12018140067 | 博士 | |
| 6 | 欧阳赞 | 男 | 土木与水利工程学院 | 水利水电工程 | 12018140062 | 博士 | |
| 7 | 贾芳 | 女 | 生命科学学院 | 动物生物技术 | 12018140054 | 博士 | |
| 8 | 任杰 | 女 | 数学统计学院 | 应用数学 | 12018140037 | 博士 | |
| 9 | 李文婷 | 女 | 阿拉伯学院 | 阿拉伯语语言文学 | 12018131028 | 硕士 | |
| 10 | 刘真真 | 女 | 光伏材料重点实验室 | 微电子学与固体电子学 | 12018131035 | 硕士 | |
| 11 | 吴玥瞳 | 女 | 化学化工学院 | 物理化学 | 12018130470 | 硕士 | |
| 12 | 罗婷 | 女 | 化学化工学院 | 学科教学（化学） | 12019130562 | 硕士 | |
| 13 | 贾转红 | 女 | 化学化工学院 | 分析化学 | 12019130592 | 硕士 | |
| 14 | 马素珍 | 女 | 回族研究院 | 人类学 | 12018130097 | 硕士 | |
| 15 | 李萍 | 女 | 机械工程学院 | 机械工程(学术) | 12018130668 | 硕士 | |
| 16 | 李嘉婧 | 女 | 机械工程学院 | 机械工程 | 12019130799 | 硕士 | |
| 17 | 蒙春柳 | 女 | 教育学院 | 少年儿童组织与思想意识教育 | 12018130205 | 硕士 | |

宁夏大学部门公文

学生处（2019）106号

宁夏大学国家奖学金、国家励志奖学金、 国家助学金评选结果公示

根据《关于下达2019年普通高校学生资助补助资金（第二批）预算的通知》宁财（教）指标[2019]275号文件、《宁夏大学国家奖学金实施细则（修订）》、《宁夏大学国家励志奖学金实施细则（修订）》和《宁夏大学国家助学金实施细则（修订）》的规定，学生处下发了《关于评选宁夏大学2018-2019学年国家奖学金的通知》、《关于评选宁夏大学2018-2019学年国家励志奖学金的通知》和《关于评选宁夏大学2019年国家助学金的通知》。经学生本人申请，学生所在学院初步评审并公示，学生资助管理中心审查后提交学校学生资助工作领导小组审定，决定李睿等40名学生为宁夏大学2018-2019学年国家奖学金候选人（名单见附件1）、蔡星等690名学生为宁夏大学2018-2019学年国家励志奖学金候选人（名单见附件2）、陈小燕等2747名学生为宁夏大学2019年一档国家助学金受助学生（名单见附件3）、杨文琴等1951名学生为宁夏大学2019年二档国家助学金受助学生（名单见附件3），现面向全校公示。

宁夏大学2019年研究生国家奖学金获奖学生名单

| 序号 | 学生姓名 | 学号 | 培养单位 | 专业 | 培养层次 |
|----|------|--------------|------------------------|------------|------|
| 1 | 郭文娟 | 12018140036 | 数学统计学院 | 应用数学 | 博士 |
| 2 | 张会丽 | 12018140074 | 农学院 | 草学 | 博士 |
| 3 | 王燕霞 | 12017140048 | 化学化工学院 | 水资源利用与化学化工 | 博士 |
| 4 | 周瑞娟 | 12018140048 | 化学化工学院 | 水资源利用与化学化工 | 博士 |
| 5 | 田晓露 | 12017140033 | 西夏学研究院 | 中国少数民族史 | 博士 |
| 6 | 田晓萍 | 120171301257 | 阿拉伯学院 | 阿拉伯语言文学 | 硕士 |
| 7 | 冯州 | 12018131040 | 光伏材料重点实验室 | 电子与通信工程 | 硕士 |
| 8 | 杨玲 | 12018130493 | 化学化工学院 | 学科教学（化学） | 硕士 |
| 9 | 麻秀芳 | 120171300700 | 化学化工学院 | 物理化学 | 硕士 |
| 10 | 高红凤 | 120171300699 | 化学化工学院 | 物理化学 | 硕士 |
| 11 | 马倩 | 120171300300 | 回族研究院 | 人类学 | 硕士 |
| 12 | 赵琛 | 120171300917 | 机械工程学院 | 机械工程(学术) | 硕士 |
| 13 | 冯朝旭 | 12018130673 | 机械工程学院 | 机械工程 | 硕士 |
| 14 | 王小艳 | 120171300410 | 教育学院 | 教育学原理 | 硕士 |
| 15 | 魏默 | 120171300423 | 教育学院 | 少年儿童组织与思想意 | 硕士 |
| 16 | 王冬霞 | 120171300425 | 教育学院 | 应用心理学 | 硕士 |
| 17 | 田雪阳 | 120171300430 | 教育学院 | 应用心理学 | 硕士 |
| 18 | 李娟 | 12016130075 | 经济管理学院 | 政治经济学 | 硕士 |
| 19 | 李扬 | 12018130064 | 经济管理学院 | 会计 | 硕士 |
| 20 | 胡海利 | 120171300318 | 马克思主义学院 | 思想政治教育 | 硕士 |
| 21 | 尹建功 | 120171301215 | 美术学院 | 中国少数民族艺术 | 硕士 |
| 22 | 王彩霞 | 120171300960 | 农学院 | 食品科学 | 硕士 |
| 23 | 程丽娟 | 120171300961 | 农学院 | 食品科学 | 硕士 |
| 24 | 孙艳丽 | 120171300984 | 农学院 | 葡萄与葡萄酒学 | 硕士 |
| 25 | 赵宇晨 | 120171300995 | 农学院 | 农业昆虫与害虫防治 | 硕士 |
| 26 | 罗芳 | 12018130741 | 农学院 | 动物生产系统与工程 | 硕士 |
| 27 | 贾昊 | 12018130777 | 农学院 | 农艺与种业 | 硕士 |
| 28 | 闫鹏科 | 12018130851 | 农学院 | 资源利用与植物保护 | 硕士 |
| 29 | 刘博 | 12018130864 | 农学院 | 畜牧 | 硕士 |
| 30 | 王誉陶 | 12018130752 | 农学院 | 草业科学 | 硕士 |
| 31 | 扶静 | 120171300380 | 人文学院 | 中国古典文献学 | 硕士 |
| 32 | 徐嘉忻 | 12018130141 | 人文学院 | 中国古代文学 | 硕士 |
| 33 | 张方 | 120171300398 | 人文学院 | 比较文学与世界文学 | 硕士 |
| 34 | 李振凯 | 120171300790 | 生命科学学院 | 植物学 | 硕士 |
| 35 | 郭媛媛 | 120171300816 | 生命科学学院 | 生物化学与分子生物学 | 硕士 |
| 36 | 骆诗剑 | 120171300709 | 省部共建煤炭高效利用与绿色化工国家重点实验室 | 应用化学 | 硕士 |
| 37 | 李欣 | 12018131135 | 省部共建煤炭高效利用与绿色化工国家重点实验室 | 化学工程 | 硕士 |
| 38 | 张佳伟 | 12018131119 | 省部共建煤炭高效利用与绿色化工国家重点实验室 | 应用化学 | 硕士 |

2018年宁夏大学研究生国家奖学金评审结果公示

发布人: 发布时间: 2018-10-12 点击量: 4221

各单位:

根据《宁夏大学研究生国家奖学金评审管理办法（修订稿）》的文件精神，经研究生个人申请，各培养单位研究生国家奖学金评审委员会评审，校研究生国家奖学金评审领导小组审定，决定李玉峰等4名博士研究生、韩中慧等50名硕士研究生获得2018年研究生国家奖学金(名单见附件)。现予以公示。

公示时间: 2018年10月12日~10月19日

联系电话: 纪检委 2061117

研究生院 2061170

研究生院

2018年10月12日

附件【2018年研究生国家奖学金拟获奖学生名单.xls】

2018年研究生国家奖学金获奖学生名单

| 学号 | 姓名 | 院系 | 专业 | 培养层次 |
|--------------|-----|------------------------|--------------|------|
| 12016140001 | 张廷刚 | 政法学院 | 民族学 | 博士 |
| 12016140020 | 李玉峰 | 西夏学研究院 | 中国少数民族史 | 博士 |
| 12016140030 | 宋智 | 化学化工学院 | 水资源利用与化学化工 | 博士 |
| 12016140048 | 傅理 | 农学院 | 華学 | 博士 |
| 12016130254 | 韩中慧 | 人文学院 | 中国古典文献学 | 硕士 |
| 12016130252 | 姚玉婷 | 人文学院 | 中国古典文献学 | 硕士 |
| 12016130269 | 薄其一 | 人文学院 | 中国现当代文学 | 硕士 |
| 12016130040 | 刘思显 | 政法学院 | 马克思主义民族理论与政策 | 硕士 |
| 120171300035 | 马小娟 | 政法学院 | 民族学 | 硕士 |
| 12016130292 | 张冲 | 教育学院 | 教育学原理 | 硕士 |
| 12015130294 | 王磊斌 | 教育学院 | 课程与教学论 | 硕士 |
| 12016130298 | 俞建芬 | 教育学院 | 课程与教学论 | 硕士 |
| 12016130223 | 曩文豪 | 马克思主义学院 | 思想政治教育 | 硕士 |
| 12016130914 | 丁佳茹 | 阿拉伯学院 | 阿拉伯语言文学 | 硕士 |
| 12016130211 | 田隰 | 回族研究院 | 人类学 | 硕士 |
| 12016130404 | 马万梅 | 西夏学研究院 | 中国古代史 | 硕士 |
| 12016130072 | 肖人隰 | 经济管理学院 | 政治经济学 | 硕士 |
| 12017130284 | 陈雅慧 | 经济管理学院 | 会计 | 硕士 |
| 12016130355 | 连位俊 | 外国语学院 | 英语语言文学 | 硕士 |
| 12017130541 | 马思琪 | 外国语学院 | 英语口译 | 硕士 |
| 12016130545 | 芦佳雪 | 化学化工学院 | 物理化学 | 硕士 |
| 12017130701 | 殷雪 | 化学化工学院 | 物理化学 | 硕士 |
| 12016130526 | 徐建菊 | 化学化工学院 | 学科教学（化学） | 硕士 |
| 12016130712 | 王皓 | 机械工程学院 | 机械制图及其自动化 | 硕士 |
| 12016130714 | 刘向南 | 机械工程学院 | 机械制图及其自动化 | 硕士 |
| 12016130639 | 王晨 | 生命科学学院 | 生物化学与分子生物学 | 硕士 |
| 12016130628 | 周丽 | 生命科学学院 | 生物化学与分子生物学 | 硕士 |
| 12016130587 | 梁洁花 | 资源环境学院 | 自然地理学 | 硕士 |
| 12016130598 | 王鹏 | 资源环境学院 | 人文地理学 | 硕士 |
| 12016130428 | 郭旭东 | 信息工程学院 | 计算机科学与技术 | 硕士 |
| 120171301285 | 牛伯洁 | 信息工程学院 | 计算机技术 | 硕士 |
| 12016130469 | 常伟 | 物理与电子电气工程学院 | 电路与系统 | 硕士 |
| 12016130471 | 刘颖博 | 物理与电子电气工程学院 | 电路与系统 | 硕士 |
| 12016130475 | 朱小波 | 物理与电子电气工程学院 | 电路与系统 | 硕士 |
| 12017130581 | 郑宇婧 | 物理与电子电气工程学院 | 学科教学（物理） | 硕士 |
| 12016130679 | 赵彦波 | 土木与水利工程学院 | 农业土木工程 | 硕士 |
| 12016130683 | 尹亮 | 土木与水利工程学院 | 农业土木工程 | 硕士 |
| 12016130658 | 杨瑞雪 | 土木与水利工程学院 | 岩土工程 | 硕士 |
| 12016130424 | 包康博 | 数学统计学院 | 数学 | 硕士 |
| 12016130408 | 赵英英 | 数学统计学院 | 数学 | 硕士 |
| 12017130737 | 隼秀秀 | 省部共建煤炭高效利用与绿色化工国家重点实验室 | 化学工程 | 硕士 |
| 12016130559 | 李德康 | 省部共建煤炭高效利用与绿色化工国家重点实验室 | 应用化学 | 硕士 |
| 120171301214 | 李铭博 | 美术学院 | 中国少数民族艺术 | 博士 |
| 12016130983 | 杨莉 | 体育学院 | 民族传统体育文化 | 硕士 |
| 120171301183 | 仇雨蕊 | 音乐学院 | 中国少数民族艺术 | 硕士 |
| 12016130650 | 杨东东 | 西部生态与生物资源开发联合研究中心 | 恢复生态学 | 硕士 |
| 120171301256 | 杜俊杰 | 光伏材料重点实验室 | 微电子学与固体电子学 | 硕士 |
| 12016130792 | 慕明鹤 | 农学院 | 园艺科学 | 硕士 |
| 12016130779 | 郭婷婷 | 农学院 | 动物营养与饲料科学 | 硕士 |
| 12016130775 | 王辉 | 农学院 | 农业昆虫与害虫防治 | 硕士 |
| 12016130748 | 王乐 | 农学院 | 作物栽培学与耕作学 | 硕士 |
| 12016130742 | 杨皓玉 | 农学院 | 食品科学 | 硕士 |

宁夏大学文件

宁大校发〔2018〕50号

关于表彰2017年研究生国家奖学金 获奖学生的决定

各单位：

根据教育部 财政部《普通高等学校研究生国家奖学金评审办法》（教财〔2014〕1号）、《宁夏大学研究生国家奖学金评审管理办法（修订稿）》有关精神，经研究生个人申请、培养单位研究生国家奖学金评审委员会评审、学校研究、自治区教育厅审核批准，王兴等4名博士研究生、陈治鹏等49名硕士研究生获得2017年研究生国家奖学金，现决定予以表彰。

希望受表彰的研究生不忘初心、珍惜荣誉、努力进取，争取更好成绩。

附件

宁夏大学2017年研究生国家奖学金获奖 学生表彰名单

| 序号 | 学号 | 学生姓名 | 培养层次 |
|----|-------------|------|------|
| 1 | 12015140038 | 王 兴 | 博士 |
| 2 | 12015140036 | 张同刚 | 博士 |
| 3 | 12016140015 | 许 峰 | 博士 |
| 4 | 12015140002 | 徐如明 | 博士 |
| 5 | 12015130454 | 陈治鹏 | 硕士 |
| 6 | 12015130471 | 唐 浩 | 硕士 |
| 7 | 12015130463 | 杨轶涵 | 硕士 |
| 17 | 12015130759 | 刘春艳 | 硕士 |
| 18 | 12015130755 | 刘 馨 | 硕士 |
| 19 | 12015130756 | 芮文婧 | 硕士 |
| 20 | 12015130744 | 张会丽 | 硕士 |
| 21 | 12015130779 | 周 瑞 | 硕士 |
| 22 | 12015130636 | 张义凡 | 硕士 |
| 23 | 12015130865 | 杨 雪 | 硕士 |
| 24 | 12016130918 | 邵 铁 | 硕士 |
| 25 | 12015130709 | 代英鹏 | 硕士 |
| 26 | 12015130718 | 张钧哲 | 硕士 |

宁夏大学部门公文

学生处〔2026〕41号

宁夏大学2026届优秀毕业生评审结果公示

各书院、中卫校区各学院：

根据《宁夏大学优秀毕业生评选办法》，经学生申请，各书院及中卫校区各学院评选、公示，党委学生工作部（学生处）审核，2026年6月2日学校学生工作专题会议审定，拟评选108名研究生、139名本科生为宁夏大学2026届校级优秀毕业生，现在全校范围内予以公示。

公示时间：2026年6月2日-6月8日

举报单位：党委学生工作部（学生处）

联系电话：2061016（内线6016）

附件：1. 宁夏大学2026届优秀毕业生（研究生）公示名单

2. 宁夏大学2026届优秀毕业生（本科生）公示名单

党委学生工作部（学生处）

2026年6月2日

党委学生工作部（学生处）

2026年6月2日印发

| 序号 | 书院 | 姓名 | 学号 | 学院 | 专业 | 备注 |
|----|------|-------------|-------------|--------------|------------------|--------|
| 48 | 励行书院 | 于雯静 | 1202****045 | 生命科学学院 | 071000 生物学 | 支教保研 |
| 49 | | 马桂兰 | 1202****996 | 生命科学学院 | 071000 生物学 | |
| 50 | | 王正兴 | 1202****713 | 动物科技学院 | 090500 畜牧学 | |
| 51 | | 韩蕊 | 1202****737 | 动物科技学院 | 090600 兽医学 | |
| 52 | | 别雪 | 1202****740 | 动物科技学院 | 095133 畜牧 | |
| 53 | | 杨丽娟 | 1202****775 | 动物科技学院 | 095133 畜牧 | |
| 54 | | 孙宇 | 1202****796 | 动物科技学院 | 095200 兽医 | |
| 55 | | 杨龙 | 1202****143 | 食品科学与工程学院 | 083200 食品科学与工程 | |
| 56 | | 金万红 | 1202****167 | 食品科学与工程学院 | 095135 食品加工与安全 | |
| 57 | | 魏佳仪 | 1202****207 | 食品科学与工程学院 | 095135 食品加工与安全 | |
| 58 | | 杨成贵 | 1202****215 | 食品科学与工程学院 | 095135 食品加工与安全 | |
| 59 | | 于建国 | 1202****220 | 食品科学与工程学院 | 095135 食品加工与安全 | |
| 60 | | 杨瑞松 | 1202****097 | 土木与水利工程学院 | 081400 土木工程 | |
| 61 | | 龙环 | 1202****121 | 土木与水利工程学院 | 081400 土木工程 | |
| 62 | | 马崇亮 | 1202****122 | 土木与水利工程学院 | 081400 土木工程 | |
| 63 | | 鲍宪远 | 1202****133 | 土木与水利工程学院 | 081500 水利工程 | |
| 64 | | 陈颖龙 | 1202****139 | 土木与水利工程学院 | 081500 水利工程 | |
| 65 | | 张甲 | 1202****147 | 土木与水利工程学院 | 081500 水利工程 | |
| 66 | | 张轩硕 | 1202****105 | 土木与水利工程学院 | 081500 水利工程 | 硕博连读博士 |
| 67 | 黄聪 | 1202****153 | 土木与水利工程学院 | 085901 土木工程 | | |
| 68 | 马玲 | 1202****962 | 地理科学与规划学院 | 070500 地理学 | | |
| 69 | 刘子毓 | 1202****972 | 地理科学与规划学院 | 070500 地理学 | | |
| 70 | 酒泽书院 | 江欣 | 1202****406 | 农学院 | 090300 农业资源与环境 | |
| 71 | | 曹玲芳 | 1202****418 | 农学院 | 095131 农艺与种业 | |
| 72 | | 马纪龙 | 1202****437 | 农学院 | 095131 农艺与种业 | |
| 73 | | 苏明 | 1202****445 | 农学院 | 095131 农艺与种业 | |
| 74 | | 万猛虎 | 1202****446 | 农学院 | 095131 农艺与种业 | |
| 75 | | 陈希 | 1202****456 | 农学院 | 095132 资源利用与植物保护 | |
| 76 | | 王雪 | 1202****522 | 农学院 | 095138 农村发展 | |
| 77 | | 魏昕 | 1202****544 | 林业与草业学院 | 090900 草学 | |
| 78 | | 白春艳 | 1202****556 | 林业与草业学院 | 095131 农艺与种业 | |
| 79 | | 杨小会 | 1202****619 | 林业与草业学院 | 095400 林业 | |
| 80 | | 赵元 | 1202****625 | 林业与草业学院 | 095400 林业 | |
| 81 | | 马晓娟 | 1202****633 | 葡萄酒与园艺学院 | 090200 园艺学 | |
| 82 | | 祁璇 | 1202****635 | 葡萄酒与园艺学院 | 090200 园艺学 | |
| 83 | | 王博涛 | 1202****646 | 葡萄酒与园艺学院 | 090200 园艺学 | |
| 84 | 李承明 | 1202****663 | 葡萄酒与园艺学院 | 095131 农艺与种业 | | |
| 85 | 鼎新书院 | 李慧 | 1202****057 | 生态环境学院 | 071300 生态学 | |
| 86 | | 王林真 | 1202****062 | 生态环境学院 | 071300 生态学 | |
| 87 | | 王艳 | 1202****063 | 生态环境学院 | 071300 生态学 | |
| 88 | | 陶常勇 | 1202****279 | 机械工程学院 | 080200 机械工程 | |
| 89 | | 丁鹏飞 | 1202****292 | 机械工程学院 | 085500 机械 | |
| 90 | | 袁欢欢 | 1202****294 | 机械工程学院 | 085500 机械 | |
| 91 | | 刘剑书 | 1202****312 | 机械工程学院 | 085500 机械 | |
| 92 | | 姜学武 | 1202****323 | 机械工程学院 | 085500 机械 | |
| 93 | | 张斌 | 1202****368 | 机械工程学院 | 085500 机械 | |
| 94 | | 马琳 | 1202****709 | 化学化工学院 | 045106 学科教学（化学） | |
| 95 | 徐晓星 | 1202****800 | 化学化工学院 | 070300 化学 | 支教保研 | |
| 96 | 李春霖 | 1202****745 | 化学化工学院 | 070300 化学 | | |

宁夏大学部门公文

学生处〔2025〕36号

宁夏大学2025届校级优秀毕业生评审结果公示

各书院：

根据《宁夏大学优秀毕业生评选办法》规定，经学生申请，各书院评选、公示，党委学生工作部（学生处）审核，2025年6月18日学校学生事务工作组会议审定，拟评选马小玲等49名研究生、李聪伟等136名本科生为宁夏大学2025届校级优秀毕业生，现在全校范围内予以公示。

公示时间：2025年6月18日—22日

举报单位：党委学生工作部（学生处）

联系电话：2061016（内线6016）

附件：1. 宁夏大学2025届校级优秀毕业生（研究生）公示名单

2. 宁夏大学2025届校级优秀毕业生（本科）公示名单

党委学生工作部（学生处）

2025年6月18日

党委学生工作部（学生处）

2025年6月18日印发

附件1：

宁夏大学2025届校级优秀毕业生（研究生）公示名单

| 序号 | 书院 | 学院 | 学号 | 姓名 | 专业 | 备注 |
|----|--------------|--------------|--------------|--------------|------------|------------|
| 25 | | 信息工程学院 | 12022****896 | 刘福瑞 | 计算机科学与技术 | |
| 26 | 励行书院 | 生命科学学院 | 12020****065 | 张思雨 | 生物学 | 博士 |
| 27 | | | 12022****004 | 高辉 | 生物学 | |
| 28 | | | 12022****005 | 郭引弟 | 生物学 | |
| 29 | | | 12022****051 | 王东 | 生物学 | |
| 30 | | | 12022****135 | 卜宁霞 | 畜牧学 | 博士 |
| 31 | | 12022****391 | 宋小雨 | 畜牧学 | | |
| 32 | | 食品科学与工程学院 | 12022****066 | 杨超 | 食品科学与工程 | |
| 35 | | 12022****128 | 顾瑞丹 | 水利工程 | | |
| 33 | | 土木与水利工程学院 | 12022****107 | 冯娜 | 水文学及水资源 | 博士 |
| 34 | | | 12022****103 | 康鑫睿 | 土木工程 | |
| 36 | 地理科学与规划学院 | 12022****981 | 何杉 | 地理学 | | |
| 37 | | 12022****985 | 刘园园 | 地理学 | | |
| 38 | 润泽书院 | 农学院 | 12022****387 | 杜化迎 | 农业昆虫与害虫防治 | |
| 39 | | 林业与草业学院 | 12022****149 | 王斌 | 草学 | 博士 |
| 40 | | | 12022****412 | 姜海鑫 | 草学 | |
| 41 | | 葡萄酒与园艺学院 | 12022****368 | 孙雨桐 | 园艺学 | |
| 42 | | 生态环境学院 | 12022****067 | 邵磊磊 | 生态学 | |
| 43 | 12022****070 | | 武荣杰 | 生态学 | | |
| 44 | 鼎新书院 | 机械工程学院 | 12022****246 | 余焯操 | 机械工程 | |
| 46 | | 化学化工学院 | 12022****797 | 慕海强 | 化学 | |
| 47 | | | 12022****830 | 陈云欢 | 化学工程与技术 | |
| 48 | | | 12022****839 | 严舒 | 化学工程与技术 | |
| 45 | | | 12022****074 | 张泽豪 | 水资源利用与化学化工 | 博士 |
| 49 | | | 材料与新能源学院 | 12022****866 | 李恒芮 | 微电子学与固体电子学 |

宁夏大学2019届校级优秀毕业研究生评审结果公示

发布人： 发布时间：2019-05-27 点击量： 3189

各单位：

根据《宁夏大学优秀毕业研究生评选办法》，经研究生个人申请，各培养单位评选、公示，研究生院审定，报主管校领导批准，决定拟推荐贾杰雯等55名研究生为宁夏大学2019届校级优秀毕业研究生，现予以公示。

公示时间：5月27日-5月31日。

公示期间，如公示对象有问题，可向学校纪检委或研究生院反映情况。

联系电话：

纪检委：2061977

研究生院：2061170

附件：宁夏大学2019届校级优秀毕业研究生评审结果

研

究生院

2019

年5月27日

附件【附件：宁夏大学2019届校级优秀毕业研究生评审结果.docx】

附件：宁夏大学 2019 届校级优秀毕业研究生评审结果

人文学院：

贾杰雯 王伟哲 任静

政法学院：

乔婧 崔红丽 刘思思

外国语学院：

何雪宁 谢亚明

经济管理学院：

胡西武(博士) 肖人瑞 陈雅馨

数学计算机学院：

包康博

信息工程学院：

靳彬锋 徐梦茹

物理电气信息学院：

马亚楠 朱小波 王喜志 郑宇晴 马欢

化学化工学院：

马晓慧 杨顺

生命科学学院：

杨益春 徐兆坤

资源环境学院：

王鹏

农学院：

王艳丽 李文学 白玲荣 哈蓉 马若霜 赵亚楠 李明雨

宁夏大学2018届校级优秀毕业研究生评审结果公示

发布人: 发布时间: 2018-06-05 点击量: 3110

各单位:

根据《宁夏大学优秀毕业研究生评选办法》，经研究生个人申请，各培养单位评选、公示，研究生院审定，决定拟推荐房盟盟等45名研究生为宁夏大学2018届校级优秀毕业研究生，现予以公示。

公示时间:6月4日-6月9日。

公示期间，如公示对象有问题，可向学校纪检委或研究生院反映情况。

联系电话:

