

邮发代号:14-339
定 价:32元

www.gysjqk.com

中国工业设计协会理事单位
综合性专业设计杂志

工业设计

INDUSTRIAL DESIGN

全国高等美术教育学会会刊

02

月刊
总第187期
Feb. 2022

GONGYESHEJI

国际标准刊号:ISSN 1672-7053
国内统一刊号:CN23-1516/T

展东方神韵 扬冬奥风采

DISPLAY THE ORIENTAL CHARM AND CARRY FORWARD THE ELEGANT
DEMEANOUR OF WINTER OLYMPIC GAMES

聚焦2022北京冬奥会产品设计 揭秘艺术与科技的设计融合

Focusing on Product Design for the 2022 Beijing Winter Olympics,
Unveiling the Design Integration of Art and Technology



工业设计

INDUSTRIAL DESIGN

基于设计思维的工业设计教育改革研究
Research on Industrial Design Education Reform Based
on Design Thinking

文化创意产品设计中的技术应用现状研究
Research on Existing Conditions of Technical Applications
in Design of Cultural Originality Products

基于目标系统的服务设计研究
Research on Service Design Based on Target System

ISSN 1672-7053
02
9 771672 705227

万方数据

主题资讯

- 008 揭秘 2022 北京冬奥会火炬台设计——清华大学美术学院马赛教授团队完成
- 010 “冰雪胜杯 筑梦冬奥”，冬奥会标志性景观建筑“海陀塔”设计——清华大学美术学院社异教授团队完成
- 011 人因技术，更精准地服务于冬奥场馆设计——清华大学建筑学院张利教授团队完成
- 012 冬奥会与冬残奥会奖牌设计——中央美院航海教授团队完成
- 013 冬奥会开幕式主席台空间设计——中央美院师生团队完成
- 014 冰壶机器人，亮相北京冬奥会！——哈尔滨工业大学科研团队牵头研制
- 015 哈工大技术助力实现“坐着高铁看冬奥”
- 016 冬奥会吉祥物“冰墩墩”设计——广州美术学院创作团队完成
- 017 冬奥里的年味——“雪容融”设计
- 018 首届虚拟仿真技术支撑下的“数字孪生”冬奥会
- 019 设计助力冬奥，水墨艺术+数字科技助力托冰雪五环升起——北京印刷学院设计团队完成
- 020 科技织就“冰丝带”——浙江大学教授团队助力完成
- 021 冬奥形象景观设计——北京服装学院师生团队完成
- 022 冰雪冬奥，点亮光明与希望：2022 北京冬奥会火炬外观设计
- 023 从餐饮到安防，机器人在冬奥无处不在
- 024 中国文化筑起“冰丝带”

INDUSTRIAL DESIGN NO.2 CONTENTS 目录



科学与艺术

- 026 基于产品系统设计方法的环境监测设备设计研究
- 029 基于 QFD 与 TRIZ 理论的儿童床创新设计
- 032 基于 AHP-TOPSIS 法的医院自助终端挂号系统可用性评价研究

迟方圆 姜勇
麦嘉雯 李诚 李沿睿
王时群 许占民



高等美术教育

- 034 基于设计思维的工业设计教育改革研究
- 037 通识教育背景下的高校美育课程赋能路径研究
- 039 基于脚手架教学理念的网络课程平台设计
- 042 基于项目化教学的《设计方法学》课程教学改革研究
- 045 跨学科背景下工业设计教育改革研究综述
- 048 高校环境设计专业《立体构成》教学改革研究
- 051 基于红色文化的工业设计专业教学改革研究
- 054 基于知觉体验理论的园林专业人才培养模式探索
- 057 海南传统手工艺与民办高校产品设计专业教学的融合
- 060 基于旅游酒店行业需求的环境设计专业人才培养研究

