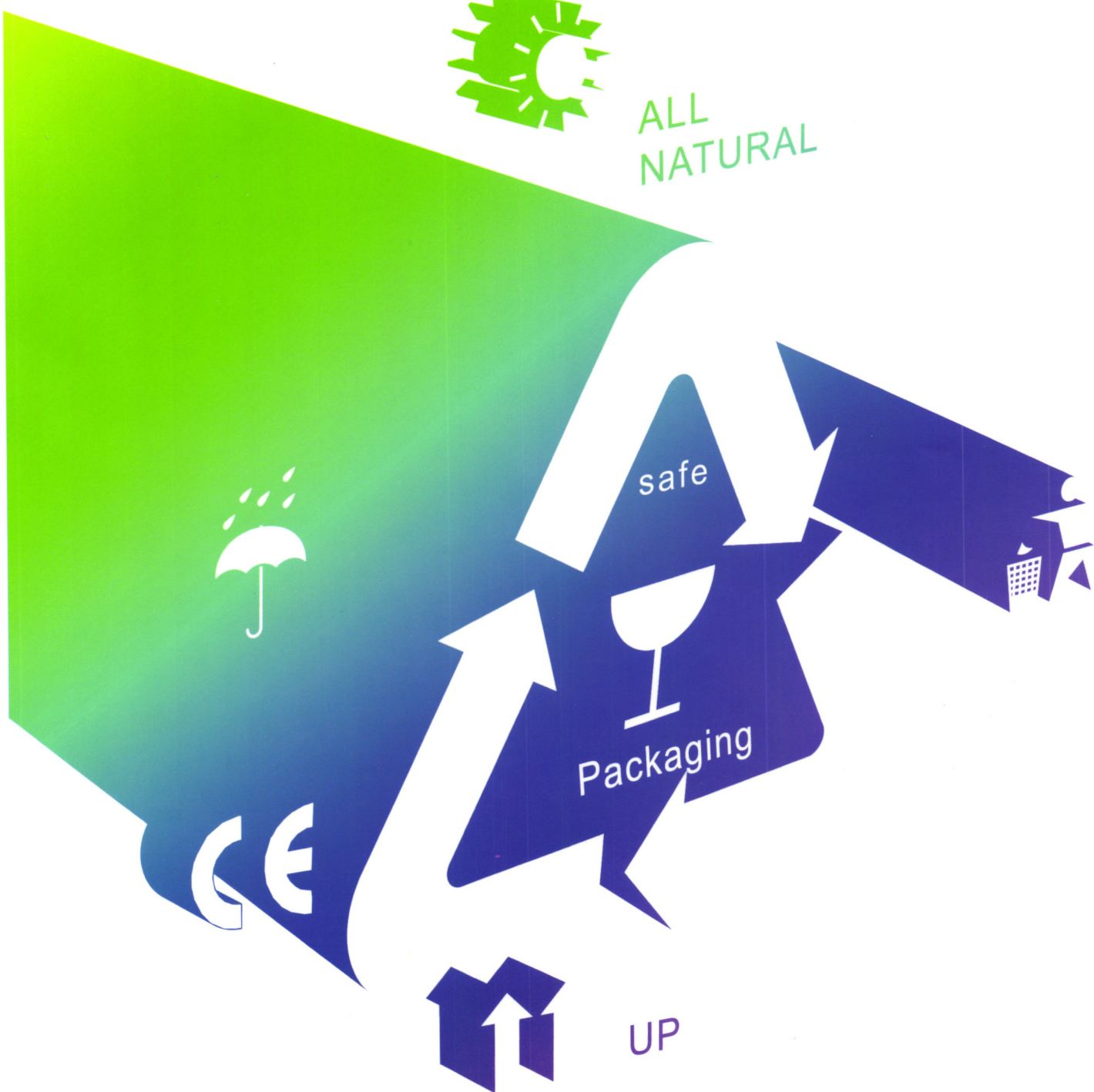


全国中文核心期刊  
中国科学引文数据库 (CSCD) 源刊

2016年12月 第37卷 第23期

主办单位: 中国兵器工业第五九研究所



# 包装工程

BAOZHUANG GONGCHENG

第37卷 第23期 2016年12月10日

## 目次

---

### 第16届全国包装工程学术会议专栏

---

- 非均布载荷下瓦楞纸箱的承载性能  
吕维亮, 王军 1
- 辊式涂布两辊间隙施涂过程的数值计算分析  
包能胜, 刘小山, 马婉, 黄学佳 6
- 双醛壳聚糖/阳离子淀粉施胶剂的抗油脂性能  
周刚, 吕勇, 宋词, 魏先福 13
- EPE缓冲性能测试及缓冲包装设计方法  
程玲, 曹国荣, 关元 18
- 滑托盘力学性能测试方法及验证  
温时宝, 褚晓珂, 姜淑芸, 杨德龙 23
- 基于Ansys Workbench的快装箱多目标优化设计  
李光, 王文雅, 孙彬青, 周彧 29
- 功能型包装薄膜材料在芒果保鲜中的应用  
刘辉, 许文才, 李东立, 付亚波, 石佳子, 廖瑞娟 34
- 聚乙烯醇/海藻酸钠复合膜性能的正交优化  
郝宇华, 黄震, 刘珈伊, 王立营, 范兴月, 彭郁雯 39
- 基于Ansys Workbench的塑料蜂窝板仿真分析及优化  
潘凤丽, 李光 44
- 木托盘受力性能理论分析及有限元模拟  
曹菲 50
- 基于复合防护材料的模块组合式柔性封套设计  
牛正一, 李良春, 高飞, 姜志保 55

---

### 包装材料

---

- 聚丙烯复合包装材料断面冲击强度的分形表征  
魏风军, 汪伟, 张峻岭 61
- 木质包装废弃物快速热解过程中的氮迁移机制  
刘惠, 苟进胜 66

---

### 食品包装

---

- 鱼鳞胶原蛋白复合抗菌膜对罗非鱼肉的保鲜效果  
邵东旭, 王卉, 裴志胜, 薛长风 73
- 喷涂参数及带速对大豆蛋白液喷涂平均密度的影响  
