

科技与创新

关注科技前沿 交流创新成果 加快科技推广 营造创新氛围



02

2014

总第2期

Science and Technology & Innovation

ISSN 2095-6835

CN 14-1369/N



ISSN 2095-6835



02 >

9 772095 683147

邮发代号：22-582 定价：每册15元

万方数据

科技与创新

Science and Technology & Innovation
2014年 第2期 / 下半月刊 / 1月20日出版



目次

◇ 应用技术 ◇

- 酶体外定向进化技术及其发展 程梦婷 (1)
- 锅炉检验的常见问题及处理对策 王强 (2)
- 电感耦合等离子体-质谱法测水中铈不确定度的评定
..... 朱培瑜, 戴秀丽 (4)
- 排卵类乳胶测试笔的层析性能改良
..... 励喆, 黄峥, 李文书, 白林泉 (6)
- 军棋裁判器的 CPLD 实现 赵航, 康广荃 (8)
- 先进刀具的选用及加工效率分析 李西望, 梁艳辉, 张超 (9)
- 牵引变压器监测技术与故障诊断研究 王宇 (10)
- 实验室用砂浆搅拌机检定搅拌叶转速测量不确定度评定
..... 丁凤文 (12)
- 75 t/h 炉空预器腐蚀破损的原因及处理措施 苗俊生 (13)
- 论高科技产品电气装配的可靠性工艺 宋李斌, 金兴文 (14)
- 变电站备用电源自动投入装置应用 郭青山 (15)
- 试论智能电网下的电力无功补偿技术 崔艳 (17)
- 水煤浆锅炉集中供热的节能环保分析 谢惠珠 (18)
- 基于多传感器的水下微型测试系统 丁宝俊, 唐晓庆 (20)
- 地籍测量技术的分析及应用 李卫京 (22)
- 风力发电风险识别及建模评价分析 尹浙鸣 (24)
- 消烟车改造的探索与研究 庞彦飞, 巨耀东, 丁建民 (26)
- 钢筋肋滚轧直螺纹连接工艺的经济性分析 史丽君, 王猛 (27)
- 航空电子仪表的发展与应用 李凯 (28)
- 浅谈直驱永磁风力发电机组叶轮的日常检修
..... 杨乐, 王忠辉, 唐伟雄 (30)
- 试论 220 kV 变电站直流系统的改造 陆萍娟 (32)
- 自动化综采工作面采煤工艺技术研究与应用 段云龙 (33)
- 机组冷态启动节能降耗优化措施 张宝东 (35)
- 某电厂间接空冷设备分析 赵建刚 (36)
- 浅析断层对煤矿开采的影响及处理措施 贾福春 (38, 41)
- 综合自动化变电站中二次系统的防雷策略研究 龙跃达 (39, 41)
- 锅炉微油点火改造及控制逻辑修改 李樟波 (40)
- 关于制药设备 CIP 与 SIP 相关问题的探讨 康向奎 (42, 45)
- 复合保温风管的燃烧性能研究 孙利敏 (43, 45)
- 直接空冷机组凝结水溶氧超标的分析和治理 李小明 (44)
- 锅炉除渣系统改造分析 马中帅 (46)

· 特别声明 ·

本刊发表的所有文章仅为作者个人观点, 如因其引起纠纷和责任, 由文章作者自行承担。文责自负, 严禁抄袭。如侵犯他人著作权, 由作者本人承担一切责任。

未经许可, 不得以任何形式复制或转载本刊之部分或全部内容。

◇ 建筑与工程 ◇

- 浅谈预制梁施工容易出现的问题及处理方法 舒悦 (47)
- 混凝土砌块墙体裂缝原因及防治措施探析 李飞 (49)
- 浅谈隧道风险识别及控制 李璐 (50)
- 房屋结构设计中设计优化的运用分析 郑若飞 (52)
- 钢栈桥上部结构设计与优化 李英杰 (53)
- 高层建筑基坑支护施工技术研究 刘晓惠 (55)
- 浅议小型农田水利工程管理 杨晓亮 (57)
- 建筑施工裂缝分析 杨中德 (59)
- 浅谈公路改建设计的体会 朱利勇 (60)
- AutoCAD 在市政工程测量中的重要性 吴智斌 (62)
- 建筑房产工程测量与三维测绘技术分析 张月琴 (63)
- 岩溶地质条件下桩基施工探讨 马钰 (65)
- 1 000 kV 变电站站外排水管道工程施工组织与设计 魏国华 (67)
- 浅议水利施工管理中存在的问题及改进措施 张亚东 (69)
- 浅谈采空区治理注浆研究 王新春 (70)
- 建筑工程大体积混凝土浇筑施工技术研究 衡大辉 (72)
- 浅谈绿色施工在太铁白龙苑住宅小区的应用 蒲芝慧 (73)
- 山区高速公路隧道施工安全管理及控制 赵小华 (75)