杨一帆 程鲲 尹显明
仇梦欢 高宏博 卜立言
邓雪梅 王玫
陈翀
秦雨 程鲲
刘迪 芮珂颖 逯鹤
黄林诗 韩珍玉
于冬波 陈思
张建敏 吴蓓
郭灿灿

1 First

设计与理论

- 063 设计事理学在家用应急救援包设计中的应用
- 066 可持续理念下的乡村再生设计研究——以小野窑村为例
- 069 公共交通工具的吊环拉手设计研究
- 072 文化创意产品设计中的技术应用现状研究
- 076 产品色彩基因的构建研究
- 079 乡村装配式住宅设计研究
- 082 基于 CMF 的救护车医疗舱内饰设计研究
- 085 中国解放战争时期徽章的视觉诗性设计研究
- 088 探析渐变色在网页设计中的表现形式与功能表达
- 091 基于朴门永续理念的乡村住宅景观设计——以浙江省建德市岳家村为例
- 094 具身认知视角下的儿童科普展示空间设计研究
- 097 浅析城市更新背景下的旧住宅改造
- 100 绿色理念在现代家居产品设计中的应用研究

鞠文欣 朱代根
董职著 朱小军
徐芷君 仓诗建
崔健 高炳学
祝琳
张嘉敏
杨抒青 王庆斌
肖瑜 蔡琦 丁铮
王俊雄
杨勇
熊建文 汪静瑶 林皎皎
刘云飞 彭鸿坤
秦朴洁 王凤华



2

Second

前沿与动态

- 103 基于目标系统的服务设计研究
- 106 基于多通道模式的可穿戴产品信息显示设计研究
- 109 基于服务设计的快递包装回收流程优化研究
- 112 广州帽峰山自然体验活动服务优化设计
- 115 仿生设计在张拉整体结构仿生水母推进器中的应用

张 祯 贾 轩
张艳河 徐环环
赵嫣然 陈倩如
刘丽芳 林 妍
张 泽 孙建伟 孙金荣

文化与传承

- 117 中国传统纹样趣味性表达研究
- 120 云南非物质文化遗产与儿童艺术教育绘本设计的融合
- 123 文化符号视角下的福州传统民居建筑设计美学研究——以严复故居为例
- 126 贵州苗绣在文化创意产品设计中的应用研究
- 129 地域文化元素在城市公园景观设计中的应用研究——以武汉宝岛城市公园为例
- 132 中国传统屏风的创新设计研究
- 135 共生理论视阈下淮阳泥泥狗传承与发展策略探究
- 138 蒙古族传统装饰元素在主题酒店室内空间设计中的应用
- 141 云南少数民族文化题材儿童绘本的创作研究——以《染云织梦》为例
- 144 嘉兴吴越文化图形在文化创意产品设计中的应用研究
- 147 文化符号在现代建筑设计中的应用研究
- 150 传统编织工艺在现代首饰设计中的运用

高 婧
孔 超 何 蕊 刘 洁
潘邦金 贾祺悦 陈祖建
杨利利 边 鹏 马增圆
邱 裕 蔡 玲
范 蓓 刘芸芸
朱子丹 张倩楠 丁 铮
张易博 王海亮
梁择宏 李尤佳 汤涵怡
任梦露 黄胜红 林 鑫
李海波 郭家明
谭 杉

技术与实践

- 152 工业装备的产品识别系统设计研究——以骏威机电液压机产品为例
- 155 基于FBS模型的农村介助老人多功能助行器设计研究
- 158 基于事理学及TRIZ理论的产品创新设计研究