纪检委: 2061977

研究生院: 2061170

附件: 宁夏大学2018届校级优秀毕业研究生评审结果

附件: 宁夏大学 2018 届校级优秀毕业研究生评审结果

农学院:

房盟盟 张会丽 刘馨 张蕊 芮文婧 周瑶

教育学院:

柳安娜 郭雨墨 丁玉芳

人文学院: |

闫慧颖 李超

政法学院:

高学丽 史晓芳 张琪

美术学院:

许婧

音乐学院:

马苗苗

体育学院:

杨雪

阿拉伯学院:

朱琳

回族研究院:

海涛

资源环境学院:

宁夏大学部门公文

研究生院 (2017) 14 号

宁夏大学 2017 届校级优秀毕业研究生评审

结果公示

各单位:

根据《宁夏大学优秀毕业研究生评选办法》，经研究生个人申请，各培养单位评选、公示，研究生院组织专家审定，报主管校领导批准，决定拟推荐高芳等 48 名研究生为宁夏大学 2017 届校级优秀毕业研究生，现予以公示。

公示时间：5 月 25 日-5 月 30 日。

公示期间，如公示对象有问题，可向学校纪检委或研究生院反映情况。

联系电话：纪 检 委： 2061977

研究生院： 2061170

附件：宁夏大学 2017 届校级优秀毕业研究生评审结果

研究生院
2017 年 5 月 25 日

附件：宁夏大学 2017 届校级优秀毕业研究生评审结果

人文学院：

高芳 薛正新 张蕾

政法学院：

虎雪梅 马植 王歌

外国语学院：

刘正 吴雨轩 王改梅

经济管理学院：

马银龙 吴敏 李胜连（博士）

数学统计学院：

李丽梅 杨晓佳

信息工程学院：

杜佳轩

物理与电子电气工程学院：

赵露 郭彦麟 白雪冰 席丽莹

化学化工学院：

黑晓霞 马玉磊 沈志远 张悦

生命科学学院：

姜中佳（博士）

资源环境学院：

韩文文

农学院：

祁娟霞 杨文婷 徐全智 魏超昆 朱志明 周静静

机械工程学院：

宁夏大学2015年度校级优秀毕业研究生评审结果公示

发布人: 综合科 发布时间: 2015-05-27 点击量: 20627

宁夏大学2015年度校级优秀毕业研究生评审结果公示

根据《宁夏大学优秀毕业研究生评选办法》，经研究生个人申请，各培养单位评选推荐，研究生院组织专家评审，报主管校领导批准，决定拟推荐赵军斌等42名研究生为宁夏大学2015年度校级优秀毕业研究生，现予以公示。

公示时间: 2015年5月27日~6月1日

联系电话:

纪检委: 2061117

研究生院: 2061170

附件: 宁夏大学2015年度校级优秀毕业研究生评审结果

研究生院

2015年5月27日

附件【[宁夏大学2015年度校级优秀毕业研究生评审结果.docx](#)】

附件:

宁夏大学2015年度校级优秀毕业研究生评审结果

人文学院:

赵军斌 杨文健

政法学院:

杨继成 强 虎

外国语学院:

王 蕾 侯 凤

经济管理学院:

田飞艳 马从礼 马 岚

数学计算机学院:

黄 洁 黑敏星

物理电气信息学院:

马天成 宋佳乾 刘 杰

化学化工学院:

冯 尧 张 瑶 毕相贤

生命科学学院:

徐鹏鑫 景红霞

资源环境学院:

郭永杰

农学院:

陈晶 赵琴 王智明 张同刚 韦峰 郭晓丹 刘宏久 孙晔

机械工程学院:

宁夏大学2014年校级优秀毕业研究生评审结果公示

发布人: 综合科 发布时间: 2014-06-04 点击量: 3659

宁夏大学2014年校级优秀毕业研究生评审结果公示

根据《宁夏大学优秀毕业研究生评选办法》的规定, 经各学院评选推荐, 学校优秀毕业研究生评审领导小组评审, 拟授予范明明等43名学生2014年“校级优秀毕业研究生”称号, 现予以公示。

公示时间: 2014年6月4日—6月7日

举报单位及电话:

纪检委 马维成 2061117 (内线6117)

研究生院 杨琼 2061170 (内线6017)

附件: 宁夏大学2014年校级优秀毕业研究生名单

研究生院
2014年6月4日

附件:

宁夏大学 2014 年校级优秀毕业研究生名单 (共 43 人)

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|-----|-----|-----|-----|-----|
| 范明明 | 杜华君 | 李茂强 | 闫文斗 | 张运河 |
| 薛文强 | 续小磊 | 任 韧 | 黄 鑫 | 黄彦珽 |
| 刘 姣 | 徐 丽 | 白君涛 | 杨萌萌 | 安 磊 |
| 苏文浩 | 施 明 | 候鹏霞 | 麻冬梅 | 陈 伟 |
| 仲俊涛 | 李冬冬 | 王娜娜 | 刘 飞 | 李淑君 |
| 刘 渊 | 史崇升 | 赵 宁 | 马成功 | 张夕芮 |
| 曲云云 | 陈小娜 | 王 晓 | 杨 静 | 王会贤 |
| 张冬梅 | 赵 姣 | 赵 笑 | 马 静 | 邓文韬 |
| 窦元运 | 高 霞 | 高新华 | | |

8. 研究生授权专利清单

表 10 研究生授权专利汇总表

| 序号 | 专利名称 | 专利权人 | 专利号 | 专利类型 | 取得时间 | 发明人 |
|----|---------------------------|------|-------------------------------|--------|------|-----------------------------------|
| 1 | 提升荒漠草原土壤质量的微生物修复方法 | 宁夏大学 | CN119817230A; CN119817230B | 国家发明专利 | 2025 | 马红彬; 周瑶; 李雯; 王国会; 沈艳; 姜海鑫; 刘超 |
| 2 | 提高植物抗旱性的基因工程方法 | 宁夏大学 | CN120230786A; CN120230786B | 国家发明专利 | 2025 | 伏兵哲; 王晶; 王星; 高雪芹; 郭帅奇 |
| 3 | 以下胚轴为外植体的无芒雀麦再生方法 | 宁夏大学 | CN117730781A; CN117730781B | 国家发明专利 | 2024 | 伏兵哲; 宋文学; 高雪芹; 王星; 王晶; 叶雨浓; 李小红 |
| 4 | 紫花苜蓿抗旱基因 MsERF1B 及其应用 | 宁夏大学 | CN118406692A; CN118406692B | 国家发明专利 | 2024 | 李淑霞; 郭帅奇; 伏兵哲; 王晓彤; 李小红; 张金青; 高雪芹 |
| 5 | 一种紫花苜蓿 IPT 基因在调控植物耐旱性中的应用 | 宁夏大学 | CN116426496A; CN116426496B | 国家发明专利 | 2023 | 马巧利; 麻冬梅; 兰剑; 胡海英; 邓建强; 陈云鑫; 王毓 |
| 6 | 农用基质的制作方法 | 宁夏大学 | CN116671414A; CN116671414B | 国家发明专利 | 2023 | 顾欣; 王新谱; 柴晓娟; 马亚兰 |
| 7 | 有机废弃物的堆肥发酵方法及装置 | 宁夏大学 | CN116768655A; CN116768655B | 国家发明专利 | 2023 | 顾欣; 王新谱; 杨娜; 贾慧 |
| 8 | 种苗自动筛选装置 | 宁夏大学 | CN114682509A; CN114682509B | 国家发明专利 | 2022 | 刘晓霞; 麻冬梅; 胡杨; 马巧利 |

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|----|---------------------------------|--------------|-------------------------------|--------|------|--|
| 9 | 具有 MICP 功能纺锤形赖氨酸芽孢杆菌在尾矿覆绿修复中的应用 | 宁夏大学; 浙江工业大学 | CN112974512A; CN112974512B | 国家发明专利 | 2021 | 岳健敏; 宋乃平; 孟晨; 谢莉; 马昀; 潘响亮; 张道勇 |
| 10 | 一种测定温带荒漠草原植物幼苗定植水分阈值方法 | 宁夏大学 | CN113742947A; CN113742947B | 国家发明专利 | 2021 | 王红梅; 张振杰; 于露 |
| 11 | 一种草方格造林对植被和土壤特征影响的研究方法 | 宁夏大学 | CN111034527A; CN111034527B | 国家发明专利 | 2020 | 邱开阳; 李海泉; 谢应忠; 王玉国; 马红彬; 李海超; 刘王锁; 赵朋波; 虎学琴; 孟文芬 |
| 12 | 一种新型孢子鞭毛染色液以及染色观察方法 | 宁夏大学 | CN110628865A; CN110628865B | 国家发明专利 | 2019 | 史娟; 姜粉霞; 马新 |
| 13 | 农作物籽粒分离设备及其控制方法 | 宁夏大学 | CN108993927A; CN108993927B | 国家发明专利 | 2018 | 贾彪; 刘志; 贺正; 温新惠; 苗芳芳; 刘永刚 |
| 14 | 一种无人机多仓位飞播吊仓 | 宁夏大学 | CN106275440A; CN106275440B | 国家发明专利 | 2017 | 王磊; 杨新国; 宋乃平; 陈林; 柴永青; 王兴 |
| 15 | 永久装片的封片方法及封片操作装置 | 宁夏大学 | CN106840830A; CN106840830B | 国家发明专利 | 2017 | 顾欣; 高飞; 王新谱 |
| 16 | 多功能碱化土壤调理剂 | 宁夏大学 | CN105272744A; CN105272744B | 国家发明专利 | 2016 | 张俊华; 孙兆军; 许兴; 黄菊莹; 毕江涛; 陈卫民; 秦萍 |
| 17 | 一种基于无人机的精准飞播系统 | 宁夏大学 | CN106218890A; CN106218890B | 国家发明专利 | 2016 | 王磊; 宋乃平; 杨新国; 柴永青; 陈林; 王兴 |
| 18 | 一种高粘质龟裂碱土调理剂 | 宁夏大学 | CN103265956A; CN103265956B | 国家发明专利 | 2013 | 张俊华; 许兴; 孙兆军; 黄菊莹; 毕江涛; 陈卫民; 秦萍 |
| 19 | 一种光伏板收集雨水恢复植被生态装置 | 宁夏大学 | CN223745435U | 实用新型专利 | 2026 | 杨小会; 张萍; 赵元; 夏天波; 麻金罗; 张开放 |

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|----|-----------------------|-----------------------|--------------|--------|------|-------------------------------------|
| 20 | 一种具有提升地温的试验小区防药剂伤害的装置 | 宁夏回族自治区草原工作站; 宁夏大学 | CN222639246U | 实用新型专利 | 2025 | 周静静; 沈艳; 王顺霞; 王蕾; 张娜; 马泽; 韩宇 |
| 21 | 一种土壤碳排放监测用取样装置 | 宁夏大学 | CN222671465U | 实用新型专利 | 2025 | 王玉霞; 杜灵通; 薛斌; 房磊 |
| 22 | 一种可提高监测效果的碳汇在线监测组件 | 宁夏大学 | CN222669519U | 实用新型专利 | 2025 | 王玉霞; 杜灵通; 薛斌; 房磊 |
| 23 | 一种针对温室气体的产品碳足迹测量装置 | 宁夏大学 | CN222838054U | 实用新型专利 | 2025 | 吴宏玥; 罗霄; 杜灵通; 薛斌; 施光耀 |
| 24 | 一种新型土壤有机碳检测装置 | 宁夏大学 | CN222913650U | 实用新型专利 | 2025 | 吴宏玥; 薛斌; 苏丽; 杜灵通 |
| 25 | 一种小型野外标记牌 | 宁夏大学; 宁夏回族自治区草原工作站 | CN223308722U | 实用新型专利 | 2025 | 周瑶; 胡毅飞; 龚昕; 马婷婷; 李锦臻; 马红彬 |
| 26 | 一种土壤呼吸环的简易型人力安装装置 | 宁夏大学 | CN223501006U | 实用新型专利 | 2025 | 黄飞; 田丛嫣; 李志刚 |
| 27 | 土壤种子雨采集器 | 宁夏大学 | CN220342901U | 实用新型专利 | 2024 | 王国会; 马红彬; 沈艳; 梁鸿飞; 杨彦东; 李雯 |
| 28 | 一种盐碱地用滴灌装置 | 宁夏大学; 宁夏千叶青农业科技发展有限公司 | CN220528583U | 实用新型专利 | 2024 | 麻冬梅; 刘晓霞; 马巧利; 朱林; 毛桂莲; 吕文; 王静; 刘健康 |
| 29 | 一种便携式草地盖度测量装置 | 宁夏大学; 宁夏回族自治区草原工作站 | CN220602418U | 实用新型专利 | 2024 | 胡毅飞; 周瑶; 马红彬; 周静静; 王顺霞 |

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| 30 | 一种凋落物收集装置 | 宁夏大学; 宁夏回族自治区草原工作站 | CN220713855U | 实用新型专利 | 2024 | 胡毅飞; 周瑶; 马红彬; 周静静; 王顺霞 |
| 31 | 一种生态恢复植被种植机构 | 宁夏大学; 宁夏回族自治区哈巴湖国家级自然保护区管理局 | CN221449076U | 实用新型专利 | 2024 | 夏天波; 张萍; 乌浩; 牛向雯; 赵元; 杨小会; 黄祥祥 |
| 32 | 移动式放牧用饮水补饲装置 | 宁夏大学 | CN222054228U | 实用新型专利 | 2024 | 杨鑫; 范芮甫; 敖道; 陈灵杰 |
| 33 | 一种用于土壤盐分含量监测的便携预警装置 | 宁夏大学 | CN218331552U | 实用新型专利 | 2023 | 潘海珠; 王磊; 岳健敏 |
| 34 | 一种用于昆虫诱集捕获装置 | 宁夏大学 | CN219478997U | 实用新型专利 | 2023 | 顾沛雯; 赵楠 |
| 35 | 一种凋落物分解袋 | 宁夏大学 | CN219512191U | 实用新型专利 | 2023 | 邱开阳; 鲍平安; 张硕; 张丁丁; 谢应忠 |
| 36 | 一种实时在线检测土壤中二氧化碳浓度的检测装置 | 宁夏大学 | CN220154376U | 实用新型专利 | 2023 | 卜晓燕; 王佳蕊; 王潇敏; 李小伟; 刘媛媛; 司惠宁; 吴颖; 沈娟; 李彦; 史舸 |
| 37 | 一种测定植被点格局的工具 | 宁夏大学 | CN218270766U | 实用新型专利 | | 王星; 许冬梅; 史佳梅; 刘万龙; 许爱云; 撒春宁; 李永康; 宋珂辰; 杨越; 田小龙; 刘梦鸽 |
| 38 | 一种简便高效的真菌孢子与菌丝体分离装置 | 宁夏大学 | CN220846107U | 实用新型专利 | 2023 | 顾沛雯; 王文凯; 鞠明岫; 赵楠 |
| 39 | 一种培育深根抗旱苗的育苗器 | 宁夏大学 | CN216164151U | 实用新型专利 | 2022 | 倪细炉; 赵宏亮; 郭军成; 李志刚; 胡杨; 侯晖; 谢沁宓; 庞丹波; 陈林 |
| 40 | 一种从土壤中筛选丛枝菌根真菌孢子的装置 | 宁夏大学 | CN216360480U | 实用新型专利 | 2022 | 顾沛雯; 李玲; 王雯雯; 闫思远; 金靖; 黄强; 王若彤; 郭苗苗 |

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|----|--------------------|---------------|--------------|--------|------|------------------------------------|
| 41 | 一种封闭式奶牛粪快速脱盐发酵装置 | 宁夏大学 | CN216472775U | 实用新型专利 | 2022 | 王锐; 高明; 蒋鹏; 孙权 |
| 42 | 一种用于植物根中丛枝菌根真菌染色装置 | 宁夏大学 | CN216525093U | 实用新型专利 | 2022 | 顾沛雯; 李玲; 徐豪; 张强强; 李金; 杨花; 鞠明釉; 马云妮 |
| 43 | 一种碳基全营养液体水溶肥制备设备 | 宁夏大学 | CN216630507U | 实用新型专利 | 2022 | 王锐; 蒋鹏; 孙权 |
| 44 | 一种青贮玉米氮素快速监测装置 | 宁夏大学 | CN216669814U | 实用新型专利 | 2022 | 蒋鹏; 孙权; 王锐 |
| 45 | 一种奶牛粪快速酶解发酵装置 | 宁夏大学 | CN216863947U | 实用新型专利 | 2022 | 孙权; 蒋鹏; 王锐 |
| 46 | 一种粪污新型发酵仓 | 宁夏大学 | CN216890693U | 实用新型专利 | 2022 | 孙权; 蒋鹏; 王锐 |
| 47 | 具有快速更换功能的电动根钻 | 宁夏大学 | CN216978437U | 实用新型专利 | 2022 | 邹瑾; 王晓佳; 曹兵; 刘佳嘉; 张萍; 卞莹莹 |
| 48 | 一种青贮玉米+E72+F76 | 宁夏大学 | CN217127398U | 实用新型专利 | 2022 | 蒋鹏; 孙权; 王锐 |
| 49 | 一种采集不同土层土壤种子库样品的装置 | 宁夏大学 | CN217384790U | 实用新型专利 | 2022 | 邱开阳; 何毅; 张丁丁; 李志刚 |
| 50 | 一种全断面便携式集沙仪 | 宁夏大学 | CN217687799U | 实用新型专利 | 2022 | 李国强; 沈艳; 程燕明; 孙斌; 仲亮; 霍新茹; 侯腾思 |
| 51 | 一种多功能可测温接种针 | 宁夏大学 | CN217733136U | 实用新型专利 | 2022 | 顾沛雯; 蒋朝阳; 于泽洋 |
| 52 | 一种用于锥形瓶的可拆卸式防烫手装置 | 宁夏大学 | CN217940238U | 实用新型专利 | 2022 | 顾沛雯; 鞠明釉; 蒋朝阳 |
| 53 | 一种种苗自动筛选装置 | 宁夏大学 | CN217963616U | 实用新型专利 | 2022 | 刘晓霞; 麻冬梅; 胡杨; 马巧利 |
| 54 | 一种固沙笼提升装置 | 宁夏大学; 中卫市治沙林场 | CN212639780U | 实用新型专利 | 2021 | 屈建军; 孟晨; 宋乃平; 杜灵通; 钟艳霞; 唐希明 |
| 55 | 便携式孢子采集器 | 宁夏大学 | CN212925024U | 实用新型专利 | 2021 | 赵龙冬; 王新谱 |

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|----|-------------------------|-------------------------------|--------------|--------|------|-----------------------------|
| 56 | 一种羔羊消化代谢笼 | 宁夏大学 | CN212993696U | 实用新型专利 | 2021 | 张桂杰; 李荫柱; 钟锐; 刘博; 寇启芳 |
| 57 | 一种多元复合微生物肥快速扩繁装置 | 宁夏大学 | CN213708176U | 实用新型专利 | 2021 | 蒋鹏; 王锐; 孙权 |
| 58 | 高效作业的深层土壤采集器 | 宁夏农林科学院 农业经济与信息技术研究所; 宁夏大学 | CN213714778U | 实用新型专利 | 2021 | 周瑶; 马红彬; 马菁; 陆琪; 刘进娣; 赵永升 |
| 59 | 一种高通过性菌剂喷施装置 | 宁夏大学 | CN213792411U | 实用新型专利 | 2021 | 孟晨; 岳健敏; 宋乃平; 屈建军 |
| 60 | 一种不锈钢取土装置 | 宁夏大学 | CN214277455U | 实用新型专利 | 2021 | 麻冬梅; 马巧利; 刘晓霞; 朱林; 马丽红 |
| 61 | 一种水培牧草培养装置 | 宁夏大学 | CN214282632U | 实用新型专利 | 2021 | 麻冬梅; 朱林; 马丽红; 马巧利; 刘晓霞 |
| 62 | 一种箱式无土栽培牧草用装置 | 宁夏大学 | CN214593398U | 实用新型专利 | 2021 | 麻冬梅; 刘晓霞; 朱林; 马丽红; 马巧利 |
| 63 | 一种便携式施肥机 | 宁夏大学 | CN214628079U | 实用新型专利 | 2021 | 麻冬梅; 朱林; 刘晓霞; 刘建康; 马巧利; 马丽红 |
| 64 | 一种稷子水培装置 | 宁夏大学 | CN214628819U | 实用新型专利 | 2021 | 麻冬梅; 刘晓霞; 朱林; 马丽红; 马巧利 |
| 65 | 一种田间便携式除草装置 | 宁夏大学 | CN214628135U | 实用新型专利 | 2021 | 麻冬梅; 马巧利; 刘晓霞; 朱林; 马丽红 |
| 66 | 一种播种用点播机 | 宁夏大学 | CN214628006U | 实用新型专利 | 2021 | 麻冬梅; 刘晓霞; 朱林; 刘建康; 马巧利; 马丽红 |
| 67 | 一种移动式牧草培养装置 | 宁夏大学 | CN214708963U | 实用新型专利 | 2021 | 麻冬梅; 朱林; 马丽红; 马巧利; 刘晓霞 |
| 68 | 一种基于无人机影像的农作物受灾倒伏面积定量装置 | 宁夏大学 | CN214839405U | 实用新型专利 | 2021 | 王磊; 冯克鹏; 高龙 |
| 69 | 拮抗内生真菌挥发物质筛选装置 | 宁夏大学 | CN214881529U | 实用新型专利 | 2021 | 顾沛雯; 李金; 鞠明岫; 陈思杰; 闫思远; 关晓庆 |

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|----|-------------------|----------------------------|--------------|--------|------|--|
| 70 | 一种汽油动力式土壤采样器 | 宁夏大学 | CN214952270U | 实用新型专利 | 2021 | 李志刚; 徐艳茹; 倪细炉; 郭宏仙; 邱开阳 |
| 71 | 昆虫诱集灯 | 宁夏大学; 宁夏回族自治区罗山国家级自然保护区管理局 | CN215012886U | 实用新型专利 | 2021 | 赵鹏; 刘超; 杨慧; 李涛; 马廷贵; 王新谱; 田会刚; 周静; 熊泽钦; 江瑞涛; 施兴文; 白天宇; 闫旭文; 候晶东; 王晓霞 |
| 72 | 一种饲用燕麦水培装置 | 宁夏大学 | CN215188649U | 实用新型专利 | 2021 | 麻冬梅; 马丽红; 马巧利; 刘晓霞; 朱林 |
| 73 | 昆虫诱集装置 | 宁夏大学 | CN215302507U | 实用新型专利 | 2021 | 陈云康; 白明; 王继飞; 王新谱; 王涛; 韩永金; 路金博; 韩勤扬; 申昊 |
| 74 | 一种组合式多功能助力农事机 | 宁夏大学 | CN210470209U | 实用新型专利 | 2020 | 伏兵哲; 常巍; 高雪芹; 兰剑; 沙柏平; 李雪; 张则宇; 周燕飞 |
| 75 | 霉变玉米识别与分拣的辅助装置 | 宁夏大学 | CN210585958U | 实用新型专利 | 2020 | 贾彪; 温新惠; 钱瑾 |
| 76 | 一种可移动式拱形网笼式阻沙障 | 宁夏大学 | CN210684652U | 实用新型专利 | 2020 | 屈建军; 宋乃平; 杜灵通; 孟晨 |
| 77 | 昆虫捕捉器 | 宁夏大学 | CN210841253U | 实用新型专利 | 2020 | 冯永宏; 刘任涛; 王文帆; 郭志霞; 蒋嘉瑜; 白燕娇 |
| 78 | 一种适根系分层变流量地下渗灌溉水器 | 宁夏大学; 西北农林科技大学 | CN211241149U | 实用新型专利 | 2020 | 张光弟; 蔡耀辉; 张林; 杜一超; 张彦慧; 李欣; 贾彪 |
| 79 | 智能可变量地下渗灌装置 | 宁夏大学; 宁夏华举科技发展有限公司 | CN211532194U | 实用新型专利 | 2020 | 张光弟; 尹清雨; 鲍子云; 俞晓艳; 贾彪 |
| 80 | 一种野外种植地块增减雨实验控制装置 | 宁夏大学 | CN212035160U | 实用新型专利 | 2020 | 张昊; 李建平; 罗叙; 张茹 |

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|----|------------------------|------|--------------|--------|------|--|
| 81 | 一种盐碱地区乔木高成活率隔盐装置 | 宁夏大学 | CN212087302U | 实用新型专利 | 2020 | 兰剑; 常巍; 伏兵哲; 张则宇; 王晶; 于金田; 刘麟; 米世明; 王欣盼; 杨雨琦 |
| 82 | 人工土壤样品采集土钻 | 宁夏大学 | CN212206638U | 实用新型专利 | 2020 | 吴鹏年; 王艳丽; 李培富; 贾彪; 东文飞 |
| 83 | 用于制作斜面培养基的试管支撑装置 | 宁夏大学 | CN208465960U | 实用新型专利 | 2019 | 顾欣; 王新谱; 刘艳薇; 刘国军; 刘文辉 |
| 84 | 一种便于拆洗的昆虫饲养装置 | 宁夏大学 | CN208509902U | 实用新型专利 | 2019 | 赵宇晨; 王新谱; 顾欣 |
| 85 | 用于旱区复杂环境下的草地蒸散监测系统 | 宁夏大学 | CN208833283U | 实用新型专利 | 2019 | 杜灵通; 孟晨; 刘可; 梁志奇; 官菲; 丹杨; 王乐; 郑琪琪; 马龙龙 |
| 86 | 农作物籽粒分离设备及系统 | 宁夏大学 | CN208976293U | 实用新型专利 | 2019 | 贾彪; 刘志; 贺正; 温新惠; 苗芳芳; 刘永刚 |
| 87 | 一种土壤团聚体稳定性的测定装置 | 宁夏大学 | CN209784112U | 实用新型专利 | 2019 | 王誉陶; 李建平; 张娟; 张翼; 井乐 |
| 88 | 一种测定深层土壤容重的取样器 | 宁夏大学 | CN209783949U | 实用新型专利 | 2019 | 张娟; 李建平; 张翼; 井乐; 王誉陶 |
| 89 | 泵前施肥装置 | 宁夏大学 | CN207639173U | 实用新型专利 | 2018 | 王锐; 孙权; 马婷慧; 王竞; 张筠筠 |
| 90 | 灌溉用增氧器 | 宁夏大学 | CN208144056U | 实用新型专利 | 2018 | 杨蔚景; 刘瑞亮; 段永锋; 马登龙; 赵思明; 曹兵 |
| 91 | 一种无人机多仓位草原飞播吊仓 | 宁夏大学 | CN206031788U | 实用新型专利 | 2017 | 王磊; 陈林; 柴永青; 宋乃平; 杨新国; 王兴 |
| 92 | 一种手动和自动切换操作的土壤动物分离改良装置 | 宁夏大学 | CN206118933U | 实用新型专利 | 2017 | 刘任涛; 赵娟; 郝伟华; 刘佳楠 |
| 93 | 一种方便操作的土壤动物分离改良装置 | 宁夏大学 | CN206118934U | 实用新型专利 | 2017 | 刘任涛; 郝伟华; 刘佳楠; 赵娟 |