黄绍祥, 杨传民, 常淑英, 何思念 78

---

### 研究进展

---

- 抑菌及抗氧化活性食品包装膜的研究进展  
王海丽, 杨春香, 杨福馨, 李立 83

---

### 包装技术与工艺

---

- 直四棱柱自锁底成型锁合点模切线  
王鹏, 车信妮, 张书驰, 王丽超, 孙诚, 黄利强 89

瓦楞纸箱尺寸设计优化系统的开发	宋卫生, 苗红涛, 苏铁青	93
EPS 泡沫包装箱有限元分析与优化设计	秦志远, 黄海松, 张慧	100
堆垛钢板用木托架的受力分析及优化	马婕	105
基于真空吸盘提升技术实现瓦楞纸箱自动码垛	王悦, 张惠忠, 智明丹, 卢立新, 潘嘹	111
双曲正切型非线性包装系统跌落冲击响应分析	李皓婧, 张敏	116
某型弹药防护包装设计验证	白焘, 杨昭	120
高温高湿环境下弹药储运包装温湿度研究	潘文庚, 尹海平, 孔凡成, 巢虎, 张沿磊	125

## 包装机械

圆压圆中封制袋机结构设计及控制系统	刘瑞素, 刘亚男, 邢新闻, 刘玉川	129
基于TRIZ 理论的成垛浆粕上料机设计	张士强	135
一种多物理场作用下玉米秸秆粉碎装备设计	钟声标	140

## 包装印刷

基于SIFT特征点匹配的抗几何攻击水印算法	陈青, 柯婷婷	146
颜料协同作用对涂布装饰原纸性能的影响	张明志, 张正健, 王满康, 黄汝权, 张启莲, 赵艳琳	151
环境光及iPad背光源亮度设置对iPad呈色的影响	张建青, 沈晓莹, 田全慧, 刘真	159
基于结构相似度的彩色图像质量评价算法	朱欢, 陈永利, 王佳辉, 刘文霞, 胡光强, 王谦	165
响应面法优化白墨在镭射卡纸上的附着力性能	李小东, 邹洋, 张彦粉, 冯利军	171
基于波长分区的半色调色光谱估算模型	田全慧, 刘真, 张建青, 刘士伟	176
光催化氧化法处理胶印油墨废水的研究	冷彩凤, 王崑, 任龙飞	181
PP棉滤芯与胶印润版液过滤级数的关系	华超	186
曲面胶印机步进分度系统建模及有限元分析	袁峰, 王建昊	191