朱 旭 邓立军
王圆圆 乔 傲 耿美玲
曹成明

封二

巨型奥运吉祥物，雪雕作品冰墩墩

封三

《工业设计》杂志征订启事



TOPIC INFORMATION

- 008** Unveil the Secrets of Torch Base Design for 2022 Beijing Winter Olympic Games-completed by Professor Ma Sai's Team from School of Fine Arts, Tsinghua University
- 010** "Sacred Ice and Snow Trophy, Build Dream for Two Olympic Games", Design of Landmark Landscaping Building "Haituo Tower" for Winter Olympic Games-completed by Professor Du Yi's Team from School of Fine Arts, Tsinghua University
- 011** Human Technology, Serving the Design of Winter Olympic Games Venues More Accurately—Completed by Professor Zhang Li's Team from School of Architecture, Tsinghua University
- 012** Design of Medals for Winter Olympic Games and Winter Paralympics—Completed by Professor Hang Hai's Team from Central Academy of Fine Arts
- 013** Design of Rostrum Spaces for the Opening Ceremony of Winter Olympic Games—Completed by the Team of Students and Teachers from Central Academy of Fine Arts
- 014** Curling Robots, Appearing at Beijing Winter Olympic Games!—Developed by the Scientific Research Team from Harbin University of Technology by Taking the Lead
- 015** The Technology of HIT Boosts the Realization of "Taking High-speed Rail to Winter Olympic Games"
- 016** Design of Mascot for Winter Olympic Games "Bing Dwen Dwen"—Completed by the Creation Team from Guangzhou Academy of Fine Arts
- 017** The Spring Festival Atmosphere at Winter Olympic Games—Design of "Shuey Rhon Rhon"
- 018** "Digital Twins" Winter Olympic Games Supported by the Technology from the 1st Session Virtual Simulation Technology
- 019** Design Supports Winter Olympic Games, Water-ink Art + Digital Technology Assisting in Rising of the Ice and Snow Olympic Rings—Completed by the Design Team from Beijing Institute of Graphic Communication
- 020** "Ice Ribbon" Woven by Technology—Completed by the Professor Team from Zhejiang University
- 021** Design of Image Landscapes for Winter Olympic Games—Completed by the Students and Teachers Team from Beijing Institute of Fashion Technology
- 022** Ice and Snow Winter Olympic Games, Ignite Light and Hope: Design of Torch Appearance for 2022 Beijing Winter Olympic Games
- 023** From Catering to Security, Robots are Applied in the Whole Winter Olympic Games
- 024** "Ice Ribbon" Built by Chinese Culture

SCIENCE AND ART

- 026** Research of Design of Environment Monitoring Equipment Based on Product System Design Method
- 029** Innovative Design of Children's Beds Based on QFD and TRIZ Theories
- 032** Research on Evaluation of Feasibility from the Hospital Self-service Terminal Registration System Based on AHP-TOPSIS Approach

Chi Fangyuan, Jiang Yong
Mai Jiawen, Li Cheng, Li Yanrui

Wang Shiqun, Xu Zhanmin

HIGHER EDUCATION OF FINE ARTS

- 034** Research on Industrial Design Education Reform Based on Design Thinking
- 037** Research on Enabling Path of College Aesthetic Education Curriculum in General Education Background
- 039** Design of Network Curriculum Platform Based on Scaffolding Teaching Concept
- 042** Research on Teaching Reform for Curriculum "Design Methodology" Based on Project-based Teaching
- 045** Summary of Research on Industrial Design Teaching Reform in Interdisciplinary Background
- 048** Research on Teaching Reform for "Three-Dimensional Composition" of Environmental Design Major at Colleges and Universities
- 051** Research on Teaching Reform of Industrial Design Major Based on Red Culture
- 054** Exploration on Garden Professional Talent Cultivation Mode Based on the Theory of Perceptual Experiences
- 057** Integration of Traditional Handicraft Art in Hainan and Teaching in Technology and Product Design at Non-Governmental Universities
- 060** Research on Cultivation of Environmental Design Professional Talents Based on Demands from Tourist Hotel Industry

Yang Yifan, Cheng Kun, Yin Xianming
Qiu Menghuan, Gao Hongbo, Bu Liyan
Deng Xuemei, Wang Mei
Chen Chong
Qin Yu, Cheng Kun

Liu Di, Rui Keying, Lu He
Huang Linshi, Han Zhenyu
Yu Dongbo, Chen Si

Zhang Jianmin, Wu Bei
Guo Cancan

DESIGN AND THEORY

- 063** Applications of Design Cybernetics in Design of Home Emergency Rescue Kit
- 066** Research on Countryside Regeneration Design in Sustainable Concept—Taking Xiaoyeyao Village as an Example
- 069** Research on Design of Hanging Ring Handles for Public Transport Means
- 072** Research on Existing Conditions of Technical Applications in Design of Cultural Originality Products
- 076** Research on Construction of Product Color Genes

Ju Wenxin, Zhu Daigen
Dong Zhizhu, Zhu Xiaojun
Xu Zhijun, Cang Shijian
Cui Jian, Gao Bingxue
Zhu Lin

