



庆祝中国共产党成立100周年

The 100th Anniversary of the Founding of  
The Communist Party of China

本期主题:红色文化与设计

RED CULTURE AND DESIGN

黑龙江省工业和信息化厅召开全省工  
业设计座谈会——暨黑龙江2021“龙江杯”  
工业设计大赛启动会

The Provincial Industry Design Forum and 2021  
“Longjiang Cup” Industry Design Contest Kick-off  
Meeting Held by Heilongjiang Provincial Department  
of Industry and Informationization

高校美育之“感觉的逻辑”

——清华大学美术学院青年学者高登科谈美育

“Logic of Sensation” for Aesthetic Education at  
Colleges and Universities

—A Young Scholar, Gao Dengke’s View about  
Aesthetic Education from School of Fine Art,  
Tsinghua University

鲁班锁在现代会展设计中的延伸应用

——以“樽”展具设计为例

The Extended Application of Luban Lock in Modern  
Exhibition Design—Take “ZUN” Exhibition Furniture  
Design as an Example

基于学龄前儿童心理特征的互动玩具设计研究

Research on Interactive Toy Design Based on  
Preschool Children’s Psychological Characteristics

老年人出行服务触点设计策略研究

Research on Strategies to Touch Spot Design for  
Elderly Travel Services





## 专题报道

- 008 黑龙江省工业和信息化厅召开全省工业设计座谈会暨黑龙江 2021 “龙江杯” 工业设计大赛启动会  
009 黑龙江 2021 “龙江杯” 工业设计大赛推进工作会议召开

## 高校美育教育大家谈

- 010 高校美育之“感觉的逻辑”——清华大学美术学院青年学者高登科谈美育

## 主题资讯

- 012 重温峥嵘岁月 献礼建党百年《红色记忆——纪念建党百年黑龙江革命文物、文献展》  
013 黑龙江百米百图百年党史剪纸展——剪纸艺术绘就百年党史恢弘画卷  
014 南京市博物总馆红色主题文化创意  
016 红色李巷文化创意礼盒设计  
017 小平故里红色文化创意打造  
018 湖湘红色文化—杨开慧文化创意系列  
019 红船礼赞系列文化创意设计  
020 永恒记忆 不朽丰碑——红色文化创意产品  
021 红军形象钥匙包 / 红色旅游文化创意产品设计  
022 社会主义核心价值观魔方 / “彭大将军” 文化创意产品设计  
023 中共一大文化创意设计  
024 红色旅游文化创意产品  
025 中国国家博物馆—新青年套装 / 长征之路—趣味拼图



## 科学与艺术

- 026 数字媒体技术在展览展示空间中的应用——以上海世博会沙特馆为例  
028 细胞生物学在艺术设计中的应用  
030 分形艺术图案的美学特征探析

林丹 颜成宇  
周祎雯 丛文瑞  
吴凡 王教庆

## 高等美术教育

- 032 面向创新能力培养的高校设计类课程多元教学模式探究  
034 基于图式理论的艺术设计教学研究  
036 乌尔姆设计学院对我国设计教学的启示  
038 地域特色文化融入《室内空间设计》课程的教学探索  
040 晋中民居建筑形式及文化融入环境设计课程的探索与实践  
042 思政育人理念在《产品设计程序与方法》教学中的应用  
044 基于德国职业教育法的图像处理课程教学改革  
046 OBE 理念下手帐图形象达形式在高职《建筑史》课程中的应用  
048 环境艺术设计专业 3Dmax 课程改革的存在问题与对策  
050 基于课程思政理念的《中国元素创意设计》课程教学研究  
052 项目教学法在《企业视觉形象设计》课程教学中的应用

张伟明  
周雪燕  
谭杰 张晓峰 霍元琳  
李国旭  
牛丽娜 杜航  
闫莹  
周淑君  
贲雯  
谢朝楠  
卢东华  
王嘉欣

## 设计与理论

- 054 鲁班锁在现代会展设计中的延伸应用——以“樽” 展具设计为例  
056 中国画论对现代设计美学的影响  
058 基于学龄前儿童心理特征的互动玩具设计研究  
060 产品设计中的成本控制研究  
062 基于无意识理念的医疗护理行业辅助位移产品设计研究  
064 基于 SD 法的住区景观环境使用评价研究——以南通市中瑾世纪城小区为例  
067 以目标为导向的权限管理系统设计研究  
070 基于用户体验的压路机显示界面设计研究  
072 基于伦理学的居住空间设计研究  
074 基于无用理念的可持续设计研究  
076 儿童玩具的创新设计思路研究

张驰 杨冬江  
陈歆怡  
邢亚龙 任玉洁  
周李辉 张伟中 曾永富  
任梅 徐晟文  
胡子西  
邓实仟  
张昆 陈冉  
黄荣  
马瑞果 林伟  
杨沙



