

实验科学与技术

SHIYAN KEXUE YU JISHU

第8卷第5期(总第42期) 2010年10月28日出版 双月刊 2003年6月创刊

顾问

李乐民 向怀成 卢铁城

编辑委员会主任

高洁

副主任

(按姓氏笔划排序)

马传峰 王连之 兰中文
熊彩东 朱晋蜀 陈大鹏
陈时见 李晖 李家强
李五一 宋智 汪成楚
杨天怡 张建峡 张兴祥
冯晓云 罗正祥 易亿筹
柳军 徐洲 唐朝纪
董志 彭金辉

主编

兰中文

执行主编

徐安玉

副主编

余魅

编委

(按姓氏笔划排序)

丁二农 丁建生 邓国红
方平 王兵 王进戈
尹定红 冯辉宗 刘平清
刘玉堂 刘松青 刘蜀知
刘希东 刘志勤 龙明华
毕卫民 孙成科 孙岳明
孙建迎 许积萍 朱卫华
阮尚全 陈小鹏 李新华
李树坚 李廷轩 李建华
李意民 温光浩 吴润
吴军 吴立群 吴四九
吴能表 汪春华 严薇
严虎 杨勇 杨慧仲
杨明伦 采振祥 杨明
余魅 张勇 张原
张烈平 张明高 官正强
罗勇武 郑春龙 郑继明
周小佳 郭庆 郭蜀燕
郭兆刚 夏锋 夏天东
姚圣国 姚祖铭 赵希文
赵谦知 姜文凤 崔邦军
崔炳谋 高成伟 高登慧
莫书荣 谈文蓉 殷瑞祥
唐敏 黄炳辉 黄榜彪
谢永安 葛一楠 韩西
董孝壁 蓝增全 雷福厚
解成喜 裴东 潘森鸿

特邀编委

齐建国 董贾寿 卢亚雄
赵瑾 赵永俭 陆斐璋

·实验技术·

- 多元共渗处理对30Cr2MoV钢性能的影响 崔国栋, 郑周, 朱鹏霄, 等 (1)
叠梁纯弯曲正应力的理论与实验分析 汤繁华, 祁方才, 李习平, 等 (3)
广播电台的有线电视设备防雷探讨 王耕 (5)
等精度数字频率计几种设计方案的实验研究 林建英, 高苗苗, 牛英俊 (8)
智能仓储实训系统设计 诸小鹏 (11)
表面处理对柔性胆甾液晶电光特性的影响 王继岷, 谢建辉, 杨文君, 等 (14)
一种对粗调要求不高的分光计调整方法 朱志立, 莫炯, 侯秀梅 (17)
一种可程控参考电压源电路设计 徐明利 (19)
有约束最小平方复原在图像复原中的应用 郝明, 方亮 (21)
设计型外压容器失稳实验研究 徐巧莲, 邹久朋, 王泽武, 等 (24)
布氏硬度试验中的几个问题—— $0.102F/D^2$ 值以及压头直径
的正确选择 示文 (27)
归纳法在探索物理规律中的应用 陆佩 (30)
煤矿微震监测定位系统误差分析 赵龙 (33)
制氧机分子筛吸附过程特性研究 梁吉坤, 邵杰, 庞小峰, 等 (35)
病理组织切片中常见问题及解决方法 王华, 周孝琼 (38)

·计算机及网络技术应用·

- 基于嵌入式操作系统的网管代理实现方法 吴迪, 贾儒鹏 (41)
基于Web和工作流的企业自动化管理系统 邓启军, 姚进, 陈昌华, 等 (44)
基于模拟器的三层交换设计与实现 任毅 (46)

·软件开发与应用·

- Flash课件在物理实验教学中的应用 孙伯耳 (49)

- 基于.NET技术的教学管理信息系统 汪雪琴 (51)
外语自主听音室管理系统的研究与实践 杜 勇,王宇翔 (55)

· 创新性实验研究 ·

- 标定原理的实验室模拟 孙胜春,罗 云,李 路 (57)
电动机控制实验方法的创新与实践
..... 李 利,张立群,串 禾 (60)