INDUSTRIAL DESIGN NO.2

CONTENTS 目录

- 079 Research on Design of Rural Prefabricated Houses
- 082 Research on Design of Interior Decorations for Ambulance Medical Treatment Cabin Based on CMF
- 085 Research on Visual Poetic Features of Badges During the Chinese War of Liberation
- 088 Analyzing the Expression form and Function Expression of Gradient Color in Website Design
- 091 Design of Countryside Residential Landscapes Based on Permaculture Concept—Taking Yuejia Village in Jiande City, Zhejiang Province as an Example
- 094 Research on Design of Children's Scientific Popularization Exhibition Spaces from the Embodied Cognition Perspective
- 097 Preliminary Discussions on Old Housing Renovations in Urban Renewal Background
- 100 Research on Applications of Green Concept in Design of Modern Household Products

Zhang Jiamin
Yang Shuqing, Wang Qingbin
Xiao Yu, Cai Qi, Ding Zheng
Wang Junxiong

Yang Yong

Xiong Jianwen, Wang Jingyao, Lin Jiaojiao
Liu Yunfei, Peng Hongkun
Qin Puje, Wang Fenghua

FRONTIERS AND DYNAMICS

- 103 Research on Service Design Based on Target System
- 106 Research on Design of Wearable Product Display Based on Multi-channel Mode
- 109 Research on Optimization of Express Packaging Recycling Process Based on Service Design
- 112 Design of Natural Experience Activity Service Optimization for Maofeng Mt. in Guangzhou
- 115 Applications of Bionics Design in Bionic Jellyfish Thruster with Tensioned Integral Structure

Zhang Zhen, Jia Xuan
Zhang Yanhe, Xu Huanhuan
Zhao Yanran, Chen Qianru
Liu Lifang, Lin Yan
Zhang Ze, Sun Jianwei, Sun Jinrong

CULTURE AND INHERITANCE

- 117 Research on Interesting Expressions for Traditional Chinese Dermatoglyphic Pattern
- 120 Integration of Yunnan Intangible Cultural Heritage and Design of Children's art Education Cartoon Books
- 123 Research On Architectural Design Aesthetics of Traditional Folk Houses in Fuzhou from the Perspective of Cultural Semiotics—Take Yan Fu's Former Residence as an Example
- 126 Research on Applications of Guizhou Miao Ethnic Embroideries in Design of Cultural and Creative Products
- 129 Research on Applications of Regional Cultural Elements in Design of City Parks Landscapes—Taking Treasure Island City Park in Wuhan as an Example
- 132 Research on Innovative Design for Traditional Chinese Screens
- 135 Exploration on Inheritance and Development Strategy for Huaiyang Muddy Dog from the Perspective of Symbiosis Theory
- 138 Applications of Traditional Mongolian Decorative Elements in Interior Space Design of Theme Hotels
- 141 Research on the Creation of Children's Picture Books with Ethnic Minority Cultural Themes in Yunnan—Take Dream Tie Dye as an Example
- 144 Research on Applications of Jiaying Wuyue Culture Graphics in Design of Cultural Originality Products
- 147 Research on Applications of Cultural Symbols in Modern Architecture
- 150 The Application of Traditional Weaving Technology in Modern Jewelry Design

Gao Jing
Kong Chao, He Rui, Liu Jie

Pan Bangjin, Jia Qiyue, Chen Zujian
Yang Lili, Bian Peng, Ma Zengyuan

Qiu Yu, Cai Ling
Fan Bei, Liu Yunyun

Zhu Zidan, Zhang Qiannan, Ding Zheng
Zhang Yibo, Wang Hailiang

Liang Zehong, Li Youjia, Tang Hanyi
Ren Menglu, Huang Shenghong, Lin Xin
Li Haibo, Guo Jiaming
Tan Shan

TECHNOLOGY AND PRACTICE

- 152 Design and Research of Product Identification System for Industrial Equipment—Taking Denway Hydraulic Press Products as an Example
- 155 Research on Design of Rural Intermediary Multi-functional Walking AIDS for the Elderly Based on FBS Model
- 158 Research on Product Innovative Design Based on Cybernetics and TRIZ Theories

Zhu Xu, Deng Lijun
Wang Yuanyuan, Qiao Ao, Geng Meiling
Cao Chengming

SECOND COVER

Giant Olympic Mascots, the Snow Sculpture Bing Dwen Dwen

THIRD COVER

Subscription Info of *Industrial Design*,

4

Fourth