1  
First

# INDUSTRIAL DESIGN NO.6

## CONTENTS 目录



# 2

## Second

- 078 基于产品语义学的助眠香薰产品外观设计研究  
郭天舒  
柳帅先
- 080 极简主义在器皿设计中的应用研究  
杨燕 李津
- 082 石墨烯材料在小型家用电器设计中的应用研究  
张思雨 林伟
- 084 “一人食”厨具的情感化设计探索  
迟瑞丰 蒋宇松
- 086 仿生设计在儿童平衡车设计中的应用研究  
李咏蔚 刘兆龙
- 088 基于感性消费的文化创意产品设计方法  
陈明 陈波
- 090 隐喻手法在工艺美术品中的应用研究  
孙亚茹 关佳征
- 092 论东方禅宗思想与艺术设计的关系  
黄惠玲 黄进杰
- 094 绿色低碳理念在包装设计中的应用  
赵晓明 高晶晶
- 096 手绘插画在现代绘本设计中的应用研究——以《中华民族神话与传说》为例  
腾玮铭
- 098 健身产品的游戏化设计研究  
代文毅
- 100 涂鸦艺术在现代包装设计中的应用价值  
郭铁军 刘思宁
- 102 基于用户行为的移动母婴室设计研究  
江霞 杨炜丹
- 104 极简主义风格在室内环境设计中的应用研究  
陈慧珍 杨亚萍
- 106 学龄前儿童家具的游戏性设计  
张浩 张雯
- 108 基于可持续理念的儿童椅设计

### 前沿与动态

- 110 探析物联网背景下产品交互设计的变革  
陆润华
- 113 老年人出行服务触点设计策略研究  
李婉仪 黄域施 宋琦
- 115 面向合租人群的智能家居系统设计研究  
胡智 朱读鑫
- 117 基于服务理念的智能睡眠舱设计与服务模式研究  
徐江华 翁懿
- 119 家用智能种植产品设计研究  
李婷 修颖 李新梅

### 文化与传承

- 121 基于网络文本分析法的文化景观遗产价值界定探究——以庐山国家公园为例  
陈晨 杨晓鹏 阚斌
- 123 汉代夔龙纹艺术特征研究  
杨儒茜 姚君
- 126 蛇形象在首饰设计中的应用研究  
相婷 张维肖 刘可鑫
- 128 中国传统吉祥文化元素在产品中的运用  
秦硕 周俊良
- 130 基于文化再生理论的传统民艺再设计研究  
刘佩芳
- 132 余荫山房园林文化创意产品设计研究  
李梓珊
- 134 青州市井塘古村的保护利用与活化研究  
张玉雪 沈泳男 杨春锁
- 136 白塔山旅游文化创意茶具设计  
潘瑶 王文兵
- 138 盛京文化创意产品的设计与推广  
卞升阳 陈禹竹
- 140 中国水墨元素在动画设计中的应用  
李燕梅
- 142 大理巍山历史文化古城的保护与开发  
方静
- 144 数字插画在敦煌文化创意产品设计中的应用  
魏妍妍 廖斌
- 146 黎族传统建筑元素在美丽乡村导视系统中的应用  
徐龙翔 张凯丽
- 148 参与式设计方法在绥棱黑陶产品设计中的应用  
赵爱丽 王黎明 于猛
- 150 火塘文化在新时期西南民居建筑设计中的应用  
张雯星 黄婷媛 卢影
- 152 浅谈镜面材料在传统民居外观设计改造中的应用  
张羽

### 技术与实践

- 154 基于系统设计理论的自闭症儿童辅助干预产品设计研究  
徐楚玄 王思维
- 157 情境交互理念下的灭火器智能设计  
吴寒
- 159 基于有限元法的明式圈椅结构优化设计  
李京龙 温冠宁

### 封二

中共一大文化创意设计

### 封三

《工业设计》杂志征订启事

## SPECIAL REPORT

- 008** The Provincial Industry Design Forum and 2021 "Longjiang Cup" Industry Design Contest Kick-off Meeting Held by Heilongjiang Provincial Department of Industry and Informationization
- 009** The Advancing Working Meeting for Heilongjiang 2021 "Longjiang Cup" Industry Design Contest is Held

## COLLEGE AESTHETIC EDUCATION EVERYBODY TALKS

- 010** "Logic of Sensation" for Aesthetic Education at Colleges and Universities—A Young Scholar, Gao Dengke's View about Aesthetic Education from School of Fine Art, Tsinghua University