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|-----|---------------------------|------|---------------|--------|------|---|
| 94 | 残地膜收集装置以及耕地装置 | 宁夏大学 | CN206698611U | 实用新型专利 | 2017 | 丁文捷; 张兵兵; 杨术明; 白琼; 于建伟; 于彦平; 杨海军; 李明; 岳群; 王磊; 郝晓明 |
| 95 | 水分传导式精准型沙漠植苗工具 | 宁夏大学 | CN206713646U | 实用新型专利 | 2017 | 刘任涛; 唐希明; 尚梦玉; 郑耀强 |
| 96 | 新型沙漠用播种装置 | 宁夏大学 | CN206713354U | 实用新型专利 | 2017 | 刘任涛; 尚梦玉; 郑耀强 |
| 97 | 具有野外增减雨和活动围栏作用的组合试验装置 | 宁夏大学 | CN206772970U | 实用新型专利 | 2017 | 陈林; 宋乃平; 杨新国; 王磊; 李月飞; 苏莹 |
| 98 | 基于机器视觉的农作物数字图像采集与生长监测装备 | 宁夏大学 | CN206772841U | 实用新型专利 | 2017 | 贾彪; 钱瑾; 苗芳芳; 靳嘉雯; 刘永刚; 李建平; 田佳 |
| 99 | 草坪自动变量灌溉控制装置 | 宁夏大学 | CN201821720U | 实用新型专利 | 2011 | 杨术明; 杨树川; 曹兵; 余永卫; 马伏龙; 丁璞 |
| 100 | 打药机延展臂 | 宁夏大学 | CN309536211S | 外观专利 | 2025 | 孙波; 邓建强; 刘宇航; 冯帆; 白春艳; 金佳奇; 魏向宇; 马沙燕 |
| 101 | 基于生态系统净初级生产力的区域碳汇量计算程序 | 宁夏大学 | 2023SR0955383 | 软件著作权、 | 2023 | 杜灵通,吴宏玥,潘海珠 |
| 102 | 标准气象数据读取及潜在蒸散计算程序 | 宁夏大学 | 2023SR1227316 | 软件著作权、 | 2023 | 吴宏玥,杜灵通,易志远 |
| 103 | 微型蒸散监测装置自动控制与数据处理软件 | 宁夏大学 | 2023SR1247788 | 软件著作权、 | 2023 | 梁志奇,杜灵通,吴宏玥 |
| 104 | MODIS 地表蒸散多时间分辨率合成及时空分析程序 | 宁夏大学 | 2023SR1367653 | 软件著作权、 | 2023 | 吴宏玥,杜灵通 |

部分专利证书



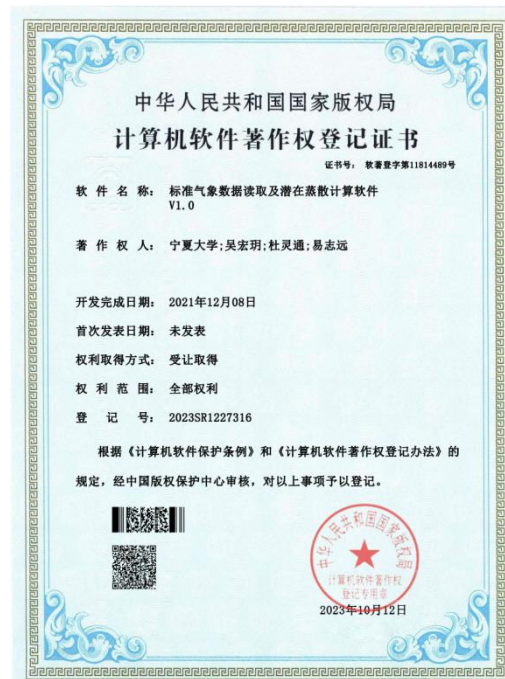












9. 研究生发表高水平论文情况

表 11 研究生发表高水平论文（部分代表性清单）

| 序号 | 学生姓名 | 论文名称 | 期刊名称 | 发表年份 | 中科院分区 |
|----|------|--|---|------|-------|
| 1 | 白春艳 | Selection basis of forage sorghum production system: Assessment of the effects of cutting period and irrigation amount on productivity and resource efficiency | Agricultural Water Management | 2026 | 1 |
| 2 | 廖家乐 | Enhanced valorization of Korshinsk peashrub(<i>Caragana korshinskii</i> Kom.) as ruminant feed via the selective ligninolysis by the white rot fungus <i>Dichomitussqualens</i> | Journal of Animal Science and Biotechnology | 2026 | 1 |
| 3 | 王博 | Short-term litter manipulation drives soil nutrient accumulation via cascading effects of soil moisture, microbial community, and enzyme activity in a desert steppe | Catena | 2026 | 1 |
| 4 | 王斌 | Selection basis of agricultural production systems: Assessment of the effects of climatic regions and planting patterns on forage production and eco-efficiency | Field Crops Research | 2025 | 1 |
| 5 | 李冰 | Precipitation change outweighs nitrogen addition in driving soil respiration of a saline-alkaline desert steppe | Catena | 2025 | 1 |
| 6 | 赵亚楠 | Coupling of soil carbon and nitrogen during the anthropogenic transition from desert grassland to shrubland | Catena | 2025 | 1 |
| 7 | 罗叙 | Plant species richness increases the relationship between soil microbial and extracellular enzyme activities and enhances soil fertility | Ecological Indicators | 2025 | 1 |
| 8 | 王博 | Dead-fallen shrubs improve soil quality and promote herb seedling settlement in an arid sandy land of northern China. | Geoderma | 2025 | 1 |
| 9 | 史金红 | SynCom-Mediated Spatiotemporal Oxygen Control Enhances Lignocellulose Degradation and Nutrient Preservation | ACS Sustainable Chemistry & | 2025 | 1 |

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| | | | Engineering | | |
| 10 | 齐波毅 | Research on the mechanism of Na ⁺ promoting the degradation of lignocellulose in salt-alkali alfalfa silage | Industrial Crops & Products | 2025 | 1 |
| 11 | 岳奕帆 | Relationships between vegetation indices and surface reflectance: Implications for detecting and monitoring sandification in arid regions | Ecological Indicators | 2025 | 1 |
| 12 | 刘卓 | Moderate time grazing in the warm season maintained the diversity and complexity of soil microorganisms by regulating nutrient cycling and decomposition function | Functional Ecology | 2025 | 1 |
| 13 | 王斌 | Optimizing nitrogen application rates to maximize productivity while reducing environmental risk by regulating nitrogen and water utilization in mixed cropping systems | Agricultural Water Management | 2024 | 1 |
| 14 | 张雅君 | Supplementation of Lycium barbarum residue increases the growth rate of Tan sheep by enhancing their feed intake and regulating their rumen microbiome and metabolome | Journal of Integrative Agriculture | 2024 | 1 |
| 15 | 张雅君 | Supplementation of Lycium barbarum residue increases the growth | Journal of Integrative Agriculture | 2024 | 1 |
| 16 | 廖家乐 | Transcriptomics and non-targeted metabolomics provide mechanistic insights into the improvement of the growth performance and meat quality of lambs supplemented with fermented Lycium barbarum residues | Animal Nutrition | 2024 | 1 |
| 17 | 杨晨阳 | Selective Co ²⁺ recovery using MgNa ₃ H(PO ₄) ₂ adsorbent from water | Chemical Engineering Journal | 2024 | 1 |
| 18 | 马泰永 | Development of forest aboveground biomass estimation, its problems and future solutions: A review | Ecological Indicators | 2024 | 1 |
| 19 | 杨壹 | Geographical, climatic, and soil factors control the altitudinal pattern of rhizosphere microbial diversity and its driving effect on root zone soil multifunctionality in mountain ecosystems | Science of the Total Environment | 2023 | 1 |
| 20 | 刘静 | Contributions of plant litter to soil microbial activity improvement and soil nutrient enhancement along with herb and shrub colonization expansions in an arid | Catena | 2023 | 1 |

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| | | sandy land | | | |
| 21 | 赵亚楠 | Spatial estimation of soil carbon and nitrogen in a grassland-shrubland transition | Ecological Indicators | 2023 | 1 |
| 22 | 周瑶 | Different responses of leaf and root economics spectrum to grazing time at the community level in desert steppe, China | Science of the Total Environment | 2023 | 1 |
| 23 | 杨晨阳 | Dittmarite-type magnesium phosphates for highly efficient capture of Cs ⁺ | Journal of Hazardous Materials | 2023 | 1 |
| 24 | 杨晨阳 | Leaching of structural Ca ²⁺ ions from a chalcogenide adsorbent by H ⁺ lifts Cs(I) uptake | Journal of Hazardous Materials | 2023 | 1 |
| 25 | 冯帆 | Dosing with pyrite significantly increases anammox performance: Its role in the electron transfer enhancement and the functions of the Fe-N-S cycle | Water Research | 2023 | 1 |
| 26 | 冯帆 | Quantification of enhanced nitrogen removal pathways of pyrite interaction with anammox sludge system | Chemical Engineering Journal | 2023 | 1 |
| 27 | 顾伯健 | Is livestock grazing compatible with green peafowl (<i>Pavo muticus</i>) conservation? Potential chance of peafowl-human coexistence | Biological Conservation | 2022 | 1 |
| 28 | 吴梦瑶 | Chemical composition of soil organic carbon and aggregate stability along an elevation gradient in Helan Mountains, Northwest China | Ecological Indicators | 2021 | 1 |
| 29 | 杨晨阳 | Rapid and selective removal of Cs ⁺ from water by layered potassium antimony thioantimonate | Journal of Hazardous Materials | 2021 | 1 |
| 30 | 冯帆 | Hydroxylamine addition enhances fast recovery of anammox activity suffering Cr(VI) inhibition | Bioresourc e Technolog y | 2021 | 1 |
| 31 | 周瑶 | Assessment of soil quality indexes for different land use | Ecological Indicators | 2020 | 1 |
| 32 | 黄飞 | Solar-tracking photovoltaic systems enhance soil carbon accumulation in desert steppe through microclimate-mediated changes in vegetation and microbial communities | Applied Soil Ecology | 2026 | 2 |
| 33 | 罗叙 | Plant species richness enhances aboveground primary productivity via net biodiversity effects and bacterial community interactions | Applied soil ecology | 2025 | 2 |

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| 34 | 韩翠 | Microbial diversity outweighs plant diversity in mediating the response of ecosystem multifunctionality to altered precipitation in a desert steppe | Plant and soil | 2025 | 2 |
| 35 | 王博 | Dead-fallen shrubs exhibit beneficial effects in enhancing soil microbial activity and soil fertility in arid sandy land restoration. | Journal of Environmental Management | 2025 | 2 |
| 36 | 蔺雄奎 | The impacts of shrub branch shelter and nitrogen addition on soil microbial activity and plant litter decomposition in a desert steppe. | Applied Soil Ecology | 2025 | 2 |
| 37 | 李志刚 | Flooding-driven gravel encroachment reshapes plant community structure and reduces species spatial stability in an arid alluvial fan of China. | Plant and Soil | 2025 | 2 |
| 38 | 李燕 | Adaptation strategies of the soil microbial community to stoichiometric imbalances induced by grassland management measures in the desert steppe of Northwest China | Journal of Environmental Management | 2025 | 2 |
| 39 | 王晶 | Integrated transcriptomic and metabolomic analyses revealed that AmASMT positively regulates drought tolerance in <i>Agropyron mongolicum</i> by modulating melatonin biosynthesis | PLANT PHYSIOLOGY AND BIOCHEMISTRY | 2025 | 2 |
| 40 | 蒋鹏 | Response of maize growth and soil biological characteristics to planting density under fertigation in a semi-arid region | International Journal of Agricultural And Biological Engineering | 2024 | 2 |
| 41 | 马宏秀 | Effects of nitrogen fertilization combined with subsurface irrigation on alfalfa yield, water and nitrogen use efficiency, quality, and economic benefits | Frontiers in Plant Science | 2024 | 2 |
| 42 | 宋鲜梅 | Feeding behavior and life-history parameters of <i>Therioaphis trifolii</i> (Hemiptera: Aphididae) on 2 alfalfa cultivars | Journal of Economic Entomology | 2024 | 2 |
| 43 | 周瑶 | Different responses of leaf and root economics spectrum to grazing time at the community level in desert steppe, China | Science of the Total Environment | 2024 | 2 |
| 44 | 周瑶 | Extending grazing time during the warm season can reduce P limitation and increase the N cycling rate in arid desert | Science of the Total Environment | 2024 | 2 |

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| | | steppes | nt | | |
| 45 | 张会丽 | Heterotrimeric G protein signaling in plant biotic and abiotic stress response | Plant Biology | 2021 | 2 |
| 46 | 张振杰 | Vegetation drives soil microbial metabolic limitation through modifications of soil properties and microbial biomass during desert grassland-shrubland state anthropogenic transition | Applied Soil Ecology | 2024 | 2 |
| 47 | 张金青 | Seed yield as a function of cytokinin-regulated gene expression in wild Kentucky bluegrass (<i>Poa pratensis</i>) | BMC PLANT BIOLOGY | 2024 | 2 |
| 48 | 马巧利 | Comparative metabolomic analysis of the metabolism | Environmental and Experimental Botany | 2021 | 2 |
| 49 | 李雯 | Effects of warming seasonal rotational grazing on plant communities' structure and diversity in desert steppe | Ecology and Evolution | 2023 | 2 |
| 50 | 刘卓 | Grazing period management affects the accumulation of plant functional groups, and soil nutrient pools and regulates stoichiometry in the desert steppe of Northwest China | Journal of Environmental Management | 2024 | 2 |
| 51 | 黄飞 | 灌枝覆盖对宁夏荒漠草地土壤呼吸的影响 | 生态学报 | 2025 | CSCD |
| 52 | 张译尹 | 苜蓿种子田间作小黑麦对饲草产量、水分利用及苜蓿种子产量的影响 | 草业学报 | 2025 | CSCD |
| 53 | 雍嘉仪 | 干旱及复水对河北木蓝生物量分配与渗透调节特征的影响 | 草业学报 | 2025 | CSCD |
| 54 | 邓文辉 | 降水变化条件下荒漠草原优势植物根际微生物群落结构和多样性特征研究 | 草业学报 | 2025 | CSCD |
| 55 | 马江萍 | 饲用高粱与拉巴豆混播对种间关系及草地生产力的影响 | 草业学报 | 2025 | CSCD |
| 56 | 王斌 | 施氮对饲用高粱/拉巴豆混播草地生产性能和氮肥贡献率的影响 | 草业学报 | 2025 | CSCD |
| 57 | 王腾飞 | 引黄灌区复种饲用燕麦种植模式产量、品质及经济效益分析 | 草业学报 | 2025 | CSCD |
| 58 | 王腾飞 | 青贮玉米-饲用高粱间作系统生产力对行比配置的响应 | 中国生态农业 | 2025 | CSCD |
| 59 | 肖爱萍 | 氮磷钾配施对长芒草种子生产性能和发芽特性的影响 | 草业科学 | 2025 | CSCD |
| 60 | 李佳旺 | 氮磷钾肥配施对宁夏雨养农区饲用燕麦生产性能及营养价值的影响 | 草业科学 | 2025 | CSCD |

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| 61 | 张译尹 | 青贮玉米 拉巴豆间作系统产量优势对空间配置的响应 | 作物学报 | 2025 | CSCD |
| 62 | 张译尹 | 饲用高粱/拉巴豆混播模式下施氮量对草地生产力和能量利用效率的影响 | 草业学报 | 2025 | CSCD |
| 63 | 唐致云 | 新种苦豆子无毛毛壳菌 <i>Achaetomium sophora</i> HY17 产槐定碱发酵条件优化 | 草业学报 | 2025 | CSCD |
| 64 | 张译尹 | 盐胁迫对不同种质小黑麦幼苗水分利用效率和渗透调节的影响 | 草业学报 | 2024 | CSCD |
| 65 | 张译尹 | NaCl 胁迫条件下 8 份小黑麦水分利用与光合特性的比较与评价 | 草业科学 | 2024 | CSCD |
| 66 | 陈云鑫 | 66 个紫花苜蓿品种无性系苗期抗旱性评价 | 草业科学 | 2024 | CSCD |
| 67 | 张硕 | 贺兰山不同海拔优势植物细根—根际土壤生态化学计量特征 | 草业科学 | 2024 | CSCD |
| 68 | 姜海鑫 | 不同放牧时间对荒漠草原土壤颗粒组成及分形维数的影响 | 草业学报 | 2024 | CSCD |
| 69 | 常怡然 | 荒漠草原不同自然种群蒙古冰草生物量和养分权衡特征 | 草业学报 | 2024 | CSCD |
| 70 | 骆欣怡 | 碳、氮、钾添加对荒漠草原凋落物分解特征的影响 | 草业学报 | 2024 | CSCD |
| 71 | 赵亚楠 | 荒漠草原灌丛转变土壤水分亏缺空间格局现状及影响因素 | 草业学报 | 2024 | CSCD |
| 72 | 冯琴 | 宁夏引黄灌区燕麦与箭筈豌豆的混播效果研究 | 草业学报 | 2024 | CSCD |
| 73 | 于双 | 灵武白芨滩柠条固沙林演替过程中林下草本植物多样性特征 | 草业学报 | 2024 | CSCD |
| 74 | 蔡文祺 | 外源褪黑素与乙烯交互对盐胁迫下紫花苜蓿幼苗生长和生理特性的影响 | 草业学报 | 2024 | CSCD |
| 75 | 冯帆 | 长期饥饿下厌氧氨氧化反应器的启动与恢复性能 | 环境科学 | 2024 | CSCD |
| 76 | 崔璐瑶 | 贺兰山岩羊可食用营养成分沿海拔梯度变化及季节动态 | 生态科学 | 2024 | CSCD |
| 77 | 赵莹 | 短期降水变化对荒漠草原土壤微生物群落的影响 | 生态学报 | 2024 | CSCD |
| 78 | 康如龙 | 荒漠草原蒙古冰草种群分布格局及种内关联性 | 生态学报 | 2024 | CSCD |
| 79 | 赵晓钰 | 荒漠草原灌丛转变土壤有机碳矿化及其对降水梯度的响应 | 生态学报 | 2024 | CSCD |
| 80 | 赫文文 | 土壤调理剂缓解玉米盐碱胁迫损伤效应 | 应用生态 | 2024 | CSCD |

| | | | | | |
|----|-----|----------------------------------|--------|------|------|
| | | | 学报 | | |
| 81 | 李志丽 | 荒漠草原灌丛引入过程中土壤氮矿化的季节动态及其影响因子 | 应用生态学报 | 2023 | CSCD |
| 82 | 宋文学 | 鹅观草生产性能和营养成分综合评价 | 草业科学 | 2023 | CSCD |
| 83 | 杨彦东 | 封育对荒漠草原优势植物根系性状特征的影响 | 草业科学 | 2023 | CSCD |
| 84 | 王腾飞 | 宁夏干旱区滴灌条件下拉巴豆不同播种量与甜高粱混播饲草生产性能研究 | 草业学报 | 2023 | CSCD |
| 85 | 苏荣霞 | 荒漠草原不同间距灌丛引入对土壤细菌碳源利用和胞外酶活性的影响 | 草业学报 | 2023 | CSCD |
| 86 | 陈彦硕 | 荒漠草原不同年限灌丛引入过程土壤细菌碳源利用特征 | 草业学报 | 2023 | CSCD |
| 87 | 张浩 | 荒漠草原优势植物牛枝子对干旱胁迫的生理响应与转录组分析 | 草业学报 | 2023 | CSCD |
| 88 | 王晓彤 | 紫花苜蓿 FBA 基因家族成员的鉴定与分析 | 草业学报 | 2023 | CSCD |
| 89 | 黄业芸 | 贺兰山不同海拔植被生物量与土壤分形特征和土壤水分的相关关系 | 草业学报 | 2023 | CSCD |
| 90 | 王晶 | 外源褪黑素对干旱胁迫下沙芦苇幼苗生长和生理特性的影响 | 应用生态学报 | 2023 | CSCD |
| 91 | 刘学琴 | 基于 MaxEnt 模型天然草原步甲属潜在地理分布研究 | 生态学报 | 2022 | CSCD |
| 92 | 丁金梅 | 宁夏草地土壤有机碳空间特征及其影响因素分析 | 生态学报 | 2022 | CSCD |
| 93 | 杨壹 | 贺兰山东坡典型植物群落多样性垂直分布特征与土壤因子的关系 | 生态学报 | 2022 | CSCD |
| 94 | 张振杰 | 荒漠草原向灌丛转变过程中两种优势植物定植土壤水分阈值特征 | 生态学报 | 2022 | CSCD |
| 95 | 郭艳菊 | 宁夏东部风沙区沙化草地土壤水分和植被的空间特征 | 生态学报 | 2022 | CSCD |

| | | | | | |
|-----|-----|------------------------------------|------|------|------|
| 96 | 王斌 | 不同播种量下行距配置对紫花苜蓿产量及品质的影响 | 草业学报 | 2022 | CSCD |
| 97 | 田英 | 生长季不同月份平茬对柠条人工林地林土壤细菌群落特性的影响 | 草业学报 | 2022 | CSCD |
| 98 | 李豫悦 | 轮牧对荒漠草原土壤种子库特征的影响 | 草业学报 | 2026 | CSCD |
| 99 | 任轶昊 | 宁夏中部干旱带荒漠草原退化过程中植被、土壤及微生物群落的协同变化特征 | 草业科学 | 2025 | CSCD |
| 100 | 李锦臻 | 干旱区温性山地草原不同海拔土壤碳氮及其比值化学计量变化特征 | 草业科学 | 2025 | CSCD |

部分论文首页清单



Selection basis of forage sorghum production system: Assessment of the effects of cutting period and irrigation amount on productivity and resource efficiency

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ABSTRACT

Cutting and irrigation are effective measures to improve crop production and resource utilization. However, further research is still needed to explore the synergistic effect of cutting period and irrigation amount on yield enhancement and efficient resource use in arid/semi-arid regions. A two-year field experiment (2020–2021), including three cutting periods (C): 75 days after sowing (C1), 45 days after sowing (C2), 15 days after sowing (C3) and three irrigation amounts (I): 0 mm (I1), 30 mm (I2), 120 mm (I3), with an additional noncutting treatment under normal irrigation (I0 nonC) was conducted in the Northwest of China. Results showed that adjusting cutting period and irrigation amount could optimize forage production and development to enhance the productivity and resource utilization (P < 0.05). Early cutting (C1) maximized yield reduction (2.4%) and achieved the highest DM content (2.09 MPa), while mid-term cutting (C2) combined with increased irrigation (I2 nonC) produced the greatest water productivity of dry matter yield (WPDM) (44.1 kg m⁻³ mm⁻¹) and highest yield performance (21.81 %). In contrast, late cutting (C3) consistently resulted in the least efficiency (WPDM 28.5–28.8 kg m⁻³ mm⁻¹) particularly under increased irrigation. Surface fitting analysis further indicated that maximum DM was achieved under mid or late cutting with normal or increased irrigation, whereas the maximum WPDM and WPDM concentration in early cutting with reduced irrigation. These findings highlight the trade-offs between yield stability and efficiency optimization, suggesting that early cutting is preferable for efficiency-oriented production, while mid-term cutting with increased irrigation optimizes both yield and resource use. This study provides scientific basis for tailoring cutting period and irrigation amount of forage sorghum, offering practical guidance for sustainable forage-livestock systems in the Northwest of China.

1. Introduction

In recent years, climate changes have resulted in more frequent and severe drought events in many regions, which has intensified greater pressure on agricultural production and threatened food security (Chen et al., 2018). Producing more nutritious food to alleviate world hunger while safeguarding the environment is a significant challenge for humanity (Gomez et al., 2019). The challenge is much pronounced in highly-populated countries and regions where agricultural resources are limited (Yang et al., 2023). What's more, the rapid development of the

social economy and progressive increase in population, the demand for meat, eggs, and milk is increasing, which requires crop export to provide more forage crops to meet the growing demand for livestock product consumption (Folwell et al., 2018).

Sorghum (*Sorghum bicolor* L.) is among the most widely distributed crops in the world, with diverse uses, including food, livestock forage (both forage and stlage), industrial raw materials, and energy (Zhou and Wu, 2017). In comparison to other forage crops, sorghum exhibits higher water productivity and strong drought tolerance, largely attributed to its C₄ photosynthetic pathway, which enables efficient biomass

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Short-term litter manipulation drives soil nutrient accumulation via cascading effects of soil moisture, microbial community, and enzyme activity in a desert steppe

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ABSTRACT

Litter plays a key role in grassland biogeochemical cycles, yet the mechanisms through which short-term litter alterations regulate soil nutrient accumulation in desert steppes remain unclear. In a two-year field experiment with litter removal, control, and litter addition treatments, we examined how litter manipulation influences soil microclimate, plant growth, microbial community structure, extracellular enzyme activity, and soil nutrients. Compared with control, litter removal exhibited higher soil moisture but did not significantly affect plant biomass, height, density, or coverage in either year. By contrast, litter addition significantly increased those plant growth parameters (2021), while maintaining soil moisture similar to the control in both years, suggesting that the moisture-retaining effect of the litter layer was offset by its upward plant water uptake. Treatment effects on microbial communities and enzyme activities were stronger in 2023 than in 2024. Overall, litter addition increased soil dominant microbial phyla abundances, enhanced microbial α-diversities, and decreased enzyme activities. Litter removal exhibited similar values to the control for dominant microbial phyla abundances and microbial activity, but tended to suppress enzyme activities. Correlation analysis revealed that soil water was positively correlated with soil moisture, and both fungal and prokaryotic abundances were positively correlated with plant biomass. Structural equation modeling confirmed that soil nutrient accumulation was directly influenced by prokaryotic community under litter removal, but positively driven by enzyme activities and fungal community under litter addition. Therefore, short-term litter addition can improve soil moisture and activate microbial enzymatic processes in the desert steppe, which in turn promotes soil nutrient accumulation.