◇ 管理科学 ◇

- 加快建设五大功能区 构筑杂力发展新优势 黎伟 (76)
- 高职院校专业计算机机房安全管理之我见 程学军, 谢延华 (79)
- 铁路运输行业成本效益问题分析 田庆旺 (80)
- 浅谈如何提高城市供水管网抢修施工效率 武艳明 (82)
- 牧马河灌区末级渠系管理现状与改进措施 崔世霞 (84)
- 加强医院成本核算, 促进医疗卫生事业发展 贾晋萍 (86)
- 浅谈几种安全不良心理和预防方法 徐玉国 (88)
- 浅谈计量标准器具的管理 丁凤文 (90, 125)

◇ 专题研究 ◇

- 网络游戏受体正效应的哲学思考 徐禄 (91)
- 竞技健美操竞赛规则演变分析
..... 岳杰, 葛娇娇, 韩馨仪, 王帅 (93)
- 积分概念的演变 许宁 (95)
- 浅析云南少数民族古籍文献的修复 施济颖 (98)
- 论新媒体艺术中科技与艺术的整合 何滢赟 (100)
- 论浙江省发展河海联运的可行性与对策 郑琳 (102)
- 金融支持政策对我国高等教育发展的影响 陈铭铿, 贝妮娜 (104)
- 从我国房地产政策看公共政策的博弈 李云飞 (106)
- 浅析央行货币政策工具“存款准备金”的运用 张超 (108)
- 关于计算机类《电子商务》课程教学方法的研究
..... 张婷婷, 葛静 (110)
- 手机智能化对思维方式影响的哲学思考 赵晓峰 (112)
- 北峰山国家森林公园森林生态旅游发展对策研究 何碧胜 (114)
- 依法促进鸡西市民营经济又好又快发展的思考 白秀娟 (116)
- 文山地区少数民族传统体育发展现状的研究 张正锦 (117)
- 《Photoshop 图像处理》课程的开发与建设 徐小亚, 谢延华 (120)

国际标准刊号 ISSN 2095—6835

国内统一刊号 CN 14—1369/N

主 管 山西省科学技术协会
主 办 山西科技新闻出版传媒集团
协 办 山西省气象局
编辑出版 科技与创新杂志社
地 址 太原市长风东街 15 号
邮政编码 030006
电 话 0351—7537156

期刊编辑管理委员会

主 任 郝建新
副 任 贾克义
委 员 石宝新 赵国旗 许 丽
罗光明 栗争荣

社 长 许 丽
总 编 贾克义
执行主编 江 海
编辑部主任 胡雪飞
责任编辑 白 洁 吴 珍
编 辑 白 洁 曹 月 雷 君
郭 杰 林华权 贾 爽
英文编辑 李 雪

投稿邮箱 kjycxzzs@126.com

kjycx@188.com

查稿电话 0351—7537156

010—88909179

网 址 www.kjycx.com

国内发行 全国各地邮政局(所)

邮发代号 22—582

国外发行 中国出版对外贸易公司
(中国国际书店)

印 刷 山西同方知网印刷有限公司

定 价 每册 15 元

SCIENCE
AND
TECHNOLOGY
&
INNOVATION

No.2 January 2014

以人为本推进高校图书馆工作 刘劲松 (121)
高职院校单片机教学改革和教材建设探析 林宏伟 (123, 125)
应急避难场所规划编制方法初探 王成莲 (124)
浅析应用型工科大学物理实验课程 胡加义, 彭跃红 (126, 130)
基于工作过程的《Photoshop 图形图像处理》课程