· 实验教学体系探索与创新 ·

- 构建研究性学习计算机实验教学平台 李 晶,夏 锋 (63)
生物技术实验教学体系改革 刘杰凤,周 天,韩寒冰,等 (66)

· 实验教学理论 ·

- ERP 沙盘模拟在高校教学中的应用综述 郑惠珍 (70)
实验教学改革与创新 万 玲,卢海霞,夏嫣蓉 (73)

· 基础实验教学 ·

- 提高实验教学质量 培养学生创新意识 徐 英 (76)
实验教学能力培养探索 阮尚全,邱 艳,刘 凯,等 (79)
生物化学实验教学改革与实践 郭天荣,杨受保 (82)
基础化学实验教学体系模块化研究
..... 何建峰,王 涛,陈传兵,等 (84)
仪器分析实验教学改革探索 刘昭第,徐华杰,盛良全 (86)

· 专业实验教学 ·

- 模拟电子技术基础课程教学方法的探讨 王彩君,黄智进 (89)
建筑结构试验与检测实验教学改革探讨 周 薄,张素华 (93)
酒店管理专业主题式综合实验教学初探 陈平平,吴水田 (95)
植物生理学实验教学改革初探 任丽丽,吴 涛,许 卉 (99)
提高电路实验课质量的一些探索 王廷高,何杰生,芦 涛 (101)
电工电子实验教学改革探讨 刘 珊 (103)
数字电子技术实验课程的改革与探索 刘银萍,王 啓 (105)
计算机硬件系列课程教学改革探讨
..... 周 燕,何乐生,王威廉 (108)
环境科学综合大实验探索 高冬梅,李 莉 (110)
机械制图课程实践教学与思考 张胜霞,田怀文 (113)
旅游管理专业本科实验教学探索 马 洁,陈平平 (116)

主管单位:四川省教育厅

主办单位:四川省高教学会

电子科技大学

编辑出版:《实验科学与技术》编辑部

地 址:成都市建设北路二段四号

邮政编码:610054

Tel:028 - 83201742

028 - 83202397

E-mail:syglk@uestc.edu.cn

网 址:www.spread.uestc.edu.cn

印 刷:成都市海翔印务有限公司

发行范围:国内外公开发行

国内发行:成都市邮政局

国外发行:中国学术期刊(光盘版)国际

联合征订

订阅方式:全国各地邮局;

本刊编辑部

刊 号:ISSN 1672 - 4550
CN 51 - 1653/T

邮发代号:62 - 287

定 价:10.00 元/期;

60.00 元/全年

广告经营许可证:

5100004000861

本刊已由下列数据库、信息库收录,如果作者不同意其文章被收录,请在来稿时申明。

中国核心期刊(遴选)数据库

万方数据—数字化期刊群

中国期刊全文数据库

中国报刊订阅指南信息库

期刊基本参数:

CN51-1653/T * 2003 * b * 16 * 192

* zh * P * ¥10.00 * 3000 * 66 *

2010 - 10

中等职业学校统计基础教学改革 李 茹 (119)

· 实验教学管理 ·

实验室开放运行机制的研究与实践 邓 劲, 彭礼坤, 董思刚 (122)

心理学在工业工程实验教学中的应用 曾 刚, 张 强 (126)

· 实训与学生科技活动 ·

电子设计竞赛促进通信工程专业人才培养 王亚飞, 杨曙辉, 李学华 (130)

工程训练课程体系中机器人模块教学改革 李彦林, 郭建新, 胡 萍 (132)

· 实验教学中心与实习(实训)基地 ·

航海实验教学示范中心建设 刘春江, 韩雪峰, 张德荣 (135)

实验教学示范中心建设探讨 杨 昆, 朱利泉, 李帮秀, 等 (137)

生物科学校级实验教学示范中心建设 万华方, 朱利泉, 李帮秀, 等 (140)

材料分析测试中心改革探索 秦 亮, 芦 笙 (143)

机械基础实验教学中心建设的实践 胡友安 (147)