1. Introduction

As a pivotal component of biogeochemical cycling, plant litter regulates the return of nutrients from vegetation to the soil (Folwell et al., 2018; Xue et al., 2023). In grassland ecosystems, approximately 50–90% of net primary productivity is returned to the soil as litterfall (Song et al., 2012; Pengjun et al., 2012; Wang et al., 2014). Litter input plays a critical role in modifying soil microclimate and nutrient cycling, thereby influencing key ecosystem processes and functions (Dunbar et al., 2010; Hobbie et al., 2015; Thaler et al., 2012). In recent decades, climate change and anthropogenic activities have substantially altered plant litter

production globally (Feng et al., 2024; Chen et al., 2023). For instance, elevated atmospheric CO₂ and nitrogen deposition generally stimulate net primary productivity, leading to increased litter inputs (Brook et al., 2015; Wang et al., 2019; Liu et al., 2020). In contrast, overgrazing and prolonged drought have significantly reduced litter production in many grassland regions (Tian et al., 2012; Chen et al., 2012). Consequently, shifts in aboveground plant biomass directly influence litter accumulations, with profound implications for soil nutrient cycling and plant community establishment in terrestrial ecosystems.

A growing body of studies has examined how litter manipulation—through addition or removal—affects soil properties and

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Enhanced valorization of Korshinsk peashrub (*Caragana korshinskii* Kom.) as ruminant feed via the selective ligninolysis by the white rot fungus *Dichomitus squalens*

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Abstract

Background: Korshinsk peashrub (*Caragana korshinskii* Kom.) is a valuable forage shrub for ruminants due to its abundant cell walls. However, its utilization is largely limited by the cross-linked structures of lignocellulose within its cell walls. White rot fungi possess the ability to degrade these resistant cross-linked structures, offering enormous potential to develop cost-effective biotreatment processes of Korshinsk peashrub.

Results: Among the white rot fungi evaluated, *Dichomitus squalens* demonstrated superior efficacy in improving lignocellulose deconstruction and subsequent rumen fermentation of Korshinsk peashrub (P < 0.05). This fungus preferentially degrades lignin, hemicellulose, and pectin (P < 0.05), which corresponded to significantly improved enzymatic saccharification, ruminal digestibility, and gas production (P < 0.05). Genomic analysis revealed that *D. squalens* possesses a comprehensive range of genes encoding ligninolytic enzymes. Elevated activities and expression levels of laccase, manganese peroxidase, esterase, glutathione S-transferase, vanillin peroxidase, and hydrogen peroxide-generating enzymes aligned with the disruption of cross-linked structures and increased porosity of Korshinsk peashrub. Furthermore, the extracellular enzyme cocktail from *D. squalens* exhibited robust lignin-degrading capability, corroborating its role in selective ligninolysis.

Conclusions: Pretreatment of Korshinsk peashrub with selective white rot fungi offers a practical approach to valorize this woody biomass as an alternative feedstock for ruminants.

Keywords: Korshinsk peashrub, Ligninolytic enzymes, Ruminant feed, Selective biodegradation, White rot fungi

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Selection basis of agricultural production systems: Assessment of the effects of climatic regions and planting patterns on forage production and eco-efficiency

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ABSTRACT

Current feed cropping can increase and stabilize productivity. However, the effects of mixed cropping practices on system productivity stability and eco-efficiency can be positive in some cases and negative in others.

Objective: This study was aimed at providing the selection basis of agricultural production systems by clarifying the mechanism of yield stability and greenhouse gas (GHG) emission reduction advantage in mixed cropping systems among different climatic regions.

Methods: A 4-year field experiment (2020–2023) with this cropping system (forage maize (Zea mays L.)/lablab (*Lablab purpureus* L.) mixed cropping (ML), forage sorghum (*Sorghum bicolor* L.)/lablab mixed cropping (SL), sole forage maize (SM), sole forage sorghum (SS), and sole lablab (LL)) and two sowing regimes (irrigated region (IR), rainfed region (RR)) was conducted.

Results: Results showed that dry matter yield (DMY), crude protein yield (CPY), and eco-efficiency index (EEI) were improved by 14.7%, 18.5%, and 72.1%, respectively, in the irrigated region, with a decrease in productivity variation and GHG emission intensity (GHGI) by 18.1% and 49.1%, respectively, compared with those in the rainfed region. In addition, mixed cropping significantly increased DMY (CPY) by 24.7% and 20.7%, respectively, compared to the average value under the SM, SS, and LL treatments. Similar improvement was observed for yield stability, which reached a maximum value under the IR treatment. Furthermore, mixed cropping significantly improved EEI and reduced GHGI, where the ML treatment increased EEI by 50.3% and reduced GHGI by 29.3% compared with the corresponding forage maize monoculture. The highest sustainability index was observed for the forage maize mixed with lablab cropping system (IR).

Conclusion: Forage maize mixed with lablab is emerging as a promising agronomic strategy that efficiently utilizes water and nitrogen in the irrigated region and reduces microbial production variability in the rainfed region, which improves forage productivity and stability while reducing GHG emissions.

Implication: Our study highlights the reasons that the effect of mixed cropping system on stability and eco-efficiency vary, providing scientific guidance for recommending forage production practices.

1. Introduction

Irrigated and rainfed regions are essential regional components of the global development of agricultural production (Wang et al., 2023; Peng et al., 2024). Recently, with an increase in global population, the

demand for livestock products has doubled with change in daily diet structures (Gong et al., 2017). The demand for meat and dairy products are growing at annual rates of 2.7% and 3.2%, respectively (Gong et al., 2023). The arable region of China is an essential livestock production base that covers irrigated and rainfed regions and produces

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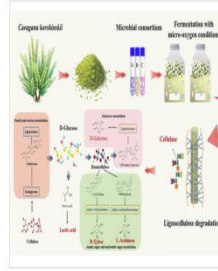
SynCom-Mediated Spatiotemporal Oxygen Control Enhances Lignocellulose Degradation and Nutrient Preservation

Jinhang Shi, Zhiqiang Sun, Boyi Qi, Guojie Zhang, and Qiang Lu*



Abstract

Lignocellulosic biomass holds immense potential as a renewable resource, yet its efficient valorization is hindered by structural recalcitrance and oxygen sensitivity in microbial systems. We engineered a synthetic microbial community (SynCom) comprising *Lactobacillus plantarum*, *Bacillus subtilis*, and *Aspergillus niger* to resolve the oxygen paradox in lignocellulose conversion. The SynCom strategically programmed spatiotemporal oxygen gradients via *A. niger*'s Crabtree-negative metabolism, reducing headspace O₂ from 2% to <0.5% within 48 h and enabling *L. plantarum* dominance (>83% relative abundance) under stabilized anaerobic micro-niches. This orchestrated environment facilitated synergistic lignocellulose degradation, with *B. subtilis*'s GH5 cellulase and *A. niger*'s β -glucosidase driving 18.57% and 21.64% reductions in cellulose and hemicellulose content, respectively, by day 30. The SynCom achieved cellulose and hemicellulose contents reduced by 18.57% and 21.64% and surpassing aerobic fungal pretreatments, and 141.38 g/kg DM of crude protein retention, 40% higher than traditional systems, through rapid acidification (pH < 4.5) that stabilized microbial communities. Macrogenomics profiling revealed enzymatic cross-feeding (GH43 hemicellulase, CE10 esterase) and metabolic handoffs, while CAZyme analysis highlighted enriched glycoside hydrolases (GH43, GH51) critical for lignocellulose deconstruction. Field trials under realistic oxygen fluctuations (1–5% O₂) demonstrated 18.9% higher dry matter recovery than commercial inoculants, resolving the historical trade-off between aerobic delignification and anaerobic nutrient preservation. By bridging ecological niche engineering with industrial scalability, this work establishes SynComs as programmable platforms for sustainable bioeconomics. Our findings redefine microbial consortia design, offering a blueprint for lignocellulose valorization in oxygen-fluctuating environments and advancing the circular bioeconomy through adaptable microbial solutions.



Research on the mechanism of Na⁺ promoting the degradation of lignocellulose in salt-alkali alfalfa silage

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ABSTRACT

Soil salinization seriously affects the development of agricultural and horticultural applications, limiting the effective degradation of lignocellulose by solid-state fermentation (SSF) systems. We investigated the effects of sodium ion (Na⁺) on cellulase activity and microbial community dynamics during lignocellulose fermentation by *Lactococcus lactis* YM8. This study explored how Na⁺ affect cellulase activity and microbial communities during alfalfa silage fermentation. The addition of Na⁺ increased cellulase activity from 25.3 IU/g to 32.9 IU/g (30% increase), reduced cellulose content by 15%, and significantly enhanced lignin degradation. Na⁺ also promoted the growth of cellulolytic bacteria (*Bacillus*, *Cellulomonas*, and *Pantoea*) and enriched glycoside hydrolase families GH3 and GH51.3. Mechanistic studies revealed that Na⁺ supplementation not only optimizes cellulase activity but also modulates microbial interactions, promoting a more efficient lignocellulose-degradation process. These findings highlight Na⁺ as a key modulator in improving biomass degradation under saline conditions and enhancing applications in forage production and animal feed.

1. Introduction

Soil salinization, covering approximately 8.31% of the global land area, is driven by natural processes and anthropogenic activities such as excessive irrigation and poor land management (Hassan et al., 2021). According to the Food and Agriculture Organization, salinity already affects nearly 1.4 billion hectares of land—more than 10% of Earth's terrestrial area—and an additional one billion hectares remain at risk (Munir et al., 2021). The complexity of lignocellulose and the change in the activity of cellulase severely limit the microbial treatment and transformation during fermentation.

SSF is increasingly recognized as an effective method to improve the nutritional value of forage. This approach offers advantages such as lower water usage, high substrate conversion rates, and environmental sustainability. Lactic acid bacteria (LAB) can produce glycoside hydrolases (GHs) to degrade complex plant cell wall structures and produce lactic acid to improve palatability and storage stability of feed (Liu et al., 2022; Beckwith et al., 2022). Nevertheless, saline environments pose challenges to microbial metabolism and enzyme expression, thereby compromising fermentation efficiency. Although manipulating microbial consortia has shown potential in enhancing fermentation, practical approaches to increase LAB enzymatic activity and structure microbial communities under saline-alkaline conditions remain limited. Saline-alkaline soils are typically rich in Na⁺, which significantly

degradability and decreasing its overall feed value (Ouyi et al., 2022; Yang et al., 2023). Lignin, cellulose and hemicellulose are three components of lignocellulose. Due to the complexity of the structure, the activity of cellulase will be inhibited, and the changes of endo- β -1,4-glucanase and β -glucosidase will affect the fermentation efficiency (Munir et al., 2021). The complexity of lignocellulose and the change in the activity of cellulase severely limit the microbial treatment and transformation during fermentation.

SSF is increasingly recognized as an effective method to improve the nutritional value of forage. This approach offers advantages such as lower water usage, high substrate conversion rates, and environmental sustainability. Lactic acid bacteria (LAB) can produce glycoside hydrolases (GHs) to degrade complex plant cell wall structures and produce lactic acid to improve palatability and storage stability of feed (Liu et al., 2022; Beckwith et al., 2022). Nevertheless, saline environments pose challenges to microbial metabolism and enzyme expression, thereby compromising fermentation efficiency. Although manipulating microbial consortia has shown potential in enhancing fermentation, practical approaches to increase LAB enzymatic activity and structure microbial communities under saline-alkaline conditions remain limited. Saline-alkaline soils are typically rich in Na⁺, which significantly

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Relationships between vegetation indices and surface reflectance: Implications for detecting and monitoring sandification in arid regions

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Droving factors

ABSTRACT

Terminal lakes in arid regions are increasingly vulnerable to sandification under water scarcity and climate stress. Taking the Qingsi Lake region in China's Shiyang River Basin as a case study, we evaluated different vegetation indices and surface parameter combinations to identify optimal monitoring models, analyzing the spatiotemporal dynamics of sandification and primary driving factors using long-term remote sensing data (2000–2023). The NDVI-ARSI combination outperformed other index-parameter combinations in the feature space model (FSM), achieving an overall classification accuracy of 88.55%. This superior combination's temporal trends exhibited strong inverse relationships, with 70% of pixels having significant negative correlation between NDVI and ARSI. The model effectively captured fine-scale spatial details of sandification levels with high ground truth consistency compared to other tested models. The regional sandification pattern revealed a distinct "transformation-differentiation" dimension in 2000–2023. Temporally, sandification intensity has greatly declined, with the area of extremely severe sandification shrinking from 2282 to 377 km². Spatially, sandification has occurred along a pronounced northeast-southwest gradient. Climate factors persistently imposed significant negative effects on sandification dynamics over just the two decades, whereas the direct influence of human activities showed a marked increase from 0.18 to 0.38. Soil factors functioned as key mediating variables by integrating climate and human influences, while geographical factors exhibited minimal contribution to the overall model (direct effects < 0.1). In conclusion, this study provided a reliable technical framework to better quantitatively assess wetlands' sandification, thus bolstering essential information for developing targeted prevention and control strategies in arid regions.

1. Introduction

The terminal lakes found in inland river basins are key components of mountain-oasis-desert landscapes in arid regions worldwide. These lakes and their native wetland vegetation together provide vital ecosystem services, in particular soil and water conservation, windbreaks and sand fixation, thereby also functioning as ecological stopgods for oases surrounded by deserts (Li et al., 2007). Yet such lakes (and consequently their wetlands) are highly sensitive to both anthropogenic-induced disturbances and natural perturbations or shifts (Ewing et al., 2020). As reported by Shi et al. (2022), the extensive expansion of irrigated agriculture combined with ongoing climate

change could be a key factor triggering the recent catastrophic shrinkage of terminal lakes and the associated widespread exposure of their lakebeds. Being typically located in wind-prone areas, once exposed these lakebeds are prone to intense erosion by prevailing winds (Chen et al., 2010; Qi et al., 2019). Salt and dust storms follow, bringing large quantities of saline materials that lead to the formation salt-alkali deserts and the severe degradation of wetlands, posing major threats to both the local environment and human health. In the Shiyang Lake Basin, for instance, the wetland area has shrunk by 251 km², increasing sandification and landscape fragmentation there, because of a reduction in the groundwater table due to greater water consumption by agriculture and population growth; worryingly, this loss of wetland

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Moderate time grazing in the warm season maintained the diversity and complexity of soil microorganisms by regulating nutrient cycling and decomposition function

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Abstract

1. The soil microbial community plays an important role in maintaining the functional diversity of grassland ecosystems. However, it is unclear how soil microbial diversity and complexity change in the desert steppe under different grazing times and what ecosystem factors influence this change.

2. To address these issues, we investigated how different grazing times affect soil microbial diversity, complexity and ecosystem function in the desert steppe using 6-year no grazing (FG), shortened time grazing (DEG) and traditional time grazing (TG) experiments in the desert steppe.

3. The diversity and complexity of soil microorganisms (bacteria and fungi) increased under TG, and the collinear network connections were strengthened. *Solirubrobacter* and *Hohenbuehelia* are the key groups under TG. Furthermore, the similarity of the soil microbial community increased with the extension of the grazing period.

4. The decomposition and nutrient cycling functions had a greater impact on the abundance of soil bacteria and fungi. Based on the structural equation model, the main driver of soil microbial diversity and network complexity in grazing time management was the decomposition function (e.g. BG, CHB, ALP).

5. In general, by improving the nutrient cycle and organic decomposition functions, moderate grazing time can boost soil microorganism diversity and complexity, ultimately contributing to the ecosystem multifunctionality.

KEYWORDS

ecosystem function, keystone taxa, microbial complexity, microbial diversity, multifunctionality



Optimizing nitrogen application rates to maximize productivity while reducing environmental risk by regulating nitrogen and water utilization in mixed cropping systems

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ABSTRACT

Optimizing the nitrogen (N) fertilization level and cropping system is critically important for achieving good production performance with low environmental pollution. However, there is a knowledge gap on the relationship between crop production sustainability, water and nitrogen consumption, greenhouse gas (GHG) emission under the change in N application rate under cereal and legume mixed systems. A 3-year field experiment with two cropping systems (cereal forage sorghum (S) and forage sorghum-legume mixed cropping (SL)) with four N fertilizer application rates (N₀, 6 kg N ha⁻¹, N₆₀, 90 kg N ha⁻¹; N₁₂₀, 180 kg N ha⁻¹; and N₂₄₀, 270 kg N ha⁻¹) was conducted. Results obtained showed that mixed cropping combined with N fertilization enhanced forage biomass and crude protein yield by 34.0% and 51.1%, respectively, particularly in mixed cropping combined with the N₆₀ treatment compared with the N₀ level in the sole cropping system. Similar improvements were observed for yield stability and sustainability (23.97% and 6.9%, respectively), which reached maximum values at N₆₀ in the mixed cropping system. In addition, mixed cropping increased the water productivity of dry matter yield (WPM) and water productivity of crude protein yield (WPM_{CP}) by 17.2% and 27.6%, respectively, at 180 kg N ha⁻¹ compared with the corresponding treatments of the sole planting system. Furthermore, mixed cropping combined with appropriate N application significantly improved N physiological efficiency (PE_N) and reduced GHG intensity (GHG_{int}), where N application of 180 kg ha⁻¹ increased PE_N by 21.3% and reduced GHG_{int} by 17.4% compared with the corresponding monoculture in the mixed cropping system. This study demonstrated that reducing N fertilization in cereal-legume cropping system can prevent forage productivity by optimizing water and N management while decreasing environmental pollution. Therefore, forage sorghum mixed with legume and fertilization at 180 kg ha⁻¹ is a preferable approach for sustainable agricultural production in the Northwest arid region of China.

1. Introduction

The global population is expected to reach 9 billion by 2050, and food consumption will correspondingly increase by 70–100% to meet the demands of the population (FAO, 2017). In addition, the demand for livestock products has doubled globally with changes in daily dietary structure (Dang et al., 2017), particularly in developing countries where the demand for meat and dairy products is growing at an annual rate of 2.7% and 3.2%, respectively, leading to severe food shortage

problems (Wang et al., 2022a). Notably, large amounts of N fertilizer are applied in agriculture in response to the increase in food consumption by the growing population (Villey et al., 2013). However, agricultural practices, such as intensive cropping systems and imbalanced fertilizer use, are projected to increase GHG emissions by 37% by 2050 in Asia (Frank et al., 2019). Consequently, it is urgent to choose forage production systems and N management levels to alleviate serious shortages of protein feed while safeguarding the environment for sustainable agriculture.

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Supplementation of *Lycium barbarum* residue increases the growth rate of Tan sheep by enhancing their feed intake and regulating their rumen microbiome and metabolome

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Abstract

Lycium barbarum residue (LBR), a by-product of *L. barbarum* processing, is packed with bioactive components and can be potentially utilized as a feed additive in animal husbandry. However, the fundamental understanding of its effectiveness on livestock animals is still lacking, particularly in ruminants. To explore the effects of LBR on the growth performance, rumen fermentation parameters, ruminal microbes and metabolites of Tan sheep, sixteen fattening rams (aged 4 months) were fed a basal diet (CON, n=8) or a basal diet supplemented with 5% LBR (LBR, n=8). The experiment lasted for 70 d, with 10 d adaptation period and 60 d treatment period. The results showed that the LBR enhanced the average daily feed intake, average daily gain (P<0.05), and ruminal total volatile fatty acids (P<0.01) while decreasing ammonia-nitrogen concentration and rumen pH value (P<0.05). Additionally, the LBR improved the relative abundances of *Prevotella*, *Succinivibrionaceae*, *Ruminococcus*, *Coproccoccus*, *Selenomonas*, and *Butyrivibrio* (P<0.05) and reduced the relative abundances of *Oscillospira* and *Succinivibrio* (P<0.05). The LBR altered the ruminal metabolome (P<0.01) by increasing the abundances of ruminal metabolites involved in amino acids (e.g., L-proline, L-phenylalanine, L-lysine, and L-tyrosine), pyrimidine metabolism (e.g., uridine, uracil, and thymidine), and microbial protein synthesis (e.g., xanthine and hypoxanthine). In conclusion, LBR had positive effects on the growth rate of Tan sheep as well as on rumen fermentation parameters, rumen microbiome and rumen

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Supplementation of *Lycium barbarum* residue increases the growth rate of Tan sheep by enhancing their feed intake and regulating their rumen microbiome and metabolome

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Abstract

Lycium barbarum residue (LBR), a by-product of *L. barbarum* processing, is packed with bioactive components and can be potentially utilized as a feed additive in animal husbandry. However, the fundamental understanding of its effectiveness on livestock animals is still lacking, particularly in ruminants. To explore the effects of LBR on the growth performance, rumen fermentation parameters, ruminal microbes and metabolites of Tan sheep, sixteen fattening rams (aged 4 months) were fed a basal diet (CON, n=8) or a basal diet supplemented with 5% LBR (LBR, n=8). The experiment lasted for 70 d, with 10 d adaptation period and 60 d treatment period. The results showed that the LBR enhanced the average daily feed intake, average daily gain (P<0.05), and ruminal total volatile fatty acids (P<0.01) while decreasing ammonia-nitrogen concentration and rumen pH value (P<0.05). Additionally, the LBR improved the relative abundances of *Prevotella*, *Succinivibrionaceae*, *Ruminococcus*, *Coproccoccus*, *Selenomonas*, and *Butyrivibrio* (P<0.05) and reduced the relative abundances of *Oscillospira* and *Succinivibrio* (P<0.05). The LBR altered the ruminal metabolome (P<0.01) by increasing the abundances of ruminal metabolites involved in amino acids (e.g., L-proline, L-phenylalanine, L-lysine, and L-tyrosine), pyrimidine metabolism (e.g., uridine, uracil, and thymidine), and microbial protein synthesis (e.g., xanthine and hypoxanthine). In conclusion, LBR had positive effects on the growth rate of Tan sheep as well as on rumen fermentation parameters, rumen microbiome and rumen

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Transcriptomics and non-targeted metabolomics provide mechanistic insights into the improvement of the growth performance and meat quality of lambs supplemented with fermented *Lycium barbarum* residues

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ABSTRACT

This study investigated the effects of *Lycium barbarum* residues (LBR) and fermented *L. barbarum* residues (FLBR) on the growth performance and meat quality of lambs. Eighteen lambs were randomly assigned into three groups and fed either a basal diet (CON) or the same diet supplemented with 5.0% LBR or FLBR for a period of 50 days. The underlying mechanisms responsible for the beneficial effect of LBR and FLBR on the longissimus thoracis (LT) and intermuscular fat (IMF) tissues of lambs were examined using metabolomics techniques. Our findings showed that FLBR supplementation significantly enhanced the average daily gain, feed efficiency, and nutrient digestibility (P < 0.05 or P < 0.01). Serum total protein (P = 0.007) and glucose (P = 0.002) levels were higher in the FLBR-fed lambs, while urea nitrogen level was lower (P = 0.001). Additionally, the levels of rumen acetate (P = 0.002) and propionate (P = 0.011) were significantly elevated, while ammonia-nitrogen (NH₃-N), isobutyrate and isovalerate decreased (P < 0.05 or P < 0.01) following FLBR supplementation. Non-meat meat quality was also improved by FLBR, as evidenced by enhanced total antioxidant capacity, superoxide dismutase activity, pH, redness (a*), tenderness and water holding capacity (P < 0.05 or P < 0.01) alongside a reduction in the malonaldehyde content (P < 0.001). Transcriptome analysis identified 962 differentially expressed genes (DEGs; FLBR vs CON) and 782 DEGs (FLBR vs LBR) in LT, and 1313 DEGs (FLBR vs CON) and 1221 DEGs (FLBR vs LBR) in IMF. The ribosome signaling pathway related genes in LT tissue were activated by the FLBR diet (P < 0.05), showing a higher abundance of protein. The genes involved in fatty acid biosynthesis in IMF tissue were upregulated by the FLBR diet (P < 0.05), showing a higher abundance of lipids. Metabolomics analysis identified the 1722 differential metabolites in LT tissue following FLBR supplementation, with significant alterations in metabolites such as carnitine, L-arginine and L-proline, which may serve as potential biomarkers for meat quality betterment. In conclusion, FLBR supplementation might have modified metabolism of protein and fatty acid, as well as muscle metabolome profiles, leading to improvements in both growth performance and meat quality in fattening lambs.
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1. Introduction

As the demand of consumers for safer, healthier, and higher-quality meat rises, producers must quickly adopt more effective feed management practices. Tan lambs, a native breed from Ningxia Province, China, are highly valued for their high nutritive value,

Selective Co^{2+} recovery using $\text{MgNa}_2\text{H}(\text{PO}_4)_2$ adsorbent from water

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ABSTRACT

Co^{2+} recovered from radioactive wastewater can potentially be used in fertilization and medical therapy; however, a reliable Co^{2+} adsorbent with high selectivity and capacity has yet to be developed. Here, we designed a glaucosterite $\text{MgNa}_2\text{H}(\text{PO}_4)_2$ (MSP) where Mg^{2+} serves as a structural cation capable of replacing Co^{2+} alongside an interlayered Na^+ . The similarity in the ionic radii of Lewis acidic Co^{2+} and Lewis basic Mg^{2+} made the exchange of structural Mg^{2+} with Co^{2+} more favorable than that with Lewis acidic Ca^{2+} , which has a larger ionic radius. MSP exhibited a remarkable Co^{2+} adsorption capacity of 443 mg/g. Notably, the separation factor of MSP for Co^{2+} against Sr^{2+} was 480, which was 65-fold higher than that reported in a previous study. The findings indicate that introducing comparably sized ions, such as Mg^{2+} , to selectively integrate Co^{2+} into the adsorbent backbone upon their release represents a novel approach for designing high-selectivity adsorbents.

1. Introduction

^{60}Co is an important neutron-activated corrosion product found in radioactive wastewater generated during reactor cooling [1] and the decontamination of nuclear power plants [2]. Owing to the emission of high-energy γ rays (1.33 MeV) combined with its relatively long half-life (5.27 years) [3,4], ^{60}Co poses health risks including the risk of cancer. However, ^{60}Co can potentially be recovered from radioactive wastewater to help meet the increasing demand for ^{60}Co in sterilization and medical therapy [5]. Among many technologies such as a precipitation [6] and membrane techniques [7], adsorption is an efficient and promising technology for Co^{2+} recovery from various sources [8]. Highly selective recovery of Co^{2+} is complicated due to the presence of other elements, such as ^{137}Cs , ^{90}Sr , and non-radioactive Na^+ , K^+ , Mg^{2+} , and Ca^{2+} [9,10]. Of particular concern is the coexistence of Sr^{2+} , which has identical charge valency and similar chemical hardness as Co^{2+} and thus hinders its selective recovery.

