

实验科学与技术

SHIYAN KEXUE YU JISHU

第9卷第1期(总第44期) 2011年2月28日出版 双月刊 2003年6月创刊

顾问

李乐民 向仲怀 卢铁城

编辑委员会主任 高洁

副主任 (按汉语拼音排序)

敖天其 陈时见 董志

冯军焯 胡凯 黄炳辉

兰中文 李家强 李五一

李意民 柳军 罗正祥

马传峰 彭金辉 孙岳明

唐朝纪 汪成楚 王连之

夏天东 熊彩东 徐洲

徐安玉 杨天怡 易亿筹

张建峡 张兴祥 周立超

朱晋蜀

主编 兰中文

执行主编 徐安玉

副主编 余魁

编委 (按汉语拼音排序)

毕卫民 采振祥 陈小鹏

谌永祥 崔邦军 崔炳谋

邓国红 丁二农 丁建生

董孝璧 方平 冯辉宗

高成伟 高登慧 葛一楠

官正强 郭庆 郭兆刚

韩西 胡定平 黄榜彪

姜文凤 巨能攀 蓝增全

雷福厚 李建华 李树坚

李廷轩 刘菊东 刘蜀知

刘希东 刘松青 刘玉堂

龙明华 罗勇武 马力

明仲 孟宪丽 莫书荣

牛显明 裴东 钱昌吉

阮尚全 宋智 孙成科

孙建迎 谈文蓉 唐敏

王兵 温光浩 吴洞

吴军 吴立群 吴能表

吴四九 夏锋 解成喜

谢永安 许积萍 严虎

严薇 杨明伦 姚圣国

殷瑞祥 尹定红 杨勇

杨慧 曾明荣 张烈平

张明高 张勇 张原

赵谦知 赵希文 郑春龙

郑继明 朱卫华 左丽

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 ·

- 微蜂窝无线通信综合实验设计方法 赵东风,牛勤,周冬明,等 (1)
- EDA技术在数字电子技术实验中的应用 王彩凤,胡波,李卫兵,等 (4)
- K75平板载荷试验在高填方工程中的应用 江巍,魏桦,陈宗清 (7)
- 8~12.4 GHz宽带频率合成器的设计 何恭涛,钱光弟 (9)
- NiFe₂O₄铁氧体薄膜溅射产额的蒙特卡罗模拟 李金龙,余忠,孙科,等 (11)
- 瓦屋山水电站长期优化调度模型研究 刘勇,李颖 (15)
- 大学物理电学实验仿真研究 吴肖,熊建文 (18)
- 分光仪调节的一种简单方法 陈丽娜 (20)
- 工学电力电子技术实践教学案例分析 段晓燕 (22)
- 植物细胞染色体有丝分裂技术 许文花,马向丽 (25)
- 食品分析综合实验设计与教学 张平,钱莉莉,张爱武,等 (27)

· 计算机及网络技术应用 ·

- SSL VPN在远程网络实验室的应用和实现 肖涛,程东,何怀文 (29)
- 一种安全的家庭无线网络环境技术的构建 唐灯平 (32)
- 多媒体教室设备故障快速反馈系统设计 杜勇,雅襄,蔡静 (34)
- 基于校园网的工程力学实验教学系统研究 刘燕,邓辉 (37)
- 虚拟互动式语言实验室系统设计探析 郭亮,郭毅 (41)
- 化学实验教学中心网络体系的建设 王晗光,赵茂俊,黄乾明 (43)
- 四川大学化学基础实验教学中心网站建设 熊庆,陈华,李梦龙,等 (46)

· 软件开发与应用 ·

- 实验报告自动生成系统设计 黄凤良,徐明,吴文婷,等 (48)
- 用Multisim软件分析触发器的状态变化过程 任骏原 (53)
- 开放实验项目教学管理系统的设计与实施 胡莹 (57)
- Proteus软件在单片机教学中的应用 张建华,靳婷 (60)
- 电磁场实验辅助教学软件的研究 李军,陈颖 (62)
- 通信原理实验课程教学研究 徐升槐,范勤儒 (65)

· 创新性实验研究 ·

- 开展“三性”模式教学 培养复合型人才 袁晓明,王宏宇,刘 苏,等 (67)
计算机硬件类实验教学改革探索 温柳英,冯 丹,王世元 (70)

· 实验教学改革、探索与创新 ·

- 电子信息专业实验教学改革初探 印 勇,黄扬帆,谢礼莹,等 (73)
基础电子实验考核模式改革的研究与实践 潘海军,李春树,熊文元 (76)
信息光学实验课程教学模式探索 纪运景,杨 庆,沈中华,等 (80)
机械工程实验教学改革实践与探索 邹宪军,李孟仁,毛建中 (82)
微生物实验的多层次递进式教学模式研究 胡廷章,涂 昀,王贵学 (85)
浅谈基础化学实验教学体系的改革 李佑稷,欧阳玉祝,石爱华 (88)