法学院校证据技术实验教学的探索和实践 邹卫东, 黄 锐, 吴 玲, 等 (150)

飞行器控制实验教学示范中心建设的实践 王佳伟 (152)

高职院校实训教学规范化管理的探讨 童克波 (155)

· 实验室建设与管理 ·

实验室安全的规范管理探索 车 将, 廖允成 (158)

对高校文科实验室特色建设的思考 刘金杰, 李建军, 赵卫红, 等 (161)

构建稳健实验室队伍的思考与探索 严 虎, 杨宇科, 彭 刚 (164)

实验教学中心模式下实验技术队伍的建设 邹 清, 郭明秀, 黄焕利 (167)

大型精密贵重仪器设备管理工作探索 许溯伦, 卢青兰, 施岱松, 等 (170)

高校公共实验平台降低经济成本的实践与探索 许 冰, 徐顺清 (173)

创新型经管实验室建设的思考 徐 翔, 李云妹, 沈 洁, 等 (176)

虚拟仿真物流实验室的建设构想 向 东 (180)

· 仪器设备研制、改进、检修 ·

CCD 杨氏模量测量仪的实验研究 石大庆, 江 超, 朱国良, 等 (183)

双室比较型温室效应实验装置研制 庄正辉, 程敏熙, 董东秀, 等 (186)

征稿启事 《实验科学与技术编辑部》 (29)

征订启事 《实验科学与技术编辑部》 (189)

短讯 实编 (59, 118)

Experiment Science & Technology

Vol. 8 No. 5 Oct. 28 2010 (Serial Number: 42) Bimonthly Published since 2003

Supervised by

Sichuan Provincial Department of Education

Sponsored by

Sichuan Higher Educational Association

University of Electronic Science & Technology
of China

Consultants

LI Le-min

XIANG Huai-cheng

LU Tie-cheng

Director of Editorial Board

GAO Jie

Deputy Directors of Editorial Board

MA Chuan-feng WANG Lian-zhi

LAN Zhong-wen XIONG Cai-dong

ZHU Jin-shu CHEN Da-peng

CHEN Shi-jian LI Hui

LI Jia-qiang LI Wu-yi

SONG Zhi WANG Cheng-chu

YANG Tian-yi ZHANG Jian-xia

ZHANG Xing-xiang FENG Xiao-yun

LUO Zheng-xiang YI Yi-cou

LIU Jun XU Zhou

TANG Cao-ji DONG Zhi

PENG Jin-hui

Editor-in-Chief LAN Zhong-wen

Executive Editor-in-Chief

XU An-yu

Deputy Editor-in-Chief YU Mei

Edited & published by

Experiment Science & Technology Editorial
Office

Add: No. 4 Section 2 North Jianshe Road Cheng-
du Sichuan 610054
P. R. China

Tel: 028 - 83201742

028 - 83202397

E-mail: syglk@uestc.edu.cn

http://www.experist.com

Subscription From

The Journal Editorial Office

Subscription Rate

\$ 15/issue (Postage included)

\$ 90/year (Postage included)

Experiment Technology

- Effect of Multicomponent Permeation on Properties of 30Cr2MoV Steel CUI Guo-dong, ZHENG Zhou, ZHU Peng-xiao, et al (1)
- Theoretical Analysis and Experimental Verification of Normal Stress of Stacked Beams TANG Fan-hua, ZHU Fang-cai, LI Xi-ping, et al (3)
- CATV Equipment Lightning Protection of Broadcasting Station WANG Geng (5)
- Multiple Designs of Equal Precision Digital Frequency Meter Implemented in Experimental Teaching LIN Jian-ying, GAO Miao-miao, NIU Ying-jun (8)
- Design of Intellectualized Storage Training System ZHU Xiao-peng (11)
- Influence of Surface Treatment on Electro-optic Properties of Polymer Stabilized Flexible Bistable Cholesteric Liquid Crystal Display WANG Ji-min, XIE Jian-hui, YANG Wen-jun, et al (14)
- An Effective Adjustment Method for Spectrometer without Hypercriticism Requirement ZHU Zhi-li, MO Jiong, HOU Xiu-me (17)
- Design of Programmable Voltage Reference Circuit XU Ming-li (19)
- Application of Constrained Least Squares Filtering on Image Restoration Technology HAO Ming, FANG Liang (21)
- Instability Experiment Investigation of External Pressure Vessel Based on Design Type Concept XU Qiao-lian, ZOU Jiu-peng, WANG Ze-wu, et al (24)
- Several Problems in Brinell Hardness Test—Correct Selection of 0.102F/D² Value and Platen Diameter SHI Wen (27)
- Application of Inductive Method in Exploring Physical Laws LU Pei (30)
- Error Analysis in Supervision Orientation System for Coalmine Slight Quake ZHAO Long (33)
- Research on Absorption Process of Molecular Sieve for Oxygen Generator LIANG Ji-kun, SHAO Jie, PANG Xiao-feng, et al (35)
- Problems and Solving Methods of Section in Pathology Tissues WANG Hua, ZHOU Xiao-qiong (38)