Previous studies have revealed that crown ether-based adsorbents generally lack selectivity for Co^{2+} against Sr^{2+} unless ammonium thio-cyanate is introduced to pre-form a complex [11,12]. Furthermore, these adsorbents display a low Co^{2+} adsorption capacity [13]. In contrast, the glaucosterite layered KAP exhibits high Co^{2+} adsorption capacity owing to its lower crystal structure, facilitating the release of interlayered and structural cations [13]. However, KAP exhibits limited

selectivity for Co^{2+} in the presence of Sr^{2+} , which can be attributed to the similarity in ionic radii between the structural cation Ca^{2+} ($r = 1.00 \text{ \AA}$) and competing Sr^{2+} ($r = 1.18 \text{ \AA}$) [14], despite the preference of phosphate-based adsorbent for Lewis softer cations (Co^{2+} ; chemical hardness [15] = 8.22 eV) Sr^{2+} = 15.93 eV) [15,16]. Thus far, no reliable material with high selectivity and adsorption capacity for Co^{2+} has been developed.

Two recent studies addressed the problem of selective Co^{2+} adsorption into crystal lattices using chalcogenide structures, and a potassium aluminum thioarsenate (KASbS₃) adsorbent was developed to address this in an earlier study. The structural sites of As^{5+} in KASbS₃ were not active adsorption sites of Co^{2+} [17] owing to the significantly smaller size of As^{5+} ($r = 0.54 \text{ \AA}$) compared to Co^{2+} ($r = 1.07 \text{ \AA}$) [14]. The ionic size barrier was resolved in a subsequent study [18] by introducing potassium calcium thioarsenate (KCaSbS₃), in which As^{5+} was replaced with Ca^{2+} . The Ca^{2+} sites in the CaSbS_3 matrix provided a sufficiently large space for Co^{2+} to reside in after its release from the lattice structure, even though Ca^{2+} was smaller than Co^{2+} . This approach offers insight into the current case barrier. Therefore, we hypothesized that replacing Ca^{2+} in KAP with Mg^{2+} ($r = 0.72 \text{ \AA}$) can lead to substitution of the structural sites by Co^{2+} ($r = 1.07 \text{ \AA}$) while preventing Sr^{2+} adsorption.

In this study, we aimed to develop a potential Co^{2+} adsorbent that possesses both high adsorption capacity and good selectivity for Co^{2+} against Sr^{2+} . Therefore, we designed a glaucosterite adsorbent,

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Geographical, climatic, and soil factors control the altitudinal pattern of rhizosphere microbial diversity and its driving effect on root zone soil multifunctionality in mountain ecosystems

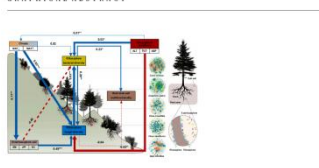
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HIGHLIGHTS

- Rhizosphere bacterial and fungal diversity do not follow similar altitudinal patterns.
- The rhizosphere microbiomes at both ends of the mountain show higher co-occurrence.
- The balance of positive-negative effects of microbes determines the impact of microbial diversity on soil multifunctionality.
- Bacterial diversity is the main driver of root zone soil multifunctionality, not fungi.
- Microbial diversity-soil multifunctionality is strongly regulated by geographical, climatic, and soil factors.

GRAPHICAL ABSTRACT



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ABSTRACT

Shifts in rhizosphere soil microorganisms of dominant plants' response to climate change profoundly impact mountain soil ecosystem multifunctionality; relatively little is known about the relationship between them and how they depend on long-term environmental drivers. Here, we conducted analyses of rhizosphere microbial altitudinal pattern, community assembly, and co-occurrence network of 6 dominant plants in six typical vegetation zones ranging from 1250 to 2900 m a.s.l. in Helan Mountain by absolute quantitative sequencing technology, and finally related the microorganisms to root zone soil multifunctionality (rod multifunctionality) hierarchy; the environmental dependence of the relationship was explored. It was found that the altitudinal pattern of rhizosphere soil bacterial and fungal diversity differed significantly. Higher co-occurrence and more potential interactions of *Sipho* and *Carex* zones were found at the lowest and highest altitudes. Bacterial diversity, the identity of root rhizosphere bacterial and fungal diversity, had significant positive or negative effects on soil multifunctionality. The effect sizes of positive effects of microbial diversity on soil multifunctionality were greater than those of negative effects. These results indicated that the balance of positive and

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Review Development of forest aboveground biomass estimation, its problems and future solutions: A review

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ARTICLE INFO

Keywords:
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ABSTRACT

Forest aboveground biomass (AGB) is crucial as it serves as a fundamental indicator of the productivity, biodiversity, and carbon storage of forest ecosystems. This paper presents a targeted literature review of all vacancies in AGB estimation methods. We conducted an extensive review of published literature using Web of Science, ResearchGate, Semantic Scholar, and Google Scholar. Our findings highlight the importance of accurate AGB estimation in the studies of terrestrial carbon cycle, forest ecosystem management, and climate change. Moreover, AGB estimation contributes valuable ecological knowledge and supports effective natural resource management. Unfortunately, during the data collection process for AGB estimation, we have identified two critical yet often overlooked issues: (1) the reliability of manual survey accuracy and (2) the impact of uneven ground plots and remote sensing pixels on AGB estimation. Drawing on existing technologies and literature analysis, we propose a potentially effective solution to address these challenges. In conclusion, accurate estimation and mapping of forest parameters, such as AGB, will remain a priority in forestry research for the foreseeable future. To ensure the practical applicability of AGB research findings, our future research efforts will focus on understanding manual survey accuracy and determining the optimal overlap between plots and pixels.

1. Introduction

Since the concept of biomass was proposed in the 19th century, people have conducted extensive research on how to estimate biomass (Stern and Weber, 2010). Forest aboveground biomass (AGB), as a component of total biomass, refers to the total mass of living organisms located above the forest vegetation, including trees, shrubs, herbaceous plants, and other biota (Yan et al., 2011; Baccali et al., 2017). Forest AGB serves as a quantitative descriptor of the ecosystem's vegetation layer, typically measured in terms of mass per unit area. It is worth noting that AGB is expressed in dry weight, which eliminates the influence of water content in organisms and more accurately reflects the

actual material content (Nielsen et al., 1989). In the field of forestry, forest AGB holds significant importance and finds wide-ranging applications as a crucial parameter for assessing the productivity level and carbon storage of forest ecosystems. By monitoring changes in forest AGB, we can gain insights into forest growth, succession processes, and the extent of natural and human-induced disturbances, providing valuable guidance for sustainable forest management and resource utilization (Azevedo et al., 2013). In conclusion, forest AGB is an indispensable and pivotal indicator in forestry research and management, offering essential information to understand forest ecosystems, the carbon cycle, climate change, and driving advancements in modern forestry practices (Nielsen et al., 1999).

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Contributions of plant litter to soil microbial activity improvement and soil nutrient enhancement along with herb and shrub colonization expansions in an arid sandy land

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ARTICLE INFO

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 Herbs and shrubs
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ABSTRACT

Herbs and shrubs are two important types of vegetation that play a pivotal role in combating land desertification in arid sandy land. Yet, the effects of plant litter on sandy soil microbial activities and soil nutrients during the shrub and herb colonization process are still unclear. Here, contributions of plant litter to soil microbial activity improvement and soil nutrient enhancement along herb and shrub colonization expansion interfaces were studied in an arid sandy landscape. Plant litter mass, soil water content, pH, nutrient content, extracellular enzyme activities, and microbial community structure (taxon composition, diversity, diversity, and co-occurrence patterns) of soils at depths of 0–10 cm were examined relative to the colonization processes of shrubs and herbs (shrub and herb vegetation → seed strips and seed beds interface → seed dunes) in an arid sandy land. We found that the processes of both herb and shrub colonization significantly increased litter co-occurrence mass in the soil relative to soil depths of 0 cm, and shrub colonization contributed several folds more litter than herb colonization. Plant litter input significantly decreased soil pH, accelerated soil extracellular enzyme activities, increased abundance of rare microbial phyla (Actinobacteria, Chloroflexi, Acidobacteria, Gemmatimonadetes, Proteobacteria, Armatimonadetes, Ascomycota, Mortierellomycota, and Chytridiomycota), enhanced both prokaryotic and fungal diversity, altered both prokaryotic and fungal community, and promoted complexity of microbial networks during both herb and shrub colonization. As a result, microorganisms actively participated in litter decomposition and soil nutrient enhancement. Nevertheless, shrub colonization process exhibited greater potential to nutrient input than herb colonization process due to its greater plant litter input, though both colonization played a comparable role in accelerating soil enzyme activity and improving soil microbial community diversity and co-occurrence. Therefore, nonwoody shrubs are still more important plants than herbs should be used for vegetation construction and ecological restoration in arid sandy land.

1. Introduction

Revegetation or intentional planting is one of the most effective ways for stabilizing soil, countering desertification and improving soil quality in arid and semiarid areas (Reynolds et al., 2007; Xu et al., 2007; Torres et al., 2015; Ingleke-Bogert et al., 2016). However, revegetation is still a major challenge for people in severely desertified sandy lands,

particularly where there are sand dunes and shifting sands (Zhang et al., 2004; Schade and Hublin, 2009; Xu et al., 2009; Thompson et al., 2009). For instance, the Ma Li Sandy Land, a typical arid region in northern China, suffers from severe desertification and the loose sandy soil is prone to erosion by wind (Chen and Tang, 2005). Therefore, revegetation projects have been conducted to combat desertification as early as the 1950s in this area (Liu et al., 2018). As a result, large areas of shrubs,

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 Desert grassland
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 Soil carbon and nitrogen
 Spatial heterogeneity

ABSTRACT

Shrub encroachment via anthropogenic introduction has been used for ecological restoration in degraded desert grassland. However, there have been debates concerning whether this activity can be effective, as contrasting results were frequently reported. The objectives of this study were to address if various *Cercaria karwinskii* planting conditions (planting year and density) had varying influences on soil organic carbon (SOC), soil total nitrogen (STN), and their spatial heterogeneities along the transition from desert grassland to shrubland. We investigated SOC and STN at the community and landscape scales, with the former containing eight land types of enclosed grassland, grand grassland, and shrubland with varying levels of planting years (3, 12, or 22 years) and planting intervals (2, 4, or 40 m), and the latter consisting of 43 grassland-shrubland mosaic sites (desert grassland, grassland-shrubland edge, and shrubland) covering approximately 2,976 km² area. At the community scale, the SOC and STN contents (from 0 to 150 cm soil depth) in shrubland, regardless of varying planting years and densities, were higher than those observed in grand grassland. Though it appeared that short-term of shrub establishment (3 and 12 years) in shrubland increased soil SOC accumulation, it was still questionable if this can be considered for a longer time period as no significant difference was seen for SOC contents between enclosed grassland and shrubland after 22 years of shrub establishment. At the landscape scale, the SOC contents were higher in shrubland than those in desert grassland. However, no significant difference was observed for STN among shrubland and desert grassland. Regarding their spatial heterogeneities, SOC exhibited stronger spatial concentrations in grassland-shrubland edge than in desert grassland and shrubland, while STN did not evidently differ in spatial autocorrelation among these transition states. In brief, we have observed differences in soil carbon and nitrogen at community scales, but when moving over to broad scales do not show the kind of significant spatial heterogeneity that we thought would be present in shrub introductions over the past 30 years. There may be a certain lag in the evolution of soil carbon and nitrogen responses from the introduction of shrubs from the community scale to the landscape scale.

1. Introduction

Over the past few centuries, shrub encroachment has widely occurred in arid and semi-arid grassland worldwide due to global climate changes (climate change, temperature rise, nitrogen deposition, and atmospheric CO₂ concentration rise) and accelerated anthropogenic disturbances (overgrazing, reduced natural fire frequency, and degradation of native vegetation types) (Cocheril et al., 1995; Ochoa et al., 2020; Urdago et al., 2012; Bengtson et al., 2012; Ding and 181818).

Abbreviations: Soil organic carbon, SOC; Soil total nitrogen, STN.
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Different responses of leaf and root economics spectrum to grazing time at the community level in desert steppe, China

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HIGHLIGHTS

- Grazing time led to an inverse pattern of the leaf and root traits economic spectrum.
- As the grazing time increases, plants tend to prioritize the growth of aboveground.
- TP and AX are the main driving factors of plant traits under different grazing times.

GRAPHICAL ABSTRACT

ARTICLE INFO

Editor: Charlotte Paschke

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 Grazing time
 Plant functional traits
 Plant economic spectrum
 Community level
 Desert steppe

ABSTRACT

The plant economic spectrum can explain the trade-off strategies of vascular plants between resource acquisition and storage. Grazing can alter the plant functional characteristics of grassland ecosystems, resulting in a shift in plant resource acquisition strategies. Taking *Stipa grandis* as a control, in this study we quantified the leaf traits and root traits of 14 plant species (those that comprised >85% of the species community abundance) of different grazing time grasslands in desert grasslands in Ningxia. We examined how grazing time shapes the functional structure of plant communities and the resource acquisition strategy. The results revealed an inverse pattern of the fast-slow economic spectrum of leaf and root traits; that is, as grazing time increased, the leaf traits shifted from an acquisitive type to a conservative type of resource acquisition strategy. In contrast, the root traits showed a shift from a conservative type to an acquisitive type of resource acquisition strategy. Grazing time leads to a whole plant economic spectrum, and plant functional traits facilitate their response to environmental change, the study of which can broadly deepen our understanding of the plant economic spectrum. Our study

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Dittmarite-type magnesium phosphates for highly efficient capture of Cs⁺

Zeqiu Li, Chenyang Yang, Kuk Cho

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Highlights

- Two dittmarite-type adsorbents, KMP and NMP, were synthesized.
- The Cs⁺ adsorption capacities of KMP and NMP are 630 and 711 mg g⁻¹, respectively.
- KMP and NMP transformed into struvite-type CsMg₂PO₄·6H₂O (CsMP) after adsorption.
- CsMP has two structural forms, cubic or hexagonal, depending on the solution pH.

Research Paper

Leaching of structural Ca²⁺ ions from a chalcogenide adsorbent by H⁺ lifts Cs(I) uptake

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HIGHLIGHTS

- A novel KCSnS adsorbent with metastable Ca²⁺ in Sn-S matrix is designed.
- Ca²⁺ adsorption capacity amounts to 630 mg/g at pH 2, 68% higher than that at pH 7.
- The enhanced Ca²⁺ adsorption at pH 2 is due to leaching of structural Ca²⁺ by H⁺ and Ca²⁺.
- The adsorption capacity dependence on pH opposes the general tendency.
- We turn the problematic proton into a functional agent of ion exchange by design.

GRAPHICAL ABSTRACT

ARTICLE INFO

Editor: Rungen Bao

Keywords:
 Metal uptake
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ABSTRACT

Acidic wastewater containing radioactive ¹³⁷Cs is difficult to treat by selective adsorption. Abundant H⁺ under acidic conditions damages the structure of adsorbents and competes with Cs⁺ for adsorption sites. Hence, we designed a novel layered calcium thioarsenate (KCSnS) that contains Ca²⁺ as a desorbent. The desorbent Ca²⁺ ion is metastable and larger than the ions adsorbed before. The proton KCSnS demonstrated a high Cs⁺ adsorption capacity of 630 mg/g at pH 2 (620 mg/g at 4200 mg/L Cs⁺ solution and pH 2), which is 68% higher than that at pH 5.5 (370 mg/g), a trend opposite to all previous studies. The neutral condition allowed the release of Ca²⁺ present only in the interlayer (~20%), whereas the high acidity facilitated the leaching of Ca²⁺ from the backbone structure (~80%). The complete structural Ca²⁺ leaching was made possible only by a synergistic interaction of highly concentrated H⁺ and Ca²⁺. Doping a large enough ion, such as Ca²⁺, to accommodate Cs⁺ into the Sn-S matrix upon its liberation opens a new way of designing high-performance adsorbents.

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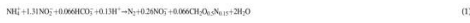
Dosing with pyrite significantly increases anammox performance: Its role in the electron transfer enhancement and the functions of the Fe-S cycle

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ARTICLE INFO
Keywords: Biological nitrogen removal; Iron mineral; Multi-center; Anammox system; S-based denitrification.
ABSTRACT
Anammox anammox oxidation (anammox) represents an energy-efficient process for biological nitrogen removal from ammonium-rich wastewater. However, there are mechanistic issues unsolved regarding the low microbial electron transfer and undrained accumulation of nitrate in treated water, limiting its widespread engineering applications. We found that the addition of pyrite (1 g L⁻¹ reacted), an earth-abundant iron-bearing sulfide mineral, to the anammox system significantly improved the nitrogen removal rate by 20% in long-term operation at a high substrate shock loading (3.86 kg N m⁻³ d⁻¹). Two lines of evidence were presented to unravel the underlying mechanisms of the pyrite-induced enhancement. Physicochemical evidence indicated that the increase of cytochromes c and Fe-S protein was responsible for the accelerated electron transfer among metabolic enzymes. Multi-center evidence showed that the depletion of nitrate was attributed to the Fe-S cycle driven by iron-dependent Fe(II) oxidation and S-based denitrification. This study deepens our understanding of the role of electron transfer and the Fe-S cycle in anammox systems, providing a fundamental basis for the development of mediators in the anammox process for practical implications.

1. Introduction
Anammox anammox-oxidizing (anammox) bacteria oxidize ammonium (NH₄⁺) to diatomic gases (N₂) using nitrite (NO₂⁻) as an electron acceptor under anaerobic conditions (1). It is an advanced biological nitrogen removal pathway with lower sludge production, no requirement for organic matter, and substantial energy savings (2). However, the anammox anammox bacteria possessed an extremely low growth rate and cellular yield, easily inhibited by substrate and other inhibitory substances, limiting the



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Is livestock grazing compatible with green peafowl (*Pavo muticus*) conservation? Potential chance of peafowl-human coexistence

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ARTICLE INFO
Keywords: Green peafowl; Livestock; Conservation; Habitat; Grazing; Peafowl-human coexistence; Sustainable development.
ABSTRACT
Establishing adequate nature reserves and managing them effectively require an enormous amount of resources, and is particularly challenging when species and communities are believed to have diverse needs. Decision makers need to understand how wildlife survives in human-disturbed habitat and how they can coexist with anthropogenic activities. Peafowl (Pavo muticus) is one of the main species of peafowl in many local communities in Yunnan Province, China, but its association with degraded green peafowl (Pavo muticus) is largely unknown. We linked our field survey data with satellite imagery and conducted occupancy modeling and diet analysis to examine the spatio-temporal response of green peafowl to free-ranging livestock in a peafowl habitat. Although it is widely believed that many grazing practices should be prohibited in green peafowl habitat, we found that green peafowl occurrence probability was positively associated with moderate cattle and goat abundance. Our temporal analysis also showed that green peafowl did not avoid livestock grazing or individual people. In contrast to green peafowl tolerance to ordinary human activities, we found significant negative association between green peafowl and major infrastructure. Our findings show that limited grazing intensity may be a possible management strategy for conserving green peafowl habitat instead of outright grazing ban. Our study will contribute immediately to green peafowl conservation planning in China. Our study also has implications for the conservation plans for other species in other locations, because our findings convey that conservation targets can promote the synergy between species conservation and human activity.

1. Introduction
Wilderness areas are intact landscapes with minimum human activities, are mostly free from industrial infrastructure, and serve as sanctuaries for endangered species (3). The establishment of protected areas has been widely believed to be effective in conserving the remaining wilderness areas and biodiversity, but globally the growth of terrestrial protected areas had tapered off since 2016 (4). With the increasing pressure of agriculture, grazing, infrastructure construction, and other anthropogenic interferences on ecosystems, establishing protected areas that adequately preserve biodiversity and possibly all major human activities is becoming imperative (5). However, it is critical to better understand the complex interactions between natural and human systems when

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Quantification of enhanced nitrogen removal pathways of pyrite interaction with anammox sludge system

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ARTICLE INFO
Keywords: Quantification; Pyrite; Anammox; Nitrogen removal; Pyrite.
ABSTRACT
Fe and S could improve the anammox performance by coupling with the Fe cycle. However, the coexistence of Fe and S complicates the metabolic process, troubling the quantification of nitrogen removal pathways. Herein, the nitrogen removal pathways were quantitatively analyzed by ¹⁵N stable isotope tracing and electron batch tests, and the enhancing mechanism was illuminated by physiological and metabolomics analysis in pyrite (FeS₂)-amended anammox systems. We found that anammox, denitrification and Feammox (NH₄⁺ oxidation coupled with Fe(II) reduction) contributed to 80.22%, 18.53% and 0.25% nitrogen removal in this process. With pyrite addition, Fe-S release and the enterobacterial polymorphic anammox variants were responsible for the enhancement of nitrite and nitrate removal via chemical, autotrophic and heterotrophic denitrification, improving nitrogen removal by 14% and 31%. The overall analysis further confirmed that the multiple nitrogen removal pathways (i.e., anammox, Feammox and denitrification) contribute to pyrite-induced nitrogen removal enhancement in the anammox system. This work makes the in-depth understanding, better design and optimization of the pyrite-amended anammox system, providing a fundamental basis for developing Fe- and S-based anammox enhancement technologies.

1. Introduction
Nitrogen pollution is severe due to the excessive application of fertilizers and increased nitrogen discharge from livestock, domestic and industrial sources (1,2). Conventional heterotrophic denitrification is widely applied for mainstream nitrogen removal in wastewater treatment (3). However, external carbon supply is dominated by the wastewater with low carbon-to-nitrogen ratios to meet the requirement of complete heterotrophic denitrification (4). Supplementing the organics (e.g., methanol, ethanol) increases the costs and potentially leads to secondary pollution if the organics are not completely consumed (5). An energy-efficient and sustainable option for biological nitrogen removal, anammox anammox oxidation (anammox) (6,7) and autotrophic denitrification driven by sulfur or iron species are gaining increasing attention (7). In anammox systems, the accomplishment of the system-level function (e.g., nitrogen removal) depends significantly on the composition of

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Chemical composition of soil organic carbon and aggregate stability along an elevation gradient in Helan Mountains, northwest China

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ARTICLE INFO
Keywords: Anammox; Microorganisms; Soil; Denitrification; Nitrogen stability; ¹⁵NCPAS NMR.
ABSTRACT
Exploring the composition of soil organic carbon (SOC) and aggregate stability over a range of elevations is essential to the stability of SOC, and the conservation of carbon source or sink of mountain ecosystems. However, information of those changes in mountain ecosystems in arid and semi-arid regions is still scarce to date. In this study, we estimated the response of SOC stability along elevation gradient (1380–2430 m) by combining physical protection of aggregates with chemical protection of SOC using a multidimensional method in the Helan Mountains, northwest China. Results showed that the distribution of aggregate of Helan Mountains changed from microaggregates to macroaggregates with increasing elevation, and the mean weight diameter (MWD) in mid and high elevations (2139–2286 m) was significantly higher than that in low elevations (1380–1450 m). Solid-state ¹³C-NMR spectra showed that O-alkyl C was the main chemical composition of SOC in the different elevations. Regression analysis indicated that with the increase of elevation, the proportion of aromatic C and amide nitrogen gradually increased, peaked at the mid elevation and subsequently decreased. These findings indicated that the soil structure and chemical composition of SOC are more stable in the mid elevations. Macroaggregates were positively correlated with O-alkyl C and aromatic C, while ill and clay were positively correlated with alkyl C, indicative of a lower decomposition rate of macroaggregates. The RDA analysis confirmed that aggregate stability were significant associated with SOC content and chemical composition such as O-alkyl C, indicating that the soil labile carbon pool was most related to affect aggregate stability. Our findings suggest that the Helan Mountains had a better soil structure and a more stable SOC chemical composition at mid elevation region. The soil structure at low elevations is sensitive to environmental change; therefore, a reduction in anthropogenic disturbance is suggested for improved sustainability of the ecosystem.

1. Introduction
Soil is the largest organic carbon reservoir in terrestrial ecosystems, which contains more carbon than that preserved in the atmosphere and living biomass (8). Furthermore, soil within a depth of 1 m of the mountains ecosystems constitute 29% of the total organic carbon (Lobbey and Jackson, 2009). However, given that the

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Rapid and selective removal of Cs⁺ from water by layered potassium antimony thiosulfate

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ARTICLE INFO

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Cesium
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Isotropy

ABSTRACT

HTc is radioactive and highly hazardous to human health and the environment and its efficient removal from water is still challenging. In this study, potassium antimony tetrathionate (KATc-2) was synthesized using a hydrothermal method and utilized for the first time for cesium removal from water. KATc-2 showed a high maximum ion exchange capacity (208 mg g⁻¹) and distribution coefficient (1.59 × 10⁴ l g⁻¹) toward Cs⁺. In particular, KATc-2 showed rapid ion exchange kinetics and reached the adsorption equilibrium within 5 min with 99% removal efficiency. The adsorption was good at a wide active pH range (1–12) even in natural alkaline conditions (K_a = 3.26 × 10⁻⁴ mol L⁻¹ at pH 12). The effect of coexisting ions was also investigated, and a high selectivity toward Cs⁺ was maintained even in artificial seawater (K_d = 3.28 × 10⁴ l g⁻¹). Powder X-ray diffraction and thermogravimetric analysis demonstrated that KATc-2 was chemically and thermally stable. The results showed that owing to its excellent adsorption performance as well as chemical and thermal stability, KATc-2 is a promising adsorbent for Cs⁺ removal from contaminated water.

1. Introduction

In order to meet the increasing energy demand and alleviate global warming, nuclear power has recently generated increased attention. However, nuclear power plant water consumption is 20–80% greater than coal-fired power plants with the same capacity (Chen and Kozlovskiy, 2013). Of greater concern is the resulting wastewater, with pH values ranging from extremely acidic to strongly alkaline, which contain a mixture of radionuclides (Vidali et al., 2013). ¹³⁷Cs, the main hazardous radionuclide, poses a threat to human health owing to its production of gamma rays and high-energy beta particles and its long half-life (t_{1/2} = 30 years) (Gama et al., 2016; Hahn et al., 2017; Chaudhary et al., 2018). The coexistence of highly concentrated radioactive ions in wastewater makes ¹³⁷Cs separation extremely challenging; therefore, a new material with high ¹³⁷Cs selectivity needs to be developed.

Chemical precipitation, membrane separation, electro-dialysis, solvent extraction, biological treatment, and ion exchange have been utilized to remove radioactive Cs from water (Zhang and Hu, 2017; Choudhury, 2018; Kim et al., 2020; Madsen et al., 2014; Wang et al., 2017). Of these methods, ion exchange is an attractive method for Cs⁺ removal due to its simple operation, relatively low cost, and high

efficiency (Ural and Usludun, 2018).