## 论坛与资讯

基于木材包装存在的主要问题及对策研究	赵彬	196
基于智能物流的供应链包装系统集成分析	倪卫涛	203
基于EAHP和免疫算法的野战军械仓库布局优化	卞光荣, 黄强, 张沿磊, 巢琥	209
教学型洗瓶机的设计	刘安静, 周文玲	215

## 广告索引

封二 普拉斯包装材料有限公司  
封三 中国兵器工业第五九研究所包装工程技术研究中心

# PACKAGING ENGINEERING

(Initial Issue 1980)(Semimonthly)

Vol.37 No.23(Total No.341)Dec.10, 2016

## Contents

---

### Special Column for The 16th National Packaging Engineering Academic Conference

---

- Load-carrying Property of Corrugated Cartons under Non-uniform Load  
*LYU Wei-liang, WANG Jun* 1
- Numerical Calculation and Analysis on Roll Coating Process of the Clearance between Two Rollers  
*BAO Neng-sheng, LIU Xiao-shan, MA Wan, et al.* 6
- Grease Resistance of Sizing Agent of Dialdehyde Chitosan/Cationic Starch  
*ZHOU Gang, LYU Yong, SONG Ci, et al.* 13
- EPE Cushioning Performance Test and Cushioning Packaging Design Method  
*CHENG Ling, CAO Guo-rong, GUAN Yuan* 18
- Test Method and Verification for Mechanical Property of Slip Sheet  
*WEN Shi-bao, CHU Xiao-ke, JIANG Shu-yun, et al.* 23
- Multi-objective Optimization Design of Plywood Box Based on Ansys Workbench  
*LI Guang, WANG Wen-ya, SUN Bin-qing, et al.* 29
- Application of Functional Packaging Film Materials in Mango Preservation  
*LIU Hui, XU Wen-cai, LI Dong-li, et al.* 34
- Orthogonal Optimization of Properties of Polyvinyl Alcohol/Sodium Alginate Composite Films  
*HAO Yu-hua, HUANG Zhen, LIU Jia-yi, et al.* 39
- Ansys Workbench-based Simulation Analysis and Optimization of Plastic Perforated Board  
*PAN Feng-li, LI Guang* 44
- Theoretical Analysis and Finite Element Simulation of Mechanical Property for Wooden Pallet  
*CAO Fei* 50
- Design of Modular Combined Flexible Envelope Based on Composite Protective Materials  
*NIU Zheng-yi, LI Liang-chun, GAO Fei, et al.* 55

---

### Packaging Materials

---

- Fractal Characterization of Section Impact Strength of Polypropylene Compound Packaging Materials  
*WEI Feng-jun, WANG Wei, ZHANG Jun-ling* 61
- Nitrogen Transformation Mechanisms during Fast Pyrolysis of Wooden Package Waste  
*LIU Hui, GOU Jin-sheng* 66

---

### Food Packaging

---

- Tilapia Preservation by Composite Antibacterial Film with Fish-scale Collagen  
*SHAO Dong-xu, WANG Hui, PEI Zhi-sheng, et al.* 73
- Effects of Spraying Parameters and Belt Velocity on the Soybean Protein's Average Spraying Density  
*HUANG Shao-xiang, YANG Chuan-min, CHANG Shu-ying, et al.* 78

---

### Research Progress

---

- Research Progress in Antimicrobial and Antioxidant Active Food Packaging Film  
*WANG Hai-li, YANG Chun-xiang, YANG Fu-xin, et al.* 83

---

### Packaging Technology and Process

---

- Die Tangent of the Auto End-lock Formed Locking Point of the Straight Quadrangular Prism  
*WANG Peng, MOU Xin-ni, ZHANG Shu-chi, et al.* 89