研究与开发 邵明东 (127, 130)
中职教育如何培养和提高学生的创新能力 辛长春 (128, 130)
建农村图书馆: 关心留守儿童教育方式之一 闫加丽 (129)
高职院校《电工电子技术》的课程教学探讨 朱学飞 (131, 134)
物流管理人才培养和课程体系改革研究 陈克坦, 张波 (132, 134)
浅谈技工院校教师队伍建设 程远平 (133)

◇ 信息时代 ◇

试析 4G 移动通信技术及其面临的问题 吴上才 (135)
干扰地铁无线通信系统的相关因素和对策探析 杨兴 (136)
浅谈维营管理支撑系统的设计 黄光华 (138, 161)
网络时代背景下电视新闻的发展提升 丁晓燕 (139, 145)

◇ 气象科技 ◇

“07.30”山西区域性暴雨的水汽输送特征分析
..... 王洪霞, 苗爱梅, 郑皓文, 董文晓 (140, 145)
气象条件对华北地区 PM_{2.5} 浓度影响的模拟研究
..... 朱凌云, 韩霄, 安炜, 高怡 (142)
2012 年山西中南部首场暴雨中尺度特征分析
..... 李冬梅, 苗爱梅, 刘婉莉, 褚红瑞, 崔鹏飞 (146)

◇ 资源与环境 ◇

地震的奥秘及准确预报 周强 (148)
水文地质在勘测中注意的问题和措施分析
..... 陈慧新, 张福水 (152, 161)
四川白玉中学边坡变形特征与成因机制分析 向兵 (153)
畜禽养殖恶臭污染分析及控制措施 陈中敏 (154)

◇ 农林科技 ◇

青海柴达木灌区蚕豆病虫害及无公害防除研究
..... 玛尼吉, 曹永久 (156)
实践淮山薯生产技术创新, 推动特色农业可持续发展
..... 冯通, 高祥兴, 邓燕玲 (157)
浅谈山西闻喜县农村土地流转的问题与对策 李小兵 (159)
浅析基层农业技术带头人的发现与培养 刘开先 (160)



旗下科技报刊:

科学导报 山西科技报 科学之友 新科幻
基层医学论坛 能源与节能 种子科技
科技与创新 山西农经 天工

封面图片:《汾河夜桥大迴环组照之二——南中环桥》(作者:周胜堂),
在“2013 年第二届中国科普摄影大赛”中荣获“三等奖”

封底图片:《纳木措银河》(作者:吴双), 在“2013 年第二届中国科普
摄影大赛”中荣获“二等奖”。

Science and Technology & Innovation

CONTENTS

Applied Technology

- Enzyme in Vitro Directed Evolution Technology and Development Cheng Mengting (1)
- Common Problems and Treatment Measures of Boiler Inspection Wang Qiang (2)
- Evaluation of Uncertainty in Measurement of Thallium in Water by Inductively Coupled Plasma Mass Spectrometry
..... Zhu Peiyu, Dai Xiuli (4)
- Ovulation Latex Test Pen Chromatographic Performance Improvement Li Zhe, Huang Zheng, Li Wenshu, Bai Linqun (6)
- Military Chess CPLD to Realize to the Referee Zhao Hang, Kang Guangquan (8)
- Analysis of Selection and Machining Efficiency of Advanced Tool Li Xiwang, Liang Yanhui, Zhang Chao (9)
- Study on Monitoring and Fault Diagnosis of Traction Transformer Wang Yu (10)
- Laboratory Tests with Mortar Mixer Mixing Blade Speed Measurement Uncertainty Evaluation Ding Fengwen (12)
- 75 t/h boiler Air Preheater Corrosion Damage to the Cause and the Treatment Measures Miao Junsheng (13)
- On the Reliability of High-tech Products Electrical Assembly Process Song Libin, Jin Xingwen (14)
- Substation BZT Device Application Guo Qingshan (15)
- On the Reactive Power Compensation under the Smart Grid Cui Yan (17)
- Coal-water Slurry Boiler Energy Conservation and Environmental Protection Analysis of Central Heating Xie Huizhu (18)
- Underwater Miniature Multi-sensor Test System Ding Baojun, Tang Xiaoqing (20)
- Analysis and Application of Technology of Cadastral Survey Li Weijing (22)
- Risk Identification and Modeling of Wind Power Evaluation and Analysis Yin Zheming (24)
- Exploration and Research Transformation Smoke Car Pang Yanfei, Ju Yaodong, Ding Jianmin (26)
- Reinforced Rib Peeling Rolling Straight Thread Connection Technology Economy Analysis Shi Lijun, Wang Meng (27)
- The Development and Application of Aviation Electronic Instrument Li Kai (28)
- On the Direct-drive Permanent Magnet Wind Turbine Impeller Daily Maintenance Yang Le, Wang Zhonghui, Tang Weixiong (30)
- Discuss about the Renovation of 220 kV Substation dc System Lu Pingjuan (32)
- Automated Mechanized Mining Face Mining Technology Research and Application Duan Yunlong (33)
- Cold Start Saving Energy Unit Optimization Measures Zhang Baodong (35)
- Indirect Analysis of a Power Plant Air Cooling Equipment Zhao Jiangang (36)
- Analysis of Fault on the Impact of Coal Mining and Treatment Measures Jia Fuchun (38, 41)
- Lightning Strategy Secondary Substation Integrated Automation System Long Yue (39, 41)
- Boiler Oil Ignition Transformation and Control Logic Modification Li Zhangbo (40)
- Discussion on Pharmaceutical Equipment CIP and SIP-related Issues Kang Xiangkui (42, 45)
- The Burning of Composite Duct Insulation Performance Study Sun Limin (43, 45)
- Analysis of Direct Air Cooling Unit Condensate of Dissolved Oxygen and Excessive Governance Li Xiaoming (44)
- Boiler Slag System Transformation Analysis Ma Zhongshuai (46)