· 实验教学理论 ·

- 校企紧密合作培养通信工程高素质应用型人才 李学华,杨曙辉,王亚飞 (91)
从教研互动看经管类研究生专业课教学 杜建国,陈永泰 (95)
地方高校嵌入式实践教学体系的构建 冯小燕,陈昌兴,朱灵娟 (98)
创新理念下的高校实验教学质量保障改革 杨 琴 (101)
建筑工程概预算实验环节探析 郭红英 (105)

· 开放式实验教学 ·

- 建设开放型创新实验室,培养学生综合能力 刘广伟 (108)
开放式化工原理实验教学模式研究 胡秀英,郑纯智 (111)

· 基础实验教学 ·

- 近代物理实验培养学生创新能力探讨 刘富池,孔文婕,覃以威,等 (114)

· 专业实验教学 ·

- 应用EDA技术 改革电子系列课程实验教学 袁小平 (117)
分子生物学实验课程考核方法探讨 肖 靓,谢 青,李元斌,等 (120)

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
028-61830178(投稿)

E-mail:syglk@uestc.edu.cn

网 址:www.sy.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:12.00元/期;

72.00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 * ¥12.00 * 3000 * 63 *

2011-02

工程训练教学试件的优化设计	张国斌,刘悦,张树军,等	(123)
综合能力的培养在数据结构实验教学中的实践	周益民,刘笑,田玲	(125)
城乡规划类专业制图课程教学改革探析	宋双华	(129)
独立学院设计性多步药物合成实验的开设	周先波,王永红,毛红雷,等	(132)
葡萄酒品尝学实验课准备的探讨	张莉,魏冬梅,梁艳英,等	(135)

· 实验教学管理 ·

高校实验教学管理现状及对策	李建楠,刘玉峰,李春晖	(138)
---------------------	-------------	-------

· 实验室开放教学管理 ·

开放性实验室管理系统的构建研究	宗莲松,肖毅,潘华	(141)
创建机场鸟害防治实验室的探索与实践	刘振江,高屹	(144)
实验中心开放实验室的风险管理	郭伟锋	(146)

· 实验教学中心与实习(实训)基地 ·

环境工程设计型实验教学实践与研究	王建宏,陈家庆,朱玲,等	(150)
加强实验教学改革,创建省级实验示范中心	魏景新,张普平,郭盼	(153)
传媒实验示范中心建设初探	田毅,顾邦军	(156)
生物实验室仪器设备的管理与共享	鲁伟,李莉,胡颖	(158)

· 师资培养 ·

民族地区基础化学实验教学团队建设研究	欧阳玉祝,陈小东,王迎春	(161)
高师电子信息类专业职业教育培养师资的对策	江超,赵桂芳,黄会玲,等	(164)

· 实验室创新型人才培养 ·

实验教学改革与创新型人才的培养	付丽,罗钧,孟丽娅	(166)
实验教学与创新人才培养	邵晓玲,陈永泰,杜建国,等	(169)

· 实验室建设与管理 ·

经济管理类实验室建设问题探讨	石永明,王玲燕,骆东奇	(173)
广播电视实验室功能定位的探讨	张化东	(177)
重点实验室的运作实践及问题探讨	林健,王开运,赵春青	(180)

· 大学生园地 ·

中国房地产财富效应之实证研究	郑晟,顾巧,马永开	(184)
《实验科学与技术》投稿注意事项	《实验科学与技术》编辑部	(189)

Experiment Science and Technology

Vol. 9 No. 1 Feb. 28 2011 (Serial Number: 44) 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 Zhong-huai
LU Tie-cheng

Director of Editorial Board

GAO Jie

Deputy Directors of Editorial Board

AO Tian-qi	CHEN Shi-jian
DONG Zhi	FENG Jun-huan
HU Kai	HUANG Bing-hui
LAN Zhong-wen	LI Jia-qiang
LI Wu-yi	LI Yi-min
LIU Jun	LUO Zheng-xiang
MA Chuan-feng	PENG Jin-hui
SUN Yue-ming	TANG Chao-ji
WANG Cheng-chu	WANG Lian-zhi
XIA Tian-dong	XIONG Cai-dong
XU Zhou	XU An-yu
YANG Tian-yi	YI Yi-chou
ZHANG Jian-xia	ZHANG Xing-xiang
ZHOU Li-chao	ZHU Jin-shu

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 - 61830178

E-mail: syglk@uestc.edu.cn

http: //www.experist.com

Subscription From

The Journal Editorial Office

Subscription Rate

\$ 20/issue (Postage included)

\$ 120/year (Postage included)