Development of Optimizing System for the Size Designing of Corrugated Box	<i>SONG Wei-sheng, MIAO Hong-tao, SU Tie-qing</i>	93
Finite Element Analysis and Optimal Design of EPS Foam Packing Case	<i>QIN Zhi-yuan, HUANG Hai-song, ZHANG Hui</i>	100
Stress Analysis and Optimization of Steel Plates for Stacking with Wooden Pallet	<i>MA Jie</i>	105
Automatic Stacking of Corrugated Carton by Lifting Technology with Vacuum Sucker	<i>WANG Yue, ZHANG Hui-zhong, ZHI Ming-dan, et al.</i>	111
Dropping Shock Response of Hyperbolic Tangent Nonlinear Packaging System	<i>LI Hao-jing, ZHANG Min</i>	116
Design and Verification of Certain Ammunition Protective Packaging	<i>BAI Tao, YANG Zhao</i>	120
Temperature and Humidity for the Storage and Transportation Container of Ammunition in High-Temperature and High-Humidity Areas	<i>PAN Wen-geng, YIN Hai-ping, KONG Fan-cheng, et al.</i>	125

---

### **Packaging Machinery**

---

Structural Design of Sealing Bag-Making Machine and Its Control System Based on Cylindrical Extruding Cylinder Technology	<i>LIU Rui-su, LIU Ya-nan, XING Xin-chuang, et al.</i>	129
Design of Stamping Pulp Feeding Machine Based on TRIZ	<i>ZHANG Shi-qiang</i>	135
Design of Corn Stalk Crushing Equipment in multi-physics fields	<i>ZHONG Sheng-biao</i>	140

---

### **Packaging Printing**

---

An Image Watermarking Algorithm Resistant to Geometric Distortion Matched Based on SIFT Feature Points	<i>CHEN Qing, KE Ting-ting</i>	146
Effect of Pigment Synergy on Properties of Coated Decorative Base Paper	<i>ZHANG Ming-zhi, ZHANG Zheng-jian, WANG Man-kang, et al.</i>	151
Effect of Settings of iPad Backlight Brightness and Ambient Light on Coloring Characteristics of iPad	<i>ZHANG Jian-qing, SHEN Xiao-ying, TIAN Quan-hui, et al.</i>	159
Color Image Quality Assessment Algorithm Based on Structure Similarity	<i>ZHU Huan, CHEN Yong-li, WANG Jia-hui, et al.</i>	165
Optimization of Adhesion Performance of White Ink on Laser Paper in Response Surface Method	<i>LI Xiao-dong, ZOU Yang, ZHANG Yan-fen, et al.</i>	171
Spectral Piecewise Partition Model(SPPM) for Predicting Halftone Printing Color	<i>TIAN Quan-hui, LIU Zhen, ZHANG Jian-qing, et al.</i>	176
Treatment of Offset Printing Ink Wastewater by Photocatalytic Oxidation Process	<i>LENG Cai-feng, WANG Yin, REN Long-fei</i>	181
The Relationship between PP Cotton Filter Element and Offset Dampening Solution Filtration Stages	<i>HUA Chao</i>	186
Modeling and Finite Element Analysis of the Stepping Indexing System of Conical Offset Printer	<i>YUAN Feng, WANG Jian-hao</i>	191

---

### **Forum and Information**

---

Main Problems Existing in Wooden Packaging and Solution	<i>ZHAO Bin</i>	196
Integrated Analysis on Supply Chain Packaging System Based on Intelligent Logistics	<i>NI Wei-tao</i>	203
Field Ordnance Warehouse Layout Optimization Based on EAHP and Immune Algorithm	<i>BIAN Guang-rong, HUANG Qiang, ZHANG Yan-lei, et al.</i>	209
Design on Bottle Washing Machine for Teaching Purpose	<i>LIU An-jing, ZHOU Wen-ling</i>	215



# 包装工程

Packaging Engineering

全国中文核心期刊  
中国科学引文数据库 (CSCD) 源刊

主办单位：中国兵器工业第五九研究所

ISSN 1001-3563

CN 50-1094/TB

定价：45.00元

邮发代号：78-30

国外发行号：BM1799

广告经营许可证：渝工商广字040297号

ISSN 1001-3563



9 771001 356168