Metal sulfides have garnered significant attention as one of the selective ion exchangers for radionuclide removal from contaminated water (Ding et al., 2014; Wang and Kozlovskiy, 2016; Zhang et al., 2020). The existence of the Lewis soft S²⁻ ligand in the metal sulfide framework gives them an innate high affinity to Lewis soft acid (Frost, 1993). In addition, because the open octahedral structure of layered metal sulfides can contribute to ion exchange, layered metal sulfides have become highly popular (Sama et al., 2016); however, there are still issues with the existing materials. For example, Mn²⁺ to Mn³⁺ oxidation during the ion exchange process causes KMS-1 to have a lower theoretical adsorption capacity for Cs⁺ (Gama and Kozlovskiy, 2019). KMS-2 (Mori et al., 2013) and KTS-3 (Sama et al., 2016) possess lower selectivity to Cs⁺ in the presence of high competitive ion concentrations. For FEM-SiS₂ (Li et al., 2013) and LMSiS₂ (Wang et al., 2019a), synthesis was extremely slow, Cs⁺ selectivity was low in highly alkaline conditions, and an undesirable release of organic anions occurred due to the ion exchange (Fahnestock et al., 2017).

Recently, Sb³⁺-based chalcogenide has attracted significant interest because the lone-pair electrons tend to adopt asymmetric coordination geometries and often undergo self-condensation when combined with chalcogenide ions to form oligomeric chain or rings. This contributes to

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Assessment of soil quality indexes for different land use types in typical steppe in the loess hilly area, China

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ARTICLE INFO

Keywords:
Soil quality index
Revised minimum data set
Scoring method
Principal component analysis
Typical steppe

ABSTRACT

Soil quality indexes (SQIs) are important for evaluating degraded ecosystems. The objective of this study was to assess different land use soil quality using total data set, minimum data set (MDS), and revised minimum data set (RMDS) indicator selection methods and linear and non-linear scoring methods. Four land uses, which were including degraded grassland (DG), forest grassland (FG), contour trench grassland (CG) and fibrous pine grassland (FPG) in a typical region of loess hilly area in Ningxia, were taken as the research object. Eighteen indicators (soil bulk density, CMB, prometric mean diameter, MDS, mean weight diameter, PWC, field water storage capacity, capillary porosity, total porosity, soil organic carbon, TN, total nitrogen, total phosphorus, AK, available potassium, available nitrogen, microbial biomass carbon, microbial biomass nitrogen, SK, urease activity, protease activity, CA, catalase activity, PPA, phosphatase activity, and urease activity) of soil physical, chemical, and biological characteristics of the 0–40 cm soil layer under different land use types were measured. Principal component analysis was used to select the MDS and RMDS. The results showed that three (CA, MDS) and PPA and six (PWC, CMB, TN, AK, SA, and CV) soil indicators were included in the MDS and RMDS, respectively. The agreement values of SQIs for the linear scoring method were higher than those of the non-linear scoring method. The linear scoring method was more suitable for the most appropriate method. The ranking of the SQI values of the four land use types was DG > FG > CG > FPG. The results showed that FG is the most beneficial measure for the restoration of degraded grassland, which has important guiding significance for the ecological construction of degraded grassland in the study area.

1. Introduction

As a key component of land ecosystem function, soil quality is an important factor of global sustainable development. Soil quality is a comprehensive reflection of physical, chemical, and biological properties. It is a sensitive indicator for revealing the dynamics of soil conditions, and it may vary with different land use and ecological restoration measures (Su and Zhao, 2003; Zhang et al., 2004; de Lima et al., 2006; Gu et al., 2009; Zheng et al., 2010). The type of land use affects the physical and chemical properties, biological processes, and land productivity of soil, which lead to the change in soil quality (Gong et al., 2011; Hammad et al., 2016; Hany et al., 2017; Babalola et al., 2019; Levi et al., 2020).

Soil quality is a complex functional entity that cannot be measured directly, but can be measured by soil quality indicators. Therefore, how

to select quantitative and qualitative indicators scientifically and reasonably is a challenge in the process of formulating soil quality indexes (SQIs). Soil quality plays a decisive role in maintaining biological performance and promoting plant health. Therefore, the impact of ecological utilization on soil quality has attracted extensive attention from scholars (Lohari and Holden, 2014; Reimann et al., 2018; Xia et al., 2019). Dominguez-Hejdar et al. (2019) evaluated the reclamation success in an open-pit coal mine using integrated soil physical, chemical, and biological quality indicators. Valizadeh et al. (2017) studied the assessment of SQIs for sub-affected agricultural land in Kurdistan Province, Iran. In another study conducted by Babalola et al. (2019) in Kordistan Province, Iran, three SQIs and two linear and non-linear scoring methods were used to assess the effects of slope gradient and soil change on soil quality degradation. There are many methods of soil quality assessment. The comprehensive evaluation method of soil

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Hydroxylamine addition enhances fast recovery of anammox activity suffering Cr(VI) inhibition

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HIGHLIGHTS

- NH₂OH recovered the Cr(VI) inhibition on anammox activity, with recovery over 100%.
- NH₂OH relieved Cr(VI) inhibition on anammox due to the reduction to Cr(III).
- 1–2 mg N/L NH₂OH accelerated the recovery of reactor performance with 2–4 h lag.
- The EPS activity and hence coagulant are better recovered with NH₂OH addition.

GRAPHICAL ABSTRACT



ARTICLE INFO

Keywords:
Anammox
Cr(VI) inhibition
Hydroxylamine
Recovery
Biological nitrogen removal

ABSTRACT

Hydroxylamine (NH₂OH), one of the most important intermediates of anammox was employed to test the recovery performance because of its stimulation to anammox bacteria. Batch test indicated simultaneous addition of 1.82–8.17 mg N/L NH₂OH relieved Cr(VI) inhibition because of extracellular reduction to Cr(III). The recovery efficiency (RE) was over 100%, with the effluent Cr(VI) and Cr(III) below 0.25 and 0.12 mg/L, respectively. Anammox activity after Cr(VI) inhibition was effectively recovered by 8 mg N/L NH₂OH with RE at 218%. The long-term operation showed 1–2 mg N/L NH₂OH accelerated the recover speed of nitrogen removal rate with 2–4 h lag, as well as improving NH₃ conversion ratio and reducing NO₂ production. After 50 days recovery, extracellular polymeric substance concentration, anammox activity and hence coagulant recovered better with NH₂OH addition. This study will provide the theoretical basis for rapid recovery of anammox activity by NH₂OH when suffering Cr(VI) inhibition.

1. Introduction

Anammox (Anaerobic Ammonia Oxidation) presents excellent performance in energy conservation and environmental protection (Fan

et al., 2020). But the sensitivity limits its application in practical wastewater treatment. Typically, the high-concentration ammonia wastewater produced by many industries is often accompanied by a variety of heavy metals. The presence of heavy metals will damage the

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Solar-tracking photovoltaic systems enhance soil carbon accumulation in desert steppe through microclimate-mediated changes in vegetation and microbial communities

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ARTICLE INFO

Keywords:
Solar-tracking photovoltaic system
Microbial community structure
Biopore activity
Soil carbon fractions
Desert steppe

ABSTRACT

Photovoltaic systems provide sustainable energy solutions, yet their ecological impacts, particularly on soil carbon accumulation, remain poorly understood in arid ecosystems. This study comprehensively assessed how solar-tracking photovoltaic systems (ST-PVS) influence soil carbon accumulation in a desert steppe by analyzing soil water, extracellular enzyme activities, microbial communities, and vegetation across different microclimate positions (between panels, West edge of panel, East edge of panel, and between panels). Our results demonstrated that ST-PVS significantly improved soil water distribution, particularly at the between and East edge positions, where optimized soil water conditions promoted plant biomass production and plant diversity, respectively. These vegetation changes drove shifts in soil microbial communities, notably increasing the abundance of Proteobacteria and Actinobacteria. Correspondingly, enhanced activities of p-N-Acetylglucosaminidase, and p-N-Acetylglucosaminidase accelerated the transformation of plant-derived organic matter into different soil carbon fractions. Structural equation modeling confirmed that soil water mediated this cascade mainly by promoting plant growth and modifying fungal community structure, with enzyme activity serving as the direct driver of carbon accumulation. However, the between position achieved the highest carbon accumulation, mainly supported by maximum plant biomass, while East edge mainly supported by superior plant diversity. Unlike fixed photovoltaic systems that often cause soil degradation beneath panels, ST-PVS maintains favorable micro-environmental conditions across all zones, simultaneously supporting energy generation and ecological restoration. These findings may establish ST-PVS as an integrated solution for enhancing soil carbon accumulation and sustainable land management in arid and semiarid regions.

1. Introduction

The construction of solar PV systems in China involves multiple ecological environments, including farmland, lakes, forests, Gobi, and deserts (Yang et al., 2020). Furthermore, in the future development of solar PV, the arid and semiarid regions in northwest China are the main strategic areas (Yin et al., 2020). The climate conditions in arid and semiarid regions can provide high solar radiation throughout the year, which is very suitable for the development and construction of solar PV systems (Jahin et al., 2019). However, the ecosystems in arid and semiarid regions are fragile, and solar PV construction has caused significant changes in land use, resulting in far-reaching impacts (Harrell et al., 2002; Xia et al., 2004). For instance, previous studies have

indicated that the large-scale construction of solar PV can reduce soil temperature and increase water content (Sun et al., 2020). The improvement of water conditions promotes vegetation growth and contributes to the improvement of the ecological environment (Gouard et al., 2021). The development of the 'PV + sand control' strategy, combining PV power generation with the plant sand fixation, effectively enhances vegetation coverage in the northwest arid region of China, satisfying energy demand while improving the ecological environment (Zhang et al., 2020). However, the fixed PV system only generates a precipitation micro zone at the edge of the solar panel, while the water shortage in the area directly below the solar panel causes soil degradation (Dai et al., 2022). By contrast, solar-tracking photovoltaic systems (ST-PVS) can generate two precipitation micro zones on the

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Plant species richness increases the relationship between soil microbial and extracellular enzyme activities and enhances soil fertility

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ARTICLE INFO

Keywords:
 Plant species richness
 Microbial functional groups
 Extracellular enzyme
 Soil fertility

ABSTRACT

Diverse plant species are crucial for the maintenance of soil health and the facilitation of nutrient cycling by recontouring for soil microbial communities and improving extracellular enzyme activities (EEAs). However, it is unclear whether the effect of plant species contribution on the interaction between soil microbial communities and EEAs contributes to the improvement of soil quality. Therefore, we selected three dominant and seven subordinate plant species from the northern Yanchi desert steppe of Ningxia to assess plant species richness (monoculture and 4-, 6-, 8-, and 14-species mixtures). We found the following: (1) The number of ADVs of soil bacteria and fungi in monoculture was generally higher than that in mixed communities. Although the microbial abundance varied among plant species richness levels, the core microbial communities were the same. EEAs in monoculture were higher than species mixtures, but EEAs did not show a consistent trend with the increase of species richness. (2) Phylogenetic Investigation of Communities by Reconstruction of Unobserved States predicted 5 primary functions, encompassing 25 secondary functions dominated by bacterial metabolism, and 5 primary functions, encompassing 29 secondary functions dominated by fungal bioturbation. (3) The Mantel test results demonstrated a strong correlation between soil carbon (C), nitrogen (N), and phosphorus (P) acquisition enzyme activities and the functional cellular processes of bacteria. (4) Structural equation modeling revealed that plant species richness directly negatively affected soil C, N, and P-acquiring enzyme activities. However, the functional activities of bacterial and fungal communities positively influenced soil organic carbon (SOC), total nitrogen (TN), and total phosphorus (TP) by indirectly regulating EEAs. The final model explained 69% of the SOC, 63% of the TN, and 29% of the TP. This study aimed to provide valuable data to support theoretical frameworks for conserving grassland biodiversity and maintaining soil health.

1. Introduction

Since 1500, approximately 30% of the global species have faced the threat of extinction or have been driven to extinction (Liu et al., 2023). In recent years, global climate change and intensified agricultural practices have emerged as primary drivers of the global biodiversity crisis (Li et al., 2019). Should this trajectory persist without intervention, the proportion of species at risk of endangerment may escalate to 37% by 2100 (Liu et al., 2023). Research indicates that the reduction of plant diversity has been recognized as a major threat to ecosystem functions and services (Cardinale et al., 2012; Liang et al., 2019; Plant

diversity influences soil functionality through the reorganization of soil microbial communities and modifications to extracellular enzyme activities (EEAs) (David et al., 2019). However, whether the loss of plant diversity will reduce soil functionality remains unclear. Therefore, studying the interactions between plant species richness and soil microbial communities and EEAs is critical to maintaining soil health. Within the context of biodiversity decline, both biotic and abiotic elements significantly impact soil microbial functional groups and EEAs (Chen et al., 2019; Strassburg et al., 2021), which play a key role in the maintenance and restoration of soil ecosystem functions (Koroloff et al., 2019). Soil microorganisms can decompose organic matter and release

Abbreviations: EEAs, Extracellular enzyme activities; ANVs, Amplicon sequencing variants; RICHUNG2, Phylogenetic Investigation of Communities by Reconstruction of Unobserved States; SEM, Structural Equation Modeling; SOC, Soil organic carbon; TN, total nitrogen; TP, total phosphorus; R²EV, R-squared coefficient of Genes and Genomes; MetaCyc, Metabolic Pathway Database.

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Dead-fallen shrubs exhibit beneficial effects in enhancing soil microbial activity and soil fertility in arid sandy land restoration

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Affiliations + expand

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Abstract

Shrub death occurs during arid sandy land restoration in northern China. However, the role of these shrubs in sandy soil restoration remains underexplored. In this study, soil samples were collected from areas with bare sand, standing living shrubs, and dead-fallen shrubs (at decay stages of 3–5, 7–9, and 11–12 years) in China's Mu Us Sandy Land. Soil samples (0–5 and 5–10 cm) were analyzed for moisture, pH, carbon/nitrogen fractions, extracellular enzyme activities, and microbial communities. Compared with bare sand, fallen shrubs increased soil moisture by 19.75–36.94% and lowered soil pH by 0.06–0.20 in 0–10 cm soil depths. Concurrently, soil enzyme activity and microbial community structure were notably improved by fallen shrubs, leading to an average 129% and 67% increase in soil carbon and nitrogen fractions, respectively. Structural equation model revealed that the accumulations of carbon and nitrogen at the two soil depths was primarily driven by soil enzymes and fungal communities. Additionally, dead-fallen shrubs also enhanced microbial network stability and increased predicted functional abundances. However, standing living shrubs showed less potential than dead-fallen shrubs in enhancing soil microbial activity and fertility during arid sandy land restoration, primarily due to the living shrubs' failure to increase soil moisture or add organic materials to sandy soils. In summary, these findings emphasize that retaining dead shrubs as natural soil amendments can significantly improve restoration outcomes in arid sandy ecosystems.

Keywords: Arid sandy soil; Dead-fallen shrubs; Soil enzyme activities; Soil microbial communities; Soil nutrients.

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Microbial diversity outweighs plant diversity in mediating the response of ecosystem multifunctionality to altered precipitation in a desert steppe
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Cui Han, Yi Zhang, Xu Luo, Ying Zhao, Xueqing Yang, Jiali Lian & Jianping Li

351 Accesses | 2 Citations | Explore all metrics

Abstract

Aims

Dryland ecosystems are susceptible to variations in precipitation. Biodiversity plays a vital role in regulating ecosystem functions. However, the effects of altered precipitation on plant and soil microbial diversity and their relationship with ecosystem multifunctionality (EMF) in desert steppes remain unclear.

Methods

We conducted a three-year precipitation manipulation experiment in a desert steppe in northwestern China to evaluate how altered precipitation influences plant and microbial diversity, EMF, and individual ecosystem functions.

Results

R33 significantly decreased the Shannon and Pielou indices of plant, as well as EF–GP and EF–P. R66 significantly decreased EMF, EF–GP, EF–N, and EF–P. In contrast, only R166 significantly decreased the Pielou index of plant. There were significant interannual variations in plant diversity, microbial diversity, EMF, and single functions. The interaction between precipitation and year significantly affected only plant diversity, microbial diversity, and EF–GP. The multi-threshold approach indicated that ecosystem functions were positively correlated with plant and fungal diversity and negatively correlated with bacterial diversity under altered precipitation. Additionally, the structural equation model demonstrated that precipitation regulated EMF by affecting plant and microbial diversity through changes in soil water content. Compared with plant diversity, microbial diversity was more significant in regulating the response of EMF to altered precipitation.

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Research paper
The impacts of shrub branch shelter and nitrogen addition on soil microbial activity and plant litter decomposition in a desert steppe
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ARTICLE INFO

Keywords:
 Shrub shelter
 Nitrogen addition
 Soil enzyme activity
 Soil microbial community structure
 Litter decomposition
 Desert steppe

ABSTRACT

Shrub encroachment and nitrogen (N) deposition have become two critical factors that cause global grassland ecosystem degradation. However, the combined effects of shrub branch shelter and N deposition on soil microbial activity and litter decomposition in grasslands remain unclear. This study adopted four branch shelter levels (0% (no shelter), 30%, 50% and 70% as the main plots, and four N additions including 0 g m⁻², 10 g m⁻², 20 g m⁻², and 40 g m⁻²) as subplots in a Northwest China desert steppe. Subsequently, soil temperature, soil moisture, pH, N content, activities of C and N cycling-related enzymes, and microbial community structure between 0 and 5 cm were determined post 2 years, and litter decomposition from dominant plants was also determined. The results demonstrated that N additions increased the soil inorganic N content, but decreased soil pH value. However, branch shelters enhanced soil moisture, yet had no effect on soil pH value and N content. As results, N additions inhibited soil N cycling-related enzyme activities, but branch shelters accelerated the activities of the most tested extracellular enzymes. Branch shelters also promoted opposite potentials to N additions in affecting soil microbial community structure. Overall, shrub shelters counteracted the negative effects of nitrogen deposition on soil enzyme activity and microbial community structure. Consequently, both branch shelter and N addition promoted litter decomposition. Therefore, branch shelter could be used as feasible measure to reverse degraded grasslands caused by shrub encroachment and N deposition in arid and semiarid areas.

1. Introduction

Over the past few centuries, under the influence of climate change and human activities, the number of shrubs in global grassland ecosystems has increased (Vidalverde et al., 2012; Benschley et al., 2018), especially in the semi-arid regions of the Northern Hemisphere (Shen et al., 2023). What's worse, as the global climate warms, shrubs are expected to continue to expand in grasslands (Gastner et al., 2019). Currently, shrub encroachment (that over-suppression of shrubs grow in grassland) has degraded global grassland ecosystems, and its adverse effects on drought regions cannot be ignored (Dong et al., 2021). For instance, studies showed that shrub encroachment reduced soil moisture, and decreased soil extracellular enzyme activities, total carbon, total nitrogen, and total phosphorus in grasslands (Guo et al., 2020; Zhao et al., 2023; Zhao et al., 2024a). Studies also revealed long-term

shrub encroachment decrease in perennial herbs, water shortages, and soil degradation (Zhao et al., 2019). Consequently, the decreased herb coverage and yield in shrub-encroached grasslands reduce the productivity of livestock grazing, which cause a dilemma both for environment and husbandry (Zhao et al., 2024a, 2024b). Therefore, effective measures are urgently required to prevent the global continued expansion of shrubs in grassland.

Presently, fire management has been adopted extensively to reduce shrub encroachment in grassland restoration (Wolfe et al., 2019; Wilson et al., 2018; Wang et al., 2015). However, these studies indicated that fire management can increase bare area, reduce soil quality, and increase the likelihood of invasion by alien species in grasslands. Therefore, current management measures for prevent encroachment may cause environmental pollution and create a bleak landscape. Our previous studies have demonstrated that the tree branches, when cut

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Flooding-driven gravel encroachment reshapes plant community structure and reduces community stability in an arid alluvial fan

Research Article | Published: 24 January 2025
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Zhigang Li & Yun Shi

165 Accesses | 1 Citation | Explore all metrics →

Abstract

Background and aims

Flooding-driven gravel encroachment is common in arid alluvial fans. However, the effect of gravel encroachment on the plant community structure remains unclear.

Methods

We characterized the relationship between flooding-driven gravel encroachment and plant community structure in an arid alluvial fan in China. Meanwhile, a simulation experiment was conducted to evaluate the soil temperature, water retention, and water-holding capacity of soils mixed with 0%, 20%, 40%, 60, and 80% gravel.

Results

The percentages of gravel in the soils of five representative plant communities, *Stipa breviflora*, *Stipa tianschanica*, *Comovulus traqacanthoides*, *Ephedra rhytidosperma*, and *Salsola laricifolia* was 34.71%, 38.68%, 61.71%, 64.30%, and 65.95%, respectively. A further simulation experiment revealed that soil temperature increased, yet soil water retention and water-holding capacity decreased as the gravel percentage increased. The density, coverage, biomass, and importance value of perennial herbs decreased, whereas those of shrubs increased with increasing gravel percentage in the soils. Thus, gravel encroachment led to an alteration from perennial herb-dominant communities to shrub-dominant communities owing to soil moisture deterioration. Although this study also found that shrubs create a beneficial living environment for herbs under their canopy, the niche overlap between perennial herbs and shrubs in shrub-dominant communities was significantly promoted. Consequently, gravel encroachment resulted in lower community stability in shrub-dominant communities.

Adaptation strategies of the soil microbial community to stoichiometric imbalances induced by grassland management measures in the desert steppe of Northwest China

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Affiliations + expand

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Abstract

Grassland management measures strongly affect soil resources availability which can not meet microbial elemental demands, potentially resulting in stoichiometric imbalances. This limits microbial metabolic activities and nutrient cycling. However, there is still limiting understanding of the adaptation strategies of soil microbial communities to stoichiometric imbalances. We investigated soil labile resources, microbial biomass stoichiometry, extracellular enzymatic stoichiometry (EES), and microbial communities under three management measures (planting *Caragana korshinskii* (NTC), moderate-intensity thinning *Caragana korshinskii* (MTC) and grassland (GL)) in desert steppe of Northwest China, and assessed microbial metabolic limitation. Lower soil labile C:N and C:P values, and higher microbial biomass C:N and C:P values were found in NTC and MTC, leading to lower C:N and C:P imbalances. The microbial communities maintained stoichiometric homeostasis through improving the threshold elemental ratio (TER), adjusting enzymes production and extracellular enzymatic stoichiometry (EES), and increasing microbial biomass P, to store scarce nutrients (N and P), consequently alleviating N and P limitations. Stoichiometric imbalances could better explain the variation of bacterial community compared with fungal community. The C:N imbalance was closely related with bacterial and fungal communities composition and diversity. Partial least squares path modelling highlighted that grassland management measures altered microbial communities, which was directly associated with EES and indirectly associated with high TER. Overall, these results helped to better understand the response of microbial metabolic activities and communities to stoichiometric imbalances changes induced by grassland management measures in the desert steppe. And moderate-intensity thinning *C. korshinskii* was a promising management measure for Ningxia desert

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Response of maize growth and soil biological characteristics to planting density under fertigation in a semi-arid region

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Abstract: Increasing the planting density can exacerbate crop competition for water, nutrients and space which results in a decline in the crop yields. However, the effect of increasing planting density on crop growth and soil biological characteristics in barren sandy land in the semi-arid regions are still unclear. In this study, we investigated the effects of six planting densities (5.4 × 10⁴, 6.45 × 10⁴, 7.95 × 10⁴, 9.5 × 10⁴, 9.75 × 10⁴ and 10.5 × 10⁴ plants/hm²) on maize growth, photosynthesis characteristics, yield and soil biological characteristics in barren sandy soil in the semi-arid region of Ningxia, China. The results indicated that the stem diameter and spike length decreased linearly with increasing planting density. The plant height, spike weight, grain weight and 100-grain weight decreased with increasing planting density. Moreover, the root length increased with increasing planting density. The diameter, volume and activity increased and then decreased with increasing planting density. There was no significant difference ($p > 0.05$) in the effect of planting density on transpiration rate, intercellular CO₂ concentration. As well, the soil microbial biomass carbon and microbial biomass nitrogen decreased with increasing planting density. The soil catalase activities increased and then decreased with increasing planting density. The alkaline phosphatase activity, the amounts of soil bacteria and actinomycetes increased with increasing planting density. Generally, a moderately increasing planting density can improve maize yield when water and nutrients are sufficient. The optimal planting density was 8.29 × 10⁴ plants/hm² and the highest yield was 15.84 t/hm² in barren sandy soil in semi-arid region of Ningxia, China. This study provides a theoretical basis for high yield and high efficiency of maize.

Keywords: maize growth, planting density, yield, fertigation, soil enzyme activity
DOI: 10.25165/ijabre.20241702.8090

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1 Introduction

Maize (*Zea mays* L.) is a thermophilic C₄ short-day plant with high light efficiency and sensitivity to light duration. As a high-yield crop for both food and feed, its cultivation is of great significance to food security in the world^[1]. The practice has shown that increasing planting density can improve the maize yield, while excessively dense planting has a negative effect on growth, yield and quality^[2]. Lu et al.^[3] confirmed that grain yield was highest for a maize planting density of 6.9 × 10⁴ plants/hm² and biological yield was highest at 9.0 × 10⁴ plants/hm² under flood irrigation conditions^[3]. The fresh matter and dry matter yield of maize increased significantly with the increase in planting density^[4]. Another study showed a quadratic relationship between planting density and silage maize yield^[5]. Resource utilization is insufficient under low-density planting, while the disease and insect pest problems are intensified and lodging is prone to occur which

reduces production under high-density planting^[6]. In 2016, the highest dry yield record of 22.50 t/hm² in China was set for the cultivated density of maize in Xinjiang Province of 12.0 × 10⁴ to 13.5 × 10⁴ plants/hm².

There is an interaction between planting density and soil characteristics, especially for rhizosphere exudates and soil microorganisms^[7]. Cha et al.^[8] studied the changes of enzyme activity in the rhizosphere soil of winter wheat under different planting densities, and showed that enzyme activity was higher under medium-density treatment. Ma et al.^[9] found that with the increase of planting density, total wheat rhizosphere microbes and enzyme activity showed rising trends at low density, but this trend changed to be a downward trend after reaching a specific density, the yield showed a similar performance, indirectly showed that an increase in microorganism numbers may increase crop yield. There are few reports on the response mechanism of rhizosphere soil, especially rhizosphere microbial characteristics to maize planting density.