· Experiment Technology ·

- Comprehensive Experimental Design of Micro-cellular Radio Communication
..... ZHAO Dong-weng, NIU Qin, ZHOU Dong-ming, et al. (1)
- Application of EDA Technique in Digital Electronic Technique Experiment
..... WANG Cai-feng, HU Bo, LI Wei-bing, et al. (4)
- K75 Plate Loading Test in a High Fill Airport JIANG Wei, WEI Hua, CHEN Zong-qing (7)
- Design of 8 ~ 12.4 GHz Wideband Frequency Synthesizer HE Gong-tao, QIAN Guang-di (9)
- Monte-carlo Simulation of Sputtering Yield for NiFe₂O₄ Ferrite Thin Film
..... LI Jin-long, YU Zhong, SUN Ke, et al. (11)
- Model-research on Long-term Optimal Dispatching of Wawushan
Hydropower Station LIU Yong, LI Jie (15)
- Simulation of Electrical Experiment in College Physics WU Xiao, XIONG Jian-wen (18)
- A Simple Method of Adjusting Spectrometer Which the Adjustment for
the Telescope is Took as a Main Task CHEN Li-na (20)
- Practice Teaching Case Analysis on Engineering Power Electronic
Technology DUAN Xiao-yan (22)
- Method for Mitotic Chromosomes Observation in Plant Cells XU Wen-hua, MA Xiang-li (25)
- Experiments Design of Food Analysis Comprehensive and Experimental
Teaching ZHANG Ping, QIAN Li-li, ZHANG Ai-wu, et al. (27)

· Computer and Network Technology Application ·

- Application and Reality of SSL VPN in Remote Network Laboratory
..... XIAO Tao, CHENG Dong, HE Huai-wen (29)
- Building a Secure Home Wireless Network Environment Technology
..... TANG Deng-ping (32)
- Design of Failure Fast Feedback System for Multimedia Classroom
Equipment DU Yong, YONG Mao, CAI Jing (34)
- Research of Engineering Mechanical Experimental Teaching System
Based on Campus Network LIU Yan, DENG Hui (37)
- Exploration of the System Design in the Virtual Interactive Language
Laboratory GUO Liang, GUO Yi (41)
- Construction of Network System of Teaching Center of Chemical
Experiments WANG Han-guang, ZHAO Mao-jun, HUANG Qian-ming (43)
- Experiment Teaching Center of Basic Chemistry of Sichuan University
Website Construction XIONG Qing, CHEN Hua, LI Meng-long, et al. (46)

· Software Development and Application ·

- Design on the System of Automatic Generating Experimental Report
..... HUANG Feng-liang, XU Ming, WU Wen-ting, et al. (48)

State Transition Analyzing of Flip-flop by Multisim Software	REN Jun-yuan	(53)
Design and Implementation of Opening Experimental Items of Teaching Management System	HU Ying	(57)
Application of Proteus Software in SCM Teaching	ZHANG Jian-hua, JIN Ting	(60)
Research on Auxiliary Teaching Software of Electromagnetic Field Experiment	LI Jun, CHEN Ying	(62)
Teaching Reform and Research of the Course of Communication Principle Experiment	XU Sheng-huai, FAN Qin-ru	(65)

· Research on Innovative Experiments ·

Carrying out Teaching Mode on Three-property Experiment and Developing Compound Talents	YUAN Xiao-ming, WANG Hong-yu, LIU Su, et al.	(67)
Discussion of Integrate EDA Technology into the Computer Hardware Experimental Teaching	WEN Liu-ying, FENG Dan, WANG Shi-yuan	(70)

· Experiments Teaching Reform, Exploration and Innovation ·

Reform Experimental Teaching of Electronic Information Specialty, Cultivate students' Comprehensive Innovative Ability	YIN Yong, HUANG Yang-fan, XIE Li-ying, et al.	(73)
Research and Practice the Foundation Electron Experiment Inspects the Pattern Reform	PAN Hai-jun, LI Chun-shu, XIONG Wen-yuan	(76)
A New Teaching Pattern of Information Optics Experimental Course	JI Yun-jing, YANG Qing, SHEN Zhong-hua, et al.	(80)
Mechanical Engineering Experimental Teaching Reform Practice and Exploration	ZOU Xian-jun, LI Meng-ren, MAO Jian-zhong	(82)
Study on Multi-layered Accelerating Teaching Mode in Microbiology Experiment Teaching	HU Ting-zhang, TU Yun, WANG Gui-xue	(85)
Reformation Discussion of Basic Chemistry Experiment Teaching System	LI You-ji, OUYANG Yu-zhu, SHI Ai-hua	(88)