Architecture and Engineering

- On the Precast Prone to Beam Construction Problems and Solutions Shu Yue (47)
- Concrete Block Wall Crack Reasons and Prevention Measures Li Fei (49)
- Identification and Control the Risk of Tunnel Li Lu (50)
- Analytic House Design Optimization of Structural Design Zheng Ruofei (52)
- Steel Pier Upper Structure Design and Optimization Li Yingjie (53)

Study on Construction Technology of High-rise Building Foundation Pit	Liu Xiaohui (55)
Discussion on the Management of Small Irrigation and Water Conservancy Project	Yang Xiaoliang (57)
Analysis of Construction Cracks	Yang Zhongde (59)
Introduction to the Experiences in the Design of Highway Reconstruction	Zhu Liyong (60)
The Importance of AutoCAD in Municipal Engineering Surveying	Wu Zhibin (62)
Construction Real Estate Surveying and Mapping Technology Measurement and 3 d Analysis	Zhang Yueqin (63)
Pile Foundation Construction Discussion Karst Geological Conditions	Ma Yu (65)
1 000 kV Substation outside Sewer Construction and Design Organizations	Wei Guohua (67)
In the Extraction of Water Conservancy Construction Management Problems and Improving Measures	Zhang Yadong (69)
On Gob Governance Research Grouting	Wang Xinchun (70)
Research on Construction Technology of Mass Concrete Pouring	Heng Dahui (72)
On the Application of Green Construction in Taiyuan Railway Bureau Bailongyuan Community	Pu Zhihui (73)
Mountain Highway Tunnel Construction Safety Management and Control	Zhao Xiaohua (75)

Management Science

Accelerate the Construction of Five Functional Areas to Develop New Strengths to Build Duo Li	Li Wei (76)
Views on Professional Computer Room Safety Management Vocational Colleges	Cheng Xuejun, Xie Yanhua (79)
Cost Benefit Analysis of Railway Transport Industry	Tian Qingwang (80)
Discuss how to Improve the Efficiency of Urban Water Supply Pipeline Emergency Repair Construction	Wu Yanming (82)
Mumahe River Irrigation District Management Status and Improvement Measures	Cui Shixia (84)
To Strengthen the Hospital Cost Accounting, Promoting the Development of Medical and Health Undertakings	Jia Jinping (86)
On Several Security and Prevention of Adverse Psychological	Xu Yuguo (88)
Introduction to the Standard of Measurement Management	Ding Fengwen (90, 125)

Special Research

Philosophical Reflections Receptor Positive Effects of Online Games	Xu Lu (91)
Sports Aerobics Rules Evolution Analysis	Yue Jie, Ge Jiaojiao, Han Xinyi, Wang Shuai (93)
Evolution of the Concept of Integration	Xu Ning (95)
Repair of Yunnan Minority Ancient Documents is Analysed	Shi Jiying (98)
The Integration of Science, Technology and Art in New Media Art	He Yingyun (100)
On the Feasibility of the Development of River Transport in Zhejiang Province and Countermeasures	Zheng Lin (102)
The Financial Support Policy Impact on the Development of Higher Education of Our Country	Chen Mingkeng, Bei Nina (104)
China's Real Estate Policies From Public Policy to See the Game	Li Yunfei (106)
Application of the Central Bank's Monetary Policy Tools "reserve"	Zhang Chao (108)
About Computer Class "E-Commerce" Study of Teaching Method	Zhang Tingting, Ge Jing (110)
Philosophical Thinking on Mobile Phone Intelligent Affect the Mode of Thinking	Zhao Xiaofeng (112)
Countermeasures on Forest Eco-tourism Development in Beifengshan National Forest Park	He Bisheng (114)
Thinking of Promoting Sound and Rapid Development of Private Economy in Jixi City in Accordance with the Law	Bai Xiujian (116)
Wenshan Region the Study of the Current Situation of the Development of Traditional Minority National Sports	Zhang Zhengjin (117)
"Photoshop Image Processing" Course of Development and Construction	Xu Xiaoya, Xie Yanhua (120)
Work to Promote People-centered University Library	Liu Jinsong (121)
In Higher Vocational Colleges Single-chip Computer Teaching Reform and the Construction of Teaching Material Analysis	Lin Hongwei (123, 125)
The Emergency Shelter Planning Method	Wang Chenglian (124)

Engineering Physics Experiments Course of Applied Type University	Hu Jiayi, Peng Yuehong (126, 130)
Based on “Photoshop Graphics Image Processing” the Process of Research and Development Programs	Shao Mingdong (127, 130)
Vocational Education and how to Cultivate and Improve Students’ Innovation Ability	Xin Changchun (128, 130)
Construction of Rural Library: Care of Left-behind Children Education	Yan Jiali (129)
Vocational Colleges “Electrical and Electronic Technology” Course Teaching	Zhu Xuefei (131, 134)
Reform of Logistics Management Personnel Training and Curriculum System	Chen Ketan, Zhang Bo (132, 134)
Talking about Team Building Mechanic Teachers College	Cheng Yuanping (133)

Information Age

Analysis of 4G Mobile Communication Technology and Its Problems	Wu Shangcai (135)
The Related Factors of Subway Wireless Communication System and the Countermeasures	Yang Xing (136)
Introduction to Camp Management Support System Design	Huang Guanghua (138, 161)
Network Era under the Background of the Development of Television News	Ding Xiaoyan (139, 145)

Meteorological Science and Technology

“07.30”Shanxi Regional Heavy Rain Water Vapor Transmission Characteristics of the Analysis	Wang Hongxia, Miao Aimei, Zheng Haowen, Dong Wenxiao (140, 145)
Simulation of Meteorological Conditions on PM _{2.5} Concentration on the North China	Zhu Lingyun, Han Xiao, An Wei, Gao Yi (142)
Central and Southern Shanxi Province in 2012 the first Analysis of Characteristics of Mesoscale Heavy Rain	Li Dongmei, Miao Aimei, Liu Wanli, Chu Hongrui, Cui Pengfei (146)

Resources and Environment

Mystery and Accurate Prediction of Earthquakes	Zhou Qiang (148)
Hydrogeological Analysis Problems and Measures in the Survey	Chen Huixin, Zhang Fushui (152, 161)
Sichuan Baiyu School Slope Deformation Characteristics and Genetic Mechanism Analysis	Xiang Bing (153)
Livestock Odor Pollution and Control Measures	Chen Zhongmin (154)

Agricultural and Forestry Technology

In the Irrigation Area of Qinghai Chaidamu Broad Bean Plant Diseases and Insect Pests and Pollution-free Control Research	Ma Niji, Cao Yongjiu (156)
Practice Huaishan Potato Production Technology Innovation, the Sustainable Development of Characteristic Agriculture	Feng Tong, Gao Xiangxing, Deng Yanling (157)
Introduction to Wenxi County of Shanxi Province Rural Land Circulation Problems and Countermeasures	Li Xiaobing (159)
The Discovery of Shallow of Grass-roots Agricultural Technology Leaders and Training	Liu Kaixian (160)