The semi-arid zone in the middle part of Ningxia is an interlacing zone of agriculture and pasture. However, maize yield here is only 10.5 t/hm² for a density of 6.0 × 10⁴ plants/hm². On the basis of studying the limiting factors such as water and fertilizer, it is of great significance to increase the unit yield of maize through reasonable dense planting in order to ensure food security. Based on this, under fertigation conditions, this experiment investigated the effects of the planting density on the growth and development, physiology, yield of maize and the soil biological properties. This study provided a theoretical basis for determining a high-yield

Integrated transcriptomic and metabolomic analyses revealed that AmASMT positively regulates drought tolerance in *Agropyron mongolicum* by modulating melatonin biosynthesis

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Affiliations + expand

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Abstract

Global climate change has exacerbated drought stress episodes, which are emerging as a serious threat to plant growth and productivity worldwide. In this context, melatonin has emerged as a potential signaling molecule for improved drought tolerance in plants, primarily through enhanced antioxidant defenses. Here, physiological, transcriptome, and metabolome analyses were used to investigate the physiological and molecular mechanisms of melatonin in drought stress mitigation in *A. mongolicum* with both drought-tolerant and drought-sensitive genotypes. Physiological results suggest that melatonin improves drought tolerance in *A. mongolicum* primarily by enhancing the antioxidant enzyme system. Integrated transcriptomic and metabolomic analyses have demonstrated that the tryptophan metabolic pathway plays a crucial role in melatonin-mediated enhancement of drought resistance. Notably, we report on the drought-related gene AmASMT, which encodes a melatonin biosynthesis enzyme and contributes to drought stress tolerance in *A. mongolicum*. We found that the AmASMT overexpressing rice lines exhibited higher endogenous melatonin levels and increased tolerance to drought stress by promoting antioxidant systems. Our findings indicate that the AmASMT plays a crucial role in regulating melatonin biosynthesis in *A. mongolicum* while facilitating protection against drought stress. These results shed light on the regulatory mechanism of melatonin biosynthesis related to the drought stress response in *A. mongolicum*, and provides a basis for exploiting melatonin-mediated mechanisms and genetic engineering approaches to enhance plant drought tolerance.

Keywords: *Agropyron mongolicum*; AmASMT; Drought; Melatonin; Metabolome; Transcriptome.

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Effects of nitrogen fertilization combined with subsurface irrigation on alfalfa yield, water and nitrogen use efficiency, quality, and economic benefits

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Proper water and fertilizer management strategies are essential for alfalfa cultivation in arid areas. However, at present, the optimal amounts of subsurface irrigation and nitrogen (N) supply for alfalfa (*Medicago sativa* L.) cultivation are still unclear. Therefore, a field experiment was conducted in 2022 in Yinchuan, Ningxia, China, to explore the effects of different subsurface irrigation levels (W₀, 50% of ET_c [crop evapotranspiration]; W_{0.5}, 75% of ET_c; W₁, 100% of ET_c) and N application rates (N₀, 0 kg/ha; N₁, 75 kg/ha; N₂, 150 kg/ha; N₃, 225 kg/ha; N₄, 300 kg/ha) on alfalfa yield, crop water productivity (CWP), N use efficiency (NUE), quality, and economic benefits. Besides, the least squares method and multiple regression analysis were used to explore the optimal water and N combination for alfalfa cultivation under subsurface irrigation. The results showed that the alfalfa yield, crude ash content, and partial factor productivity from applied N (PPFN) were the highest under W_{0.5} level, but there was no difference in PFPN compared with that under W₀ level. The branch number (BN), leaf area index (LAI), yield, CWP, irrigation water productivity (IWP), crude protein content (CPC), and economic benefits increased and then decreased with the increase of N application rate, reaching a maximum at the N₂ or N₃ level, while the NUE and PFPN decreased with the increase of N application rate. Considering the yield, CWP, NUE, quality, and economic benefits, W_{0.5}N₂ treatment was the optimal for alfalfa cultivation under subsurface irrigation. Besides, when the irrigation volume and N application rate were 69.8–88.7% of ET_c and 145–190 kg/ha, respectively (confidence interval: 85%), the yield, CPC, and economic benefits reached more than 85% of the maximum. This study will provide technique reference for the water and N management in alfalfa cultivation in Northwest China.

KEYWORDS

multiple regression analysis, *Medicago sativa* L., fertilizer management, water productivity, crude protein content

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Different responses of leaf and root economics spectrum to grazing time at the community level in desert steppe, China

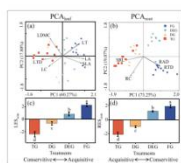
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HIGHLIGHTS

- Grazing time led to an inverse pattern of the leaf and root traits economic spectrum.
- As the grazing time increases, plants tend to prioritize the growth of aboveground.
- TP and AK are the main driving factors of plant traits under different grazing times.

GRAPHICAL ABSTRACT



ARTICLE INFO

Editor: Charlotte Pechenider
Keywords: Grazing time, Plant functional traits, Plant economic spectrum, Community level, Desert steppe

ABSTRACT

The plant economic spectrum can explain the trade-off strategies of vascular plants between resource acquisition and storage. Grazing can alter the plant functional characteristics of grassland ecosystems, resulting in a shift in plant resource acquisition strategies. Taking fenced grassland as a control, in this study we quantified six leaf traits and four root traits of 14 plant species (those that comprised ~85% of the species community abundance) of different grazing time grasslands in desert grasslands in Ningxia. We examined how grazing time shapes the functional structure of plant communities and the resource acquisition strategy. The results revealed an inverse pattern of the leaf and root economic spectrum of leaf and root traits, that is, as grazing time increased, the leaf traits shifted from an acquisitive type to a conservative type of resource acquisition strategy. In contrast, the root traits showed a shift from a conservative type to an acquisitive type of resource acquisition strategy. Grazing time leads to a whole plant economic spectrum, and plant functional traits may facilitate their response to environmental change, the study of which can thereby deepen our understanding of the plant economic spectrum. Our study

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Feeding behavior and life-history parameters of *Therioaphis trifolii* (Hemiptera: Aphididae) on 2 alfalfa cultivars

Xianmei Song, Xinpu Wang

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Abstract

Alfalfa, *Medicago sativa*, is a link connecting crop production and animal husbandry and plays a dominant role in the development of the livestock sector. The productivity of alfalfa is adversely affected by aphids' feeding damage and their capacity to transmit viral plant pathogens. To increase alfalfa forage yield, it is imperative to control pest insects and use resistant varieties. The aim of this study was to identify the mechanism of *M. sativa* resistance to aphids by examining changes in the physiology, feeding behavior, and life history of the pests. The leaves of Gannong No. 5 (HA-3, aphid-resistant cultivar) had denser, longer trichome and thicker cortical parenchyma cell, and greater xylem thicknesses than those of Hunter River (Hu, aphid-susceptible cultivar). Nonprobing behaviors suggested that the spotted alfalfa aphid, *Therioaphis trifolii*, became more active in searching for suitable feeding sites on HA-3 than on Hu plants. Additionally, *T. trifolii* showed shorter durations for salivating into sieve elements and ingesting phloem sap on HA-3 plants. Life-table analysis showed that *T. trifolii* on HA-3 had longer developmental duration, higher mortality rate, and lower fecundity, net reproductive rate, intrinsic rate of increase, finite rate of increase and gross reproduction rate values than that on Hu plants. Moreover, relative fitness was significantly reduced in *T. trifolii* on HA-3 plants. The results of this study provided a basis for developing better control strategies for *T. trifolii* and studying the mechanisms of alfalfa resistance to aphids.

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Extending grazing time during the warm season can reduce P limitation and increase the N cycling rate in arid desert steppes

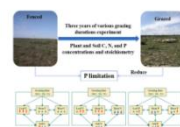
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HIGHLIGHTS

- Extending grazing time in warm season can reduce P limitation in desert steppes.
- Extending grazing time in warm season can increase N cycling rate in desert steppes.
- As grazing time increased, nutrients are moved from the subsoil to the surface.
- The C:N, C:P, and N:P in plants and soils show significant anisotropic growth.
- The main environmental factor driving plant stoichiometry is SOC, pH, STP and SuCP.

GRAPHICAL ABSTRACT



ARTICLE INFO

Editor: Manuel Esteban Lora-Bayo
Keywords: Plant region, Grazing time, Response ratio, Element limitation, Desert steppe

ABSTRACT

Ecological stoichiometry serves as a valuable tool for comprehending biogeochemical cycles within grassland ecosystems. The impact of grazing time on the concentration and stoichiometric characteristics of carbon (C), nitrogen (N), and phosphorus (P) in desert steppe ecosystems remains ambiguous. This research was carried out in a desert grassland utilizing a completely randomized experimental design. Four distinct grazing time treatments were implemented: fenced grassland (FG, control), delay to start and early to end grazing grassland (DEG), delay to start grazing grassland (DYG), and traditional grazing grassland (TG). The patterns of C, N, and P concentrations and their stoichiometry in various components of the ecosystem, as well as their driving factors under different grazing times were examined. The results showed that grazing time positively influenced C and N concentrations in leaves, while negatively affecting N concentrations in roots. TG had a significant positive effect on soil P concentrations but a negative effect on soil C:P and N:P ratios. Plant C:N, C:P, and N:P ratios were mainly influenced by N and P. The soil C:N ratio was primarily influenced by soil N, the soil C:P ratio was affected by both soil C and P, and the soil N:P ratio was influenced by both soil N and P. The growth of plants in desert steppes is mainly limited by P; however, as grazing time increased, P limitation gradually decreased and

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REVIEW ARTICLE

Heterotrimeric G protein signalling in plant biotic and abiotic stress response

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Keywords

G protein, immunity signalling, drought, salt stress, abiotic stresses, ROS

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INTRODUCTION

The membrane-bound G proteins are heterotrimeric proteins bound to guanine nucleotides that consist of three subunits, G-protein alpha (Gα), beta (Gβ) and gamma (Gγ). The number of plant Gγ subunits is higher than that of α and β subunits, and thus Gγ largely determines the diversity of plant heterotrimeric G protein functions (Trause et al. 2007, 2008; Zhang et al. 2013).

and abiotic stress responses, and the detailed studies of G proteins in biotic stress response might provide some clues for studies in the abiotic stress field. The functional models of G proteins in biotic and abiotic stresses are also compared and analysed; thus, this review could serve as a model to guide studies of other protein complexes in plants.

DEFINITION AND CLASSIFICATION OF G PROTEINS

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BMC Plant Biology

RESEARCH

Open Access

Seed yield as a function of cytokinin-regulated gene expression in wild Kentucky bluegrass (*Poa pratensis*)

Jingqiang Zhang¹, Xue Ha² and Hailing Ma^{2*}

Abstract

Background Kentucky bluegrass (*Poa pratensis* L.) panicle development is a coordinated process of cell proliferation and differentiation with distinctive phases and architectural changes that are pivotal to determine seed yield. Cytokinin (CK) is a key factor in determining seed yield that might underpin the second 'Green Revolution'. However, whether there is a difference between endogenous CK content and seed yields of Kentucky bluegrass, and how CK-related genes are expressed to affect enzyme regulation and downstream seed yield in Kentucky bluegrass remains enigmatic.

Results In order to establish a potential link between CK regulation and seed yield, we dissected and characterized the Kentucky bluegrass young panicle, and determined the changes in nutrients, G types of endogenous CKs, and 16 genes involved in biosynthesis, activation, inactivation, re-activation and degradation of CKs during young panicle differentiation of Kentucky bluegrass. We found that high seed yield material had more meristems compared to low seed yield material. Additionally, it was found that seed setting rate (SSR) and lipase activity at the stage of spikelet and floret primordium differentiation (S3), as well as 1000-grain weight (TGW) and zeatin-riboside (ZR) content at the stages of first bract primordium differentiation (S1) and branch primordium differentiation (S2) showed a significantly positive correlation in the two materials. And zeatin, ZR, dihydrozeatin riboside, isopentenyl adenosine and isopentenyl adenosine riboside contents were higher in seed high yield material than those in seed low yield material at S3 stage. Furthermore, the expressions of *PpZRR1*, *PpZRR2*, *PpZRR3* and *PpZRR4* were positively correlated with seed yield, while the expressions of *PpCKO2*, *PpCKO3* and *PpCKO7* were negatively correlated with seed yield in Kentucky bluegrass.

Conclusions Overall, our study established a relationship between CK and seed yield in Kentucky bluegrass. Perhaps we can increase SSR and TGW by increasing lipase activity and ZR content. Of course, using modern gene editing techniques to manipulate CK related genes such as *PpZRR3/6*, *PpCKO1* and *PpCKO3/7*, will be a more direct and effective method in Kentucky bluegrass, which requires further validation.

Keywords Wild Kentucky bluegrass, Cytokinin, Gene expression patterns, Seed yield parameters, Nutrient

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Research paper

Vegetation drives soil microbial metabolic limitation through modifications of soil properties and microbial biomass during desert grassland-shrubland state anthropogenic transition

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ARTICLE INFO

Keywords
Soil microbial metabolism
Vegetation heterogeneity
Microbial nutrient limitation
Microbial carbon use ratio

ABSTRACT

Soil microclimate heterogeneity was investigated in grassland-shrubland ecosystem. However, there is still limited attention on the changes in plant and animal C:N:P availability and soil microbial metabolic limitation caused by anthropogenic vegetation transition in the desert grassland of northern China, as well as their driving mechanisms. To study the question, we quantified the availability of plant litter and soil physicochemical properties, microbial biomass, extracellular enzyme activities, and microbial metabolic limitation status during the vegetation transition from grassland to shrubland. First, our results showed that anthropogenic shrub encroachment reduced plant C, soil water, and soil nutrient contents while increasing N and P contents in both plant and soil. The conditions also suggested that litter nutrient content related to plant resources, while those increased soil nutrient. Secondly, with the gradient of shrub encroachment, the microclimate (except for soil C:N ratio) of soil litter will showed a decreasing trend and a positive correlation. Furthermore, our study indicated that shrub encroachment reduced soil microbial biomass and extracellular enzyme activities, altering microbial metabolism and pattern of enzyme allocation. Redundancy analysis revealed that available carbon, water soluble organic carbon, and microclimate were mainly driven by soil water content, nutrient content, and nutrient availability. The soil microbial carbon use ratio revealed that along the transition from desert grassland to shrubland, soil microbial nutrient limitation shifted from P to N, while energy C:P limitation increased. The soil microbial metabolic limitation was driven jointly by plant and litter through modifications of soil properties and microbial biomass. Additionally, we propose plant and litter may change their biomass and nutrient contents in response to shrub encroachment, but forested desert grassland-shrubland system, especially, will need to further studies. Our data suggest microclimate and soil microbial metabolic limitation status in northern China. This study provides new insights into the C, N, and P cycling in desert soil system following shrub encroachment caused by climate change and anthropogenic disturbance.

1. Introduction

Shrub encroachment has become a common phenomenon in grassland-shrubland ecosystems, with extensive records documented across continents (Chase et al., 2015; D'Odorico et al., 2012; Huang et al., 2015; Van Soest, 2003). Shrub encroachment rapidly increased shrub density and

coverage in grassland ecosystems, with its main driving factors being global climatic change and human disturbance (Holtby et al., 2016; D'Odorico et al., 2012; Elmholt et al., 2012; Zhao et al., 2017a). Climate factors involve alterations in rainfall patterns, increased concentrations of CO₂, and increasing temperatures (Victor et al., 2015; Zhao et al., 2017a). Human disturbances include overgrazing, fire

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Comparative metabolomic analysis of the metabolism pathways under drought stress in alfalfa leaves

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ARTICLE INFO

Keywords
Alfalfa
Metabolites
Drought stress
Nutrient acids
Acetyl-salicylate

ABSTRACT

Alfalfa (*Medicago sativa* L.) is a very important forage that is severely threatened by water deficiency. Metabolic changes under drought stress conditions are largely unknown in alfalfa. Therefore, two alfalfa (*Medicago sativa* L.) cultivars with contrasting tolerance to drought, namely the drought-tolerant 'Inland DT' and drought-sensitive 'WLSBRT DT', were investigated to identify metabolic responses to drought stress. Both the tolerant and sensitive alfalfa showed significant differences in physiological levels under water-limited conditions. The drought-tolerant cultivar DT sustained growth despite reduced water potential and photosynthesis, suggesting its capacity over the past 40 years. Such anthropogenic encroachment has formed a desert grassland-shrubland system, especially, will need to further studies. Our data suggest microclimate and soil microbial metabolic limitation status in northern China. This study provides new insights into the metabolic changes of alfalfa under severe drought stress. This study provided new insights into the metabolic changes of alfalfa under drought stress conditions.

1. Introduction

Alfalfa is a highly valued legume forage that is among the most extensively cultivated in the world (Li et al., 2017). Alfalfa has a deep root system which helps prevent water loss in semi-arid lands. Consequently, alfalfa is relatively resistant to drought compared to many other food crops (Tang et al., 2013). Nonetheless, drought is one of the major environmental factors that determine plant growth and productivity. In the last two decades, the effect of drought stress on crop yield, growth and quality has increasingly become a major environmental problem (Wu et al., 2017) and represents a major limitation in alfalfa production (Zhi et al., 2015). As a consequence, the aim of breeding programs to increase water-use efficiency and drought tolerance is essential to achieving high crop yields.

Drought tolerance is defined as the ability of plants to grow despite a suboptimal water supply (Liu, 2010). The mechanisms which counter drought tolerance include osmotic adjustment and the production of

protective metabolites, protein and ROS scavenging system (Dai et al., 2015). With limited soil water content, plant metabolism can change at the developmental, physiological and molecular levels, leading to reduced growth and photosynthetic rates, modified photosynthetic protein and electron transport as well as reduced carbon oxidation cycle and photosynthetic carbon (Gottschalk and Frensch, 2002; Rasmussen and Janda, 2012; Poth et al., 2014). Therefore, understanding the mechanisms of drought stress in alfalfa plants and approaches to improve drought tolerance is important to increasing the productivity of alfalfa. The degree of drought damage to plants varies with plant genotypes and growth stages (Georgescu, 2015). Genotypes can be divided into four groups based on their yield response to stress conditions (Mullish et al., 2006). However, genotypes with high yields under conditions of both stress and non-stress are the most desired varieties in our production. Consistently, the breeding of drought-tolerant alfalfa is currently based on yield and direct selection of phenotypic traits. However, this is a time-consuming and laborious task that requires field trials under dry



RESEARCH ARTICLE

Effects of warming seasonal rotational grazing on plant communities' structure and diversity in desert steppe

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灌枝覆盖对宁夏荒漠草地土壤呼吸的影响

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摘要: 骆驼刺属 (*Caragana*) 灌木是荒漠北方地区广泛应用于退化荒漠草地恢复的常见植物, 然而这些灌木需要定期的平茬以促进其更新, 同时平茬产生的大量灌枝为草地恢复提供了丰富的资源。因此, 以宁夏盐池荒漠草地为研究对象, 以平茬后骆驼刺 (*Caragana korshinskii*) 灌枝为覆盖材料, 设置了无枝条覆盖 (CK)、短枝条覆盖 (S, 枝条长度 5–10 cm) 和长枝条覆盖 (L, 枝条长度 70–130 cm) 3 个处理, 以探讨灌枝对荒漠草地土壤呼吸的影响。结果表明, 与 CK 相比, 2 种覆盖措施均可以显著降低土壤温度, 且 S 处理增加土壤含水量 0.05%–3.31%, L 增加土壤含水量 0.04%–1.89%。此外, 2 种覆盖处理均显著提高了土壤有机碳含量和土壤呼吸速率, 增加了土壤有机碳含量和土壤呼吸速率。同时, 灌枝覆盖还增加了土壤水分, 且 S 和 L 处理土壤水分含量高于 CK (56.09% 和 20.09%)。相关分析结果表明, 土壤水分、土壤温度、土壤水分及植物生长均不同程度影响了草地呼吸, 灌枝覆盖可以通过改善土壤水分促进植物生长, 同时通过促进植物生长增加对有机碳的分解和再分配, 并最终促进了土壤的呼吸速率。本研究证明, 荒漠草地平茬的灌枝覆盖可以促进土壤碳库, 利用退化草地的生态恢复, 为平茬灌木利用提供了途径, 同时也为荒漠化草地管理提供了借鉴。

关键词: 灌枝覆盖; 荒漠草地; 土壤呼吸; 生态恢复

The impacts of shrub branch covering on soil respiration in a desert steppe of Ningxia

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Abstract: *Caragana* are common shrubs that are extensively planted for the restoration of degraded desert steppes in northern China. However, those shrubs require regular stumping to encourage their regeneration. As a result, lots of branches are produced, and these branches may provide abundant resources for restoration of degraded desert steppe. Thus, this study utilized the stumped branches as mulch materials, establishing three treatments: no branch mulch (CK), mulch with short branches (S, branches 5–10 cm in length), and mulch with long branches (L, branches 70–130 cm in length) to investigate the impact of branch mulching on soil respiration in the desert steppe of Yanchi County, Ningxia. The findings indicated that, in comparison to CK, both branch mulch treatments significantly lowered soil temperature and raised soil water content, with treatment S enhancing soil water content by 0.05%–3.31%, and treatment L by 0.04%–1.89%. In addition, both covered treatments significantly accelerated the activities of cellulase, β -1,4-xylanase, urease, β -1,4-N-acetylglucosaminidase and β -1,4-phosphatase, increased contents of soil organic carbon and available phosphorus, enhanced

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Research article

Grazing period management affects the accumulation of plant functional groups, and soil nutrient pools and regulates stoichiometry in the desert steppe of Northwest China

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Highlights:

- Grazing alleviates phosphorus limitation in the desert steppe.
- Aboveground biomass is the main factor driving plant nutrient storage.

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苜蓿种子田间作小黑麦对饲草产量、水分利用及苜蓿种子产量的影响

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摘要: 针对宁夏引黄灌区地下水超采引起苜蓿营养生长过剩, 限制了其生殖生长, 造成种子产量低等问题, 试验采用田间随机区组设计, 于 2022 年 9 月主栽苜蓿种子田间作小黑麦, 小黑麦的播量设置 5 个水平, 分别为 90 (IMS₁), 135 (IMS₂), 180 (IMS₃), 225 (IMS₄), 270 kg·ha⁻¹ (IMS₅)。苜蓿单独为对照 (SM)。研究了不同播量小黑麦与苜蓿间作对第一茬牧草产量、水分利用以及第二茬苜蓿种子生产性能的影响。结果表明, 小黑麦与苜蓿间作可显著提高其干草产量和粗蛋白产量, 较苜蓿单独平均提高了 25.71% 和 0.02%。小黑麦与苜蓿间作可促进苜蓿群体用水, 提高水分利用效率。为第二茬苜蓿种子收获提供适宜的土壤水环境, 进而促进植株的个体发育和种子产量。其中间作群体耗水量较苜蓿单独均显著降低, 且在 IMS₅ 处理下, 耗水量达到最大, 为 455.72 mm。同时, 在 IMS₅ 处理下苜蓿实际种子产量达到最高, 为 448 kg·ha⁻¹, 较苜蓿单独提高了 38.33%。因此, 小黑麦播量为 225 kg·ha⁻¹ 时苜蓿实际种子田间作有利于提高第一茬牧草生产性能和水分利用效率, 同时对第二茬苜蓿种子生产具有明显的正向效应。

关键词: 小黑麦; 间作; 干草产量; 水分利用效率; 苜蓿种子产量

Effects of intercropping triticale with alfalfa on system yield, resource utilization, and alfalfa seed yield

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Abstract: The high water table in the diverted irrigation area of Ningxia causes low seed yield of alfalfa (*Medicago sativa*), because the excessive nutrient supply favors its vegetative growth and limits its reproductive growth. We conducted a field experiment to explore whether intercropping with triticale (*Triticosecale*) could address this issue. The field experiment began in September 2022, and had a one-way randomized block design, with triticale intercropped with alfalfa. Five seeding rates of triticale were tested, namely: 90 (IMS₁), 135 (IMS₂), 180 (IMS₃), 225 (IMS₄), and 270 kg·ha⁻¹ (IMS₅). Alfalfa monoculture served as the control (SM). The effects of intercropping with triticale at different seeding rates on the yield of the first forage crop, and the water use and seed production of the second alfalfa crop were investigated. The results show that intercropping with triticale increased the total hay yield and crude protein yield of alfalfa by an average of 25.71% and 6.02%, respectively, compared

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干旱及复水对河北木蓝生物量分配与渗透调节特征的影响

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摘要: 植物在遭受干旱胁迫后复水, 会经历渗透调节、修复、恢复过程, 且不同植物对水分亏缺的感知不同, 复水后的恢复状况也会存在差异。因此, 研究植物对水分与复水的恢复反应以植物恢复生态学具有重要意义。本研究采用盆栽法模拟干旱胁迫和复水处理, 以野生和栽培苜蓿为研究对象, 在持续干旱胁迫(15、30和45 d)以及复水(2和4 h)后进行生长及生理生化指标测定, 研究干旱胁迫和复水条件下2种木蓝物种生物量分配策略和渗透调节的渗透调节生理机制及其内在逻辑。结果表明: (1) 随着干旱胁迫时间的延长, 2种木蓝物种生物量分配策略和渗透调节生理指标(脯氨酸、可溶性糖、MDA)含量均呈上升趋势, 且随着复水时间的延长, 2种木蓝物种生物量分配策略和渗透调节生理指标(脯氨酸、可溶性糖、MDA)含量均呈下降趋势; (2) 野生和栽培苜蓿在干旱胁迫期间, 野生苜蓿的渗透调节生理指标(脯氨酸、可溶性糖、MDA)含量均显著高于栽培苜蓿; (3) 复水后, 野生苜蓿的渗透调节生理指标(脯氨酸、可溶性糖、MDA)含量均显著高于栽培苜蓿; (4) 野生和栽培苜蓿在干旱胁迫期间, 野生苜蓿的渗透调节生理指标(脯氨酸、可溶性糖、MDA)含量均显著高于栽培苜蓿; (5) 野生和栽培苜蓿在干旱胁迫期间, 野生苜蓿的渗透调节生理指标(脯氨酸、可溶性糖、MDA)含量均显著高于栽培苜蓿。 关键词: 木蓝; 干旱; 复水; 生物量分配; 渗透调节; 生理生化

Effects of drought stress and rehydration on biomass allocation and osmotic regulation characteristics of *Indigofera bungeana*

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Abstract: Plants under drought stress show various types of injury, and have adaptation strategies and repair processes that function during rehydration after drought stress. The degree of sensitivity to water deficit and the extent of recovery after rehydration differ among different plants. Therefore, it is of great significance to study drought tolerance and recovery after rehydration to breed drought-resistant and water-saving plants. In this research, a comparative analysis was conducted using wild and cultivated species of *Indigofera bungeana*. The plants were subjected to a drought stress treatment, imposed by controlling the water level in pots, followed by rehydration.