· Experiment Teaching Theory ·

University and Enterprise Working in Close Cooperation to Train High Quality Applied Talent for Communication Engineering Profession	LI Xue-hua, YANG Shu-hui, WANG Ya-fei	(91)
View the Specialty Courses Teaching for Graduate Students Majoring in Business Management from the Interaction between Research and Teaching	DU Jian-guo, CHEN Yong-tai	(95)
Construction of Embedded Practice Teaching System at Local College	FENG Xiao-yan, CHEN Chang-xing, ZHU Ling-juan	(98)
Present Priorities and Measures of Reforming Experiment Teaching in Institutions of Higher Learning	YANG Qin	(101)
Analysis on Experiment Link in Construction Engineering Budget	GUO Hong-ying	(105)

· Opening Experiment Teaching ·

Construction Opened Innovation Laboratory and Train Student Comprehensive Ability	LIU Guang-wei	(108)
Research of the Opening Teaching Model of Chemical Engineering Principle Experiment	HU Xiu-ying, ZHENG Chun-zhi	(111)

· Specialty Experiment Teaching

Teaching Discussion of the Innovation Ability Training of Modern Physical Experiments	LIU Fu-chi, KONG Wen-jie, QIN Yi-wei, et al.	(114)
---	--	-------

· Specialty Experiment Teaching ·

Carrying out EDA teaching positively and Reforming Experimental Methods of Electronic Series Courses	YUAN Xiao-ping	(117)
Study on the Examination Method of the Molecular Biology Experiment Course	XIAO Jing, XIE Qing, LI Yuan-bin, et al.	(120)
Optimizing Design of Engineering Training Teaching Specimens	ZHANG Guo-bin, LIU Yue, ZHANG Shu-jun, et al.	(123)

Practice of Comprehensive Ability Cultivation in Data Structure Experiment Teaching	ZHOU Yi-min, LIU Xiao, TIAN Ling	(125)
Research on the Teaching Reform of the Drawing Course in Urban and Rural Planning Majors	SONG Shuang-hua	(129)
Investigation on Construction of many Steps Drug Synthesis Experiments in Independence College	ZHOU Xian-bo, WANG Yong-hong, MAO Hong-lei, et al.	(132)
Exploration on the Preparations of Winetasting Experiment Class	ZHANG Li, WEI Dong-mei, LIANG Yan-ying, et al.	(135)

· Experimental Teaching Management ·

Status and Countermeasures about the Management of Regional University Experimental Teaching	LI Jian-nan, LIU Yu-feng, LI Chun-hui	(138)
--	---------------------------------------	-------

· Teaching and Management of Opening Laboratory ·

Research on the Construction of Opening Laboratory Management System	ZHONG Lian-song, XIAO Yi, PAN Hua	(141)
Exploration and Practice on Creating the Laboratory of Prevention and Control of Bird Strike at Airport	LIU Zhen-jiang, GAO Yi	(144)
Risk Management in Opening Laboratory of Experimental Center	GUO Wei-feng	(146)

· Experiment Teaching Center and Training Base ·

Teaching and Study on Designed Experiment of Environmental Engineering	WANG Jian-hong, CHEN Jia-qing, ZHU Ling, et al.	(150)
Strengthen Experimentation Teaching Innovation and Construct Demonstration Center of Provincial Level	WEI Jing-xin, ZHANG Xi-ping, CUO Fang	(153)
First Exploration of the Medium Experimental Demonstration Center Construction	TIAN Yi, GU Bang-jun	(156)
Application and Management of Biological Macromolecule Purification System	LU Wei, Li li, Hu ying	(158)

· Teacher Training ·

Research on Construction of Fundamental Chemistry Experimental Teaching Team in National Areas University	OUYANG Yu-zhu, CHEN Xiao-dong, WANG Ying-chun	(161)
Countermeasure of Training Teachers for Vocational Education by Normal University Electron Information Specialty	JIANG Chao, ZHAO Gui-fang, HUANG Hui-ling, et al.	(164)

· Innovative – type Talents Cultivation of Laboratory ·

Experimental Teaching Reform and Innovative Ability Training	FU Li, LUO Jun, MENG Li-ya	(166)
Experimental Teaching and Creative Talents Cultivation	SHAO Xiao-ling, CHEN Yong-tai, DU Jian-guo, et al.	(169)

· Management and Construction of Laboratory ·

Laboratory Construction of the Economic Management	SHI Yong-ming, WANG Ling-yan, LUO Dong-qi	(173)
Study about Function Orientation of the Radio and Television Lab	ZHANG Hua-dong	(177)
Running Practice and Question Discussion of Key Laboratory in Universities	LIN Jin, WANG Kai-yun, ZHAO Chun-qin	(180)

· Student Corner ·

Empirical Study of Real Estate Wealth Effect of China	ZHENG Zheng, GU Qiao, MA Yong-kai	(184)
---	-----------------------------------	-------