## TOPIC INFORMATION

- 012** Review the Eventful Years, A Gift Presented at the 100th Anniversary of Founding of CPC "A Red Memory—Revolutionary Cultural Relics and Literature Exhibition of Heilongjiang in Memory of the 100th Anniversary of Founding of CPC"
- 013** Paper-Cut Exhibition of Heilongjiang with Hundred-Meter and Hundred Pictures for Hundred Years History of CPC—Paper-Cut Art Draws A Grand Painting for Hundred Years History of CPC
- 014** Red Theme Cultural Creation of Nanjing General Museum
- 016** Red Li Lane Cultural Creation Gift Box Design
- 017** Forging Red Cultural Creation at Deng Xiaoping's Hometown
- 018** Red Culture in Hunan—Yang Kaihui Cultural Creation Series
- 019** Red Boat Salutation Series Cultural Creation Design
- 020** Eternal Memory, Immortal Monument—Red Cultural Creation Products
- 021** Red Army Image Key Bag / Red Tour Cultural Creation Product Design
- 022** Rubik's Cube with Core Socialist Values / "General Peng Dehuai" Cultural and Creative Product Design
- 023** Cultural Creation Design on the First Congress of the Communist Party of China
- 024** Red Tour Cultural and Creation Products
- 025** National Museum of China - New Youth Suit / The Road to the Long March—Fun Puzzles

## SCIENCE AND ART

- 026** Application of Digital Media Technology in Display and Demonstration Spaces—Take Saudi Arabia Pavilion on Shanghai World Expo as An Example
- 028** Application of Cytobiology in Art Design
- 030** Analysis and Exploration on Aesthetic Features of Fractal Art Patterns

Lin Dan, Yan Chengyu  
Zhou Yiwen, Cong Wenrui  
Wu Fan, Wang Jiaqing

## HIGHER EDUCATION OF FINE ARTS

- 032** Research on the Multiple Teaching Mode of Design Courses in Colleges and Universities for the Cultivation of Innovation Ability
- 034** Research on Art Design Teaching Based on Schema Theory
- 036** Revelation from Ulm School of Design to Design Teaching in China
- 038** Teaching Exploration on Integrating Regional Featured Culture in the Course of "Interior Space Design"
- 040** Exploration and Practices on Integrating the Architectural Form and Culture of Residential Buildings in Central Shanxi in the Course of Environmental Design
- 042** Application of the Ideological and Political Education Philosophy in Teaching of "Product Design Procedures and Methods"
- 044** Teaching Reform for Picture Processing Course Based on German Vocational Education Law
- 046** The Application of the Graphical Expression Form of Handbook under OBE Concept in the Course of "History of Architecture" in Higher Vocational Education
- 048** Existing Problems and Countermeasures to Reform of 3Dmax Course for the Major of Environmental Art Design
- 050** Teaching Research of the Course "Chinese Elements Creative Design" Based on Course Ideological and Political Concept
- 052** Application of Project Teaching Method in Teaching the Course of "Corporate Visual Image Design"

Zhang Weiming  
Zhou Xueyan  
Tan Jie, Zhang Xiaofeng, Huo Yuanlin  
Li Guoxu

Niu Lina, Du Hang  
Yan Ying  
Zhou Shujun

Ben Wen  
Xie Chaonan  
Lu Donghua  
Wang Jiaxin

## DESIGN AND THEORY

- 054** The Extended Application of Luban Lock in Modern Exhibition Design—Take "ZUN" Exhibition Furniture Design as an Example
- 056** Influences from Chinese Painting Criticism on Aesthetics of Modern Design
- 058** Research on Interactive Toy Design Based on Preschool Children's Psychological Characteristics
- 060** Research on Cost Control in Product Design
- 062** Research on Design of Auxiliary Displacement Products in Medical and Nursing Industry Based on Unconscious Concept
- 064** Research on Residential Area Landscape Environment Use Comments Based on SD Method—Take Zhongjin Centennial City Community in Nantong City as An Example
- 067** Research on Design of Target-Oriented Permission Management System
- 070** Research of Display Interface Design for Road Rollers Based on Users' Experiences
- 072** Research on Design of Residential Spaces Based on Ethics
- 074** Research on Sustainable Design Based on Useless Concept

Zhang Chi, Yang Dongjiang  
Chen Xinyi  
Xing Yalong, Ren Yujie  
Zhou Lihui, Zhang Weizhong, Zeng Yongfu  
Ren Mei, Xu Shengwen

Hu Zixi  
Deng Shiqian  
Zhang Kun, Chen Ran  
Huang Rong  
Ma Ruiguo, Lin Wei

# 3 Third

# INDUSTRIAL DESIGN NO.6

## CONTENTS 目录

- 076 Research on Creative Design Idea of Children's Toys  
078 Research on Appearance Design of Sleeping Aromatherapy Based on Product Semantics  
080 Research on Application of Minimalism in Vessel Design  
082 Research on Application of Graphene Materials in Design of Small Household Appliances  
084 Exploration on the Emotional Design of "One Eater" Kitchenware  
086 Research on Application of Bionics Design in the Design of Balancing Car for Children  
088 Design Methods for Cultural Creative Products Based on Perceptual Consumption  
090 Research on Application of Metaphors in Artistic Handicrafts  
092 Discussion on Relationship between Oriental Buddhist Ideas and Art Design  
094 Application of Green Low Carbon Concept in Packaging Design  
096 Research on Application of Freehand Illustrations in the Design of Modern Picture Books—Take "Myth and Legends for the Chinese Nation" as An