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饲用高粱与拉巴豆混播对种间关系及草地生产力的影响

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摘要: 豆-禾混播是影响混播草地生产性能和营养价值的关键因素。本研究引入黄河流域适宜饲用高粱混播的拉巴豆混播, 以探究不同混播模式对草地生产力和种间关系的影响。在宁夏回族自治区, 设置4个不同拉巴豆混播量(SL₁: 16.5 kg·ha⁻¹, SL₂: 33.0 kg·ha⁻¹, SL₃: 49.5 kg·ha⁻¹, SL₄: 66.0 kg·ha⁻¹)与饲用高粱混播, 以及拉巴豆和饲用高粱混播(L₁: 49.5 kg·ha⁻¹和S₁: 18.0 kg·ha⁻¹)。测定混播草地生产性能、种间竞争以及经济效益进行探究。2年试验结果表明, 饲用高粱与拉巴豆混播草地的总干草产量与粗蛋白产量显著高于单播(P<0.05), 其中在SL₂处理下达到最大, 较饲用高粱单播分别提高了63.66%和9.13%。所有混播处理的土壤含水量均大于L₁, 且在SL₂处理下达到最大(1.26), 表明该处理增产明显。混播草地中饲用高粱的侵占力大于L₁, 且竞争比率大于拉巴豆, 说明饲用高粱的竞争优势强于拉巴豆。饲用高粱为竞争优势物种。系统生产力指数随拉巴豆混播量增加而增加, 且在SL₂处理下两年平均均达到最高(3740.49元·ha⁻¹)。综合混播草地生产性能、土壤含水量、货币优势指数以及净收入等指标, 饲用高粱与拉巴豆在SL₂混播处理中表现最优。因此建议在宁夏回族自治区拉巴豆与饲用高粱混播的最佳混播量为33.0 kg·ha⁻¹。 关键词: 饲用高粱; 拉巴豆; 混播草地; 种间竞争; 生产性能

Interspecific relationship and forage productivity effects in mixed sowings of *Sorghum bicolor* and *Dolichos lablab*

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Abstract: The seeding rate of *Sorghum bicolor* and *Dolichos lablab* in mixed sowings is a key factor affecting the yield and nutritional value of mixed sowings. It is of high relevance to evaluate the optimal seeding rates of *D. lablab* and *S. bicolor* in mixed sowings in the Ningxia Yellow River Irrigation Area, to alleviate the shortage of forage supply in this area. In this study, *D. lablab* was sown at four different seeding rates in mixtures (SL₁: 16.5 kg·ha⁻¹, SL₂: 33.0 kg·ha⁻¹, SL₃: 49.5 kg·ha⁻¹, SL₄: 66.0 kg·ha⁻¹), sown together with *S. bicolor* at 18.0 kg·ha⁻¹ in each case. The experiment also included *D. lablab* and *S. bicolor* monocultures (L₁: 49.5 kg·ha⁻¹ and S₁: 18.0 kg·ha⁻¹). The aim was to investigate the yield, interspecific competition indexes and economic benefits of the two

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降水变化条件下荒漠草原优势植物根际微生物群落结构和多样性特征研究

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摘要: 通过探究荒漠草原优势植物根际土壤微生物群落结构的多样性特征, 以期为荒漠草原植物根系与微生物互作机制提供理论依据。以宁夏荒漠草原优势植物根际土壤为研究对象, 选取了增雨30%、增雨30%+增雨30%、减雨30%、减雨30%+减雨30% 5个处理, 采用高通量测序方法, 研究了不同降水条件下, 荒漠草原优势植物根际微生物群落结构和多样性特征。结果表明: (1) 随着降水量的增加, 根际微生物群落结构的多样性特征均呈上升趋势; (2) 随着降水量的增加, 根际微生物群落结构的多样性特征均呈上升趋势; (3) 随着降水量的增加, 根际微生物群落结构的多样性特征均呈上升趋势; (4) 随着降水量的增加, 根际微生物群落结构的多样性特征均呈上升趋势; (5) 随着降水量的增加, 根际微生物群落结构的多样性特征均呈上升趋势。 关键词: 荒漠草原; 优势植物; 降水变化; 根际微生物群落

Structure and diversity characteristics of the rhizosphere microbial community of dominant plants on the desert steppe under changing precipitation

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Abstract: The aim of this study was to explore the responses of rhizosphere soil microorganisms of dominant plant species on the Ningxia desert steppe to changes in precipitation. The overall aim was to broaden our understanding of the interactions between microorganisms and the roots of important plants on the desert steppe. Three plant species were selected for analysis of their rhizospheric communities: *Stipa breviflora*, *Lepedoea potaninii*, and *Coronilolus ammoxili*. Five rainfall treatments were established: 50% increase in rainfall, 30% increase in rainfall, control

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施氮对饲用高粱/拉巴豆混播草地生产性能和氮贡献率的影响

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摘要: 为了探究施氮对饲用高粱/拉巴豆混播草地生产性能和氮贡献率的影响, 本研究以饲用高粱/拉巴豆混播草地为研究对象, 设置4个不同施氮量(N₀: 0 kg·ha⁻¹, N₁: 30 kg·ha⁻¹, N₂: 60 kg·ha⁻¹, N₃: 90 kg·ha⁻¹)和2个不同拉巴豆混播量(L₁: 49.5 kg·ha⁻¹, L₂: 99 kg·ha⁻¹)。测定混播草地生产性能、种间竞争以及经济效益进行探究。2年试验结果表明, 饲用高粱与拉巴豆混播草地的总干草产量与粗蛋白产量均随施氮量的增加而增加, 且在N₂处理下达到最大, 较单播分别提高了14.85%和35.9%。混播草地中饲用高粱的侵占力大于L₁, 且竞争比率大于拉巴豆, 说明饲用高粱的竞争优势强于拉巴豆。饲用高粱为竞争优势物种。系统生产力指数随施氮量的增加而增加, 且在N₂处理下达到最高(3740.49元·ha⁻¹)。综合混播草地生产性能、土壤含水量、货币优势指数以及净收入等指标, 饲用高粱与拉巴豆在N₂混播处理中表现最优。因此建议在宁夏回族自治区拉巴豆与饲用高粱混播的最佳混播量为33.0 kg·ha⁻¹。 关键词: 饲用高粱; 拉巴豆; 混播草地; 种间竞争; 生产性能

Effect of nitrogen application on production performance and nitrogen fertilizer contribution of forage sorghum/lablab mixed cropping

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Abstract: This research investigated the effect of nitrogen application on the forage yield and nutrient utilization of forage sorghum (*Sorghum bicolor*) variety "High Value" and lablab (*Dolichos lablab*) variety "High Value" under different cropping patterns. A split-plot experiment was conducted at the Grass Science Teaching and Research Base of Ningxia University in 2021-2022, with two planting patterns (sole forage sorghum (SS), forage sorghum/lablab

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王鹏飞, 马榕, 王斌, 等. 引黄灌区复种饲用燕麦种植模式产量、品质及经济效益分析. 农业学报, 2025, 34(4): 27-37.
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引黄灌区复种饲用燕麦种植模式产量、品质及经济效益分析

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摘要:为探讨适合宁夏引黄灌区及引种复种燕麦种植模式,以燕麦、苜蓿或苕荻和毛苕子为试验材料,设置3种混播模式(模式1:燕麦+苜蓿,模式2:燕麦+苕荻,模式3:燕麦+毛苕子)和3种轮作模式(模式4:燕麦+苜蓿,模式5:燕麦+苕荻,模式6:燕麦+毛苕子)种植模式,研究不同种植模式对单茬和间作产量、生产性能及经济效益的影响。3年试验结果表明,复种燕麦混播模式相较于单茬燕麦在土地利用率、生产力和经济效益方面具有明显优势。复种燕麦混播模式土壤有机质(LER)均高于1,土地利用率平均提高21%,复种燕麦+苜蓿模式对土地生产力的提高最明显,其中干草产量(8.37 t·hm⁻²)、粗蛋白产量(19.56 t·hm⁻²)和经济效益(8817元·hm⁻²)较复种燕麦单茬产量提高了16.37%、17.45%和20.30%。复种燕麦+毛苕子套作模式效果最佳,其中粗蛋白(12.33%)和粗纤维(10.01%)值(11%)较单茬燕麦产量提高了79.39%、107.79%。综上,复种燕麦混播模式优于单茬燕麦种植模式,复种燕麦+毛苕子套作模式,复种燕麦+苜蓿套作模式,复种燕麦+苕荻套作模式,对复种燕麦品质要求高,推荐燕麦+毛苕子套作模式。本研究可为宁夏引黄灌区复种燕麦的推广种植提供有益参考。 **关键词:**引黄灌区;复种;混播;产量;品质;经济效益

Analysis of the yield, quality and economic benefits from multiple cropping of fodder oats in the Yellow River irrigation area
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Abstract: This research evaluated different mixed cropping options for planting oats after wheat in the Ningxia Yellow River irrigation area. Two mixed planting patterns and three sole crop planting treatments were established with oats (*Avena sativa*), common vetch (*Vicia sativa*) and hairy vetch (*Vicia villosa*), to study the effects on interspecific competition, yield performance and economic benefits over two years. The results showed that oats sown in mixtures with vetch outperformed oats sown as a sole crop in terms of land resource utilization, productivity enhancement, nutritional quality improvement, and economic benefit. The land equivalent ratio (LER) of the

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氮磷钾肥施对长芒草种子生产性能和发芽特性的影响

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摘要:为明确在宁夏羊草区(N、P、K)肥水施对长芒草(*Stipa bungeana*)种子生产性能和发芽特性的影响,本研究采用“3414”施肥试验方案,设置综合施肥及主成分施肥方法,探讨最佳施肥方案,以期为建立宁夏羊草区长芒草种子高产高效施肥提供科学依据。结果表明,与对照相比,各施肥处理株高和分蘖数均显著增加,其中N、P、K、N、P、O和K、O处理分别分别为90、105和60 kg/ha(与处理增幅最大,较未施肥处理分别提高10.77%和51.04%)。各施肥处理对根长、根重、根重/干重和根重/根长均有显著影响,其中N、P、K、N、P、O和K、O处理分别分别为90、52.5和60 kg/ha(与处理增幅最大,较未施肥处理分别提高14.07%、42.23%和42.39%)。通过对长芒草种子产量和主成分产量分析得出,各施肥处理对种子产量影响最大,综合分析得出,宁夏羊草区长芒草区实现高产栽培N、P、O、K、O处理分别为90.0、52.5和60.0 kg/ha²。在此施肥处理(N、P、K)下,宁夏羊草区长芒草种子产量与主成分产量达到最高,分别为119.50和2.133.16 kg/ha²。**关键词:**宁夏羊草; 氮磷钾肥; 长芒草; 种子产量; 种子质量; 发芽特性; 综合施肥

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Effects of the combined application of nitrogen, phosphorus, and potassium on seed yield and its components in *Stipa bungeana*

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Abstract: To clarify the effects of nitrogen (N), phosphorus (P), and potassium (K) fertilization on the production performance and germination characteristics of *Stipa bungeana* seeds, the “3414” fertilization test scheme was used to determine the optimal fertilization method through path analysis and principal component analysis. This study aims to provide a reference for establishing a high-yield, high-efficiency fertilization system for *S. bungeana* seed production in arid areas of Ningxia. The results showed that, compared with the control, plant height and tiller number increased significantly

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青贮玉米-饲用高粱间作系统生产力对行比配置的响应

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摘要:为明确青贮玉米与饲用高粱间作系统生产力对行比配置的响应,探讨间作系统生产力提升对经济效益及西北灌溉青贮玉米-饲用高粱最佳行比,于2022-2023年在宁夏大学草业生态及设施农业试验站,基于恒定不变行比或变行比,设置青贮玉米与饲用高粱5种间作行比[10:2, 8:4, 6:6, 4:8, 2:10 (10M2S, 8M4S, 6M6S, 4M8S, 2M10S)]及青贮玉米单作(SM),田间试验结果表明,间作系统生产力提升,对经济效益提升,青贮玉米和饲用高粱产量增加,分别增加6.40%、28.18%和8.37%、13.81%,间作对饲用高粱产量60 d和80 d的影响较小,播后100 d提高了6M6S的干物质积累量,播后120 d(收获期)提高了6M6S、4M8S和8M4S干物质积累量,其中6M6S播后100 d和120 d干物质积累量较饲用高粱单作分别增加16.53%和33.16%,同时,各处理下土壤含水量(LER)均大于1,2年平均为1.08-1.38,土壤生产力提高8%-38%,表明间作系统生产力提升,间作系统增加了饲料产量和能量密度,2年平均每公顷干物质产量分别增加13.92%、41.92%和22.43%、53.33%,饲用高粱单作分别提高6.73%、33.42%和8.34%、20.64%(播2M10S行),6M6S增产幅度最大,5个不同间作行比均优于单作,播后100 d,播后120 d,播后150 d,播后180 d,播后210 d,播后240 d,播后270 d,播后300 d,播后330 d,播后360 d,播后390 d,播后420 d,播后450 d,播后480 d,播后510 d,播后540 d,播后570 d,播后600 d,播后630 d,播后660 d,播后690 d,播后720 d,播后750 d,播后780 d,播后810 d,播后840 d,播后870 d,播后900 d,播后930 d,播后960 d,播后990 d,播后1020 d,播后1050 d,播后1080 d,播后1110 d,播后1140 d,播后1170 d,播后1200 d,播后1230 d,播后1260 d,播后1290 d,播后1320 d,播后1350 d,播后1380 d,播后1410 d,播后1440 d,播后1470 d,播后1500 d,播后1530 d,播后1560 d,播后1590 d,播后1620 d,播后1650 d,播后1680 d,播后1710 d,播后1740 d,播后1770 d,播后1800 d,播后1830 d,播后1860 d,播后1890 d,播后1920 d,播后1950 d,播后1980 d,播后2010 d,播后2040 d,播后2070 d,播后2100 d,播后2130 d,播后2160 d,播后2190 d,播后2220 d,播后2250 d,播后2280 d,播后2310 d,播后2340 d,播后2370 d,播后2400 d,播后2430 d,播后2460 d,播后2490 d,播后2520 d,播后2550 d,播后2580 d,播后2610 d,播后2640 d,播后2670 d,播后2700 d,播后2730 d,播后2760 d,播后2790 d,播后2820 d,播后2850 d,播后2880 d,播后2910 d,播后2940 d,播后2970 d,播后3000 d,播后3030 d,播后3060 d,播后3090 d,播后3120 d,播后3150 d,播后3180 d,播后3210 d,播后3240 d,播后3270 d,播后3300 d,播后3330 d,播后3360 d,播后3390 d,播后3420 d,播后3450 d,播后3480 d,播后3510 d,播后3540 d,播后3570 d,播后3600 d,播后3630 d,播后3660 d,播后3690 d,播后3720 d,播后3750 d,播后3780 d,播后3810 d,播后3840 d,播后3870 d,播后3900 d,播后3930 d,播后3960 d,播后3990 d,播后4020 d,播后4050 d,播后4080 d,播后4110 d,播后4140 d,播后4170 d,播后4200 d,播后4230 d,播后4260 d,播后4290 d,播后4320 d,播后4350 d,播后4380 d,播后4410 d,播后4440 d,播后4470 d,播后4500 d,播后4530 d,播后4560 d,播后4590 d,播后4620 d,播后4650 d,播后4680 d,播后4710 d,播后4740 d,播后4770 d,播后4800 d,播后4830 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贺兰山东坡典型植物群落多样性垂直分布特征与土壤因子的关系

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摘要: 深入探究山地生态系统植物群落多样性与关键土壤因子的关系及土壤因子在植物群落构建与多样性维持中的重要作用是区域生物多样性保护和生态系统功能提升的基础。本文采用冗余分析(Redundancy analysis, RDA)和相关性分析揭示了贺兰山东坡典型植物群落多样性垂直分布格局与土壤因子的关系。结果表明: (1) 贺兰山东坡植物群落多样性具有明显的垂直分布格局, 针阔混交林植物群落组成最为丰富, 中坡效应明显; 不同层次植物多样性随海拔升高变化趋势不一致且各自在不同海拔间存在差异($P < 0.05$)。植物多样性大体表现为: 草本层 > 灌木层 > 乔木层。(2) 研究区土壤因子随海拔变化趋势不同, 均存在显著差异($P < 0.05$)。其中土壤养分(SM)、有机质(SOC)和全氮(TN)含量随海拔增加, 由山脚向山顶土壤养分含量增加, 而有效氮(N)和有效磷(P)含量随海拔增加呈先增加后减少的趋势。土壤因子与植物群落多样性具有显著的正相关性, 影响不同层次植物多样性垂直分布的主要因素是土壤因子。综上, 土壤有机质、pH、碱度、含水量是影响贺兰山东坡植物群落多样性垂直分布的主要因素因子。
关键词: 贺兰山, 植物群落多样性, 土壤因子, 海拔梯度, 植被—土壤关系

Relationship between altitudinal distribution characteristics of typical plant community diversity and soil factors on the eastern slope of the Helan Mountains

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Abstract: To deeply explore the relationship between altitudinal distribution characteristics of typical plant community diversity and soil factors on the eastern slope of the Helan Mountains.

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Guo Y.J., Ma X.J., Xu A.Y., Shi J.M., Liu W.L., Xu D.M. Spatial characteristics of soil moisture and vegetation in desertification grassland in eastern Ningxia sand-wind area. China Acta Ecologica Sinica, 2022, 42(4): 1571-1581.

宁夏东部风沙区沙化草地土壤水分和植被的空间特征

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摘要: 土壤水分作为土壤-植被-大气连续体的关键因子, 对沙化草地的演化过程具有重要作用。为探讨宁夏东部风沙区沙化草地土壤水分、物种丰富度指数及植被盖度的空间变异及其相互关系, 以阿拉善自然保护沙化草地为对象, 采用样线法设置在沙化草地至完整化草地进行植被调查和土壤取样, 通过经典多元统计软件分析, 得出以下结果: 0—100 cm 各土层土壤水分含量、植被盖度和物种丰富度指数的空间分布分别为 0.82%—28.22%、41.00%—93.00% 和 0.82—2.80, 变异系数范围均为 0.20—0.44, 均属于中等变异。各土层土壤水分和物种丰富度指数均为中等空间自相关, 植被盖度表现为强烈的空间自相关性。Kriging 插值结果表明, 0—100 cm 各土层土壤水分和植被盖度的空间格局均呈条带状和块状化的梯度变化, 物种丰富度呈斑块分布, 自南向北沙化草地重度沙化草地, 表现为逐渐降低的趋势。相关分析表明, 植被盖度与 0—40 cm 各土层土壤水分呈显著正相关, 与 40—100 cm 各土层土壤水分呈显著负相关。宁夏东部风沙区沙化草地土壤水分含量总体较低, 由于结构因素和随机因素的共同作用, 随草地沙化程度的加重, 表现为逐渐降低的梯度变化区出现局部升高的斑块格局; 受土壤水分的影响, 草地植被呈现出类似的空间分布特征。研究结果可为草地沙化演变过程的定量监测及干旱风沙区草地生态环境保护和建设提供理论依据。
关键词: 沙化草地, 土壤水分, 植被盖度, 物种丰富度指数, 空间特征

Spatial characteristics of soil moisture and vegetation in desertification grassland in eastern Ningxia sand-wind area, China

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Abstract: Soil moisture is of crucial importance for hydrological, biological and biogeochemical processes, especially in arid and semiarid regions where water is the main factor limiting vegetation survival and economic development. In order to explore the spatial variability and the relationship with soil moisture, Margalef richness index and vegetation coverage of the desertified grassland in eastern Ningxia sand-wind area, three 3.6 km parallel transects were laid out from the potential desertified grassland to the severe desertified grassland with 500 m interval between the two adjacent transects. Along each transect, quadrats were established at 200 m intervals for the vegetation investigation and soil sampling. Soil samples were collected at the following depths: 0—10, 10—20, 20—30, 30—40, 40—50, 50—60, 60—70, 70—80, 80—90, and 90—100 cm. The soil moisture, Margalef richness index and vegetation coverage were measured and their spatial distributions and interrelationships were analyzed by combining of the classical and geostatistical methods. The results showed that the vegetation coverage, species richness and the contents of soil moisture at each soil layer from 0—100 cm ranged from 0.82%—93.00%, 0.82—2.80, and 0.82%—28.22%, respectively, and the variation coefficient ranged from 0.20 to 0.44, all of which belonged to moderate variability. The optimal models of the soil moisture at 0—100 cm layer and Margalef richness index were Spherical and Exponential models, respectively. The Gaussian models are applicable to the soil

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Zhang Z.J., Yu L., Wang H.M. Characteristics of soil moisture threshold for the seedling establishment of two dominant plants in desert grassland-shrubland transition. Acta Ecologica Sinica, 2022, 42(19): 8061-8072.

荒漠草原向灌丛转变过程两种优势植物定植土壤水分阈值特征

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摘要: 为探究宁夏东部荒漠草原灌丛转变过程中两种优势物种蒙古冰草(Agropyron mongolicum)和籽粒苋(Grassia leucostachya)植物定植土壤水分阈值特征, 在前期野外调查的基础上, 进一步通过野外观测和室内盆栽试验分析确定转变过程中两种优势植物物种的定植土壤水分阈值。结果表明, 荒漠草原灌丛近 30 年人为转变过程中 0—20 cm 土壤水分呈降低趋势, 灌丛土壤水分含量较荒漠草原显著降低(52.43% ($P < 0.05$)), 灌丛转变加速了土壤早化, 籽粒苋和蒙古冰草幼苗定植过程中叶面积指数随土层深度增加而降低趋势, 其死亡率随土层深度增加而降低。通过土壤水分和死亡率拟合以及不同土层上的土壤水分-土壤养分分析得出, 两种优势植物物种的定植土壤水分阈值, 水分阈值位于籽粒苋和蒙古冰草的土壤水分阈值分别为 0.28—0.95 kPa, 0.72—0.28 kPa, 平均土壤水分阈值分别为 4.07%—5.23%、5.92%—6.59%, 与蒙古冰草相比, 籽粒苋水分阈值更适应干旱或半干旱少雨地区的土壤早化, 其在土壤条件下的定植成功率更高。
关键词: 荒漠草原, 灌丛化, 干旱胁迫, 幼苗定植, 水分阈值

Characteristics of soil moisture threshold for the seedling establishment of two dominant plants in desert grassland-shrubland transition

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Abstract: In order to explore the characteristics of soil moisture availability for plant recruitments of the two dominant species *Agropyron mongolicum* and *Grassia leucostachya* in desert grassland-shrubland transition of eastern Ningxia, the soil moisture thresholds of the two plant species were calculated by conducting field observations and drought stress experiments based on the previous study on the soil water potential threshold for germination. The results showed that soil moisture in the depth of 0—200 cm soil has been decreasing during the transition from desert grassland to shrubland over the past 30 years, and the soil water content of shrubland was significantly lower than that of desert grassland by 52.43% ($P < 0.05$), that is, shrub introduction had accelerated the process of soil drought. With the process of the seedling establishment of *Grassia leucostachya* and *Agropyron mongolicum*, the chlorophyll content firstly increased and then decreased with the drought stress increase, meanwhile the mortality rate gradually increased. The fitting function of soil water potential and mortality and soil water characteristic curves of the transitional sites were used to determine the soil water potential and soil moisture thresholds for seedling establishment of the two plant species. The results showed that the soil water thresholds of *Grassia leucostachya* were all lower than those of *Agropyron mongolicum* in each transition site, and the average soil water potential thresholds of the two species were -0.38 — 0.95 kPa, -0.72 — 0.28 kPa, and the average soil moisture thresholds were

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不同播种量下行距配置对紫花苜蓿产量及品质的影响

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摘要: 为探讨宁夏回族自治区农业优质高效生产的最佳播量是单行距配置, 试验采用田间小区设计, 研究了不同播量(S₁: 13.5 kg/hm², S₂: 18.0 kg/hm², S₃: 22.5 kg/hm²)和行距(R₁: 15 cm 等行距, R₂: 20 cm 等行距, R₃: 窄—宽—窄 15 cm × 15 cm × 20 cm, R₄: 窄—宽—窄 15 cm × 20 cm)对紫花苜蓿产量和品质的影响。3 年试验结果表明, 播量显著影响紫花苜蓿产量, 对茎比、干物质、粗蛋白、中性洗涤纤维含量和相对饲用价值均有显著影响($P < 0.05$)。其中处理 S₂ 对茎比、干物质和粗蛋白含量随播量的增加呈显著降低趋势, 干物质量(18.11 t/hm²)、粗蛋白含量(21.05%)随播量增加 18.0 kg/hm² 和行距为 15 cm × 15 cm 时最高, 中性洗涤纤维(38.50%)和中性洗涤纤维(28.59%)含量随行距 20 cm 时最高。相对饲用价值(171.50)随播量为 18.0 kg/hm² 和行距为 20 cm 时最高。3 年各项指标取各年平均值, 主成分分析(PCA)可知, 紫花苜蓿产量、干物质、茎比、中性洗涤纤维和相对饲用价值较大, 株高和中性洗涤纤维可取较小。播量为 18.0 kg/hm² 和行距为 15 cm × 15 cm 时有利于提高紫花苜蓿产量和粗蛋白品质, 是当地紫花苜蓿最佳播量和行距配置。
关键词: 紫花苜蓿; 行距配置; 播量; 产量; 品质

The effect of sowing rate and row spacing on the yield and quality of alfalfa in the Ningxia Yellow River irrigation area

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Abstract: This research explored the optimal sowing rate and row spacing configuration for high-quality and high-efficiency production of alfalfa (*Medicago sativa*) in the Ningxia Yellow River irrigation area. In a three-year experiment, a two-factor randomized block design was used to study the effects on the yield and quality of alfalfa, of different sowing rates (S₁: 13.5 kg/hm², S₂: 18.0 kg/hm², S₃: 22.5 kg/hm²) and row spacing configurations (R₁: 15 cm equal row spacing, R₂: 20 cm equal row spacing, R₃: narrow spaced two narrow and one wide 15 cm × 15 cm × 20 cm, R₄: narrow spaced one narrow and one wide 15 cm × 20 cm). It was found that the number of biomass, leaf-stem ratio, hay yield, crude protein, neutral detergent fiber content and relative feeding value of alfalfa were

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