Computer and Network Technology Application

- Implementation of SNMP Agent in RTOS WU Di, JIA Ru-peng (41)
- A Service Enterprise Automation Management System Based on Web and Workflow Technology DENG Qi-jun, YAO Jin, CHEN Chang-hua, et al (44)
- Design and Implementation of the Third Layer Switching Based on the Simulator REN Yi (46)

· Software Development and Application ·

Flash Courseware in Physics Teaching	SUN Bo-er	(49)
Teaching Management Information System Based on .NET	WANG Xue-qin	(51)
Study and Practice on Language Lab Management	DU Yong, WANG Yu-xiang	(55)

· Research on Innovative Experiments ·

Improvement of Experimental Teaching Efficiency on Position Training by Means of Optical Equipment Simulation		
.....	SUN Sheng-chun, LUO Yun, LI Lu	(57)
Innovation and Practice of Experimental Method of Motor Control	LI Li, ZHANG Li-qun, CHUAN He	(60)

· Exploration and Innovation of Experimental Teaching System ·

Establishment of Teaching Platform for Computer Experiment on the Basis of Explorative Learning	LI Jing, XIA Feng	(63)
Innovation of Experimental Teaching System of Biotechnology to Improve Student Quality		
.....	LIU Jie-feng, ZHOU Tian, HAN Han-bing, et al.	(66)

· Experiment Teaching Theory ·

A Review of the Application of ERP Sand Table Simulation in College Teaching	ZHENG Hui-zhen	(70)
Practical Teaching Improvement and Innovation	WAN Ling, LU Hai-xia, XIA Yan-rong	(73)

· Fundamental Experiment Teaching ·

Modern Physics Experiment to Improve the Quality of Teaching to Develop Students' Awareness of Innovation	XU Ying	(76)
Exploration of Training in the Chemical Experimental Teaching Ability	RUAN Shang-quan, QIU Yan, LIU Kai, et al.	(79)
Practice of Teaching Reform in Biochemical Experiment	GUO Tian-rong, YANG Shou-bao	(82)
Study on the Modularization of the Experimental Teaching System for the Fundamental Chemistry		
.....	HE Jian-feng, WANG Tao, CHEN Chuan-bing, et al.	(84)
Exploration on the Experiment Teaching Reform in Instrumental Analysis	LIU Zhao-di, XU Hua-jie, SHENG Liang-quan	(86)

· Specialty Experiment Teaching ·

Study on the Teaching Method of <i>Fundamentals of Analog Electronics Technique</i>	WANG Cai-jun, HUANG Zhi-jing	(89)
Experimental Teaching Reform Construction on Civil Engineering and Structural Testing and Inspection		
.....	ZHOU Miao, ZHANG Su-hua	(93)
Study on Theme-based Teaching of Comprehensive Experiment for Hotel Management	CHEN Ping-ping, WU Shui-tian	(95)
Reform on the Experiment Teaching on Plant Physiology	REN Li-li, WU Tao, XU Hui	(99)
Exploration of Improve Lesson Quality of Circuit Experiments	WANG Ting-gao, HE Jie-sheng, LIU Tao	(101)
Reform and Discussion on Electrotechnics and Electronics Experimental Teaching	LIU Lin	(103)
Reform and Exploration on Experimental Courses of Digital Electronic Technology	LIU Yin-ping, WANG Han	(105)
Discussion on Teaching Reform of the Computer Hardware Series Courses	ZHOU Yan, HE Le-sheng, WANG Wei-lian	(108)
Exploration on the Comprehensive Experiment of Environmental Science	GAO Dong-mei, LI Li	(110)
Thinking and Practical Teaching about Mechanical Drawing	ZHANG Sheng-xia, TIAN Huai-wen	(113)
A Preliminary Study on Experiment Teaching of Undergraduate of the Tourism Management Major in University		
.....	MA Jie, CHEN Ping-ping	(116)
Breaking and Creation in Secondary Vocational Statistical Basis Education	LI Li	(119)

· Experimental Teaching Management

- Laboratory Running Open Mechanism Research and Practices ... DENG Jie, PENG Li-kun, DONG En-gang (122)
Application of Psychology in Industrial Engineering Experiment Teaching ZENG Gang, ZHANG Qiang (126)

· Training and Student Science and Technology Activities ·

- Electronic Design Competition Promotes Talents Fostering of Communication Engineering Professional
..... WANG Ya-fei, YANG Shu-hui, LI Xue-hua (130)
Educational Reform of Robot Module in Engineering Traning LI Yan-lin, GUO Jian-xin, HU Rong (132)

· Experiment Teaching Center and Training Base ·

- Maritime Demonstration Experimental Teaching Center Construction
..... LIU Chun-jiang, HAN Xue-feng, ZHANG De-rong (135)
Probing to Reformation on Experimental Teaching of Colleges and Universities
..... YANG Kun, ZHU Li-quan, LI Bang-xin, et al. (137)
Construction of the Experiment Teaching Demonstration Center of Bioscience
..... WAN Hua-fang, ZHU Li-quan, LI Ban-gxiu, et al. (140)
Research on the Reformation of the Analysis and Testing Center QIN Liang, LU Sheng (143)
Practice of Building the Mechanical Experiment Teaching Demonstration Center HU You-an (147)
Teaching and Practice of Evidence Technology Experiment in Law Schools
..... ZOU Wei-dong, HUANG Rui, WU Ling, et al. (150)
Vehicle Control Experimental Teaching Demonstration Center Construction WANG Jia-wei (152)
Discussion on Standardized Management of the Higher Vocational Schools TONG Ke-bo (155)

Management and Construction of Laboratory ·

- Standard Administration on the Safety Laboratories Management CHE Jiang, LIAO Yun-cheng (158)
Ideas on Characteristic Construction about Experimental Laboratory of Literal Arts in Colleges and Universities
..... LIU Jin-jie, LI Jian-jun, ZHAO Wei-hong, et al. (161)
Thought and Exploration of Building a Solid Lab Team YAN Hu, YANG Yu-ke, PENG Gang (164)
Building of the Ranks of Experimental Technique in Experimental Teaching Center
..... ZOU Qing, GUO Ming-xiu, HUANG Huan-li (167)
Explorations of Large-scale Precision Instrument and Equipment Management in Universities
..... XU Su-lun, LU Qing-lan, SHI Dai-song, et al. (170)
Practice and Exploration of the Management to Decrease the Economic Cost for Experiment Center of University
..... XU Bing, XU Shun-qing (173)
Searching and Thinking on the Construction of Innovative Laboratories of Economic and Management Science
..... XU Xiang, JI Yun-shu, SHEN Jie, et al. (176)
Virtual Simulation Laboratory Construction Logistics Concept XIANG Dong (180)

· Equipment Development and Maintenance ·

- Study on CCD Young's Modulus Measurement Apparatus
..... SHI Da-qing, JIANG Chao, ZHU Guo-liang, et al. (183)
Manufacture of Double Containers Comparative Instrument for Greenhouse Effect
..... ZHUANG Zheng-hui, CHENG Min-xi, DONG Dong-xiu, et al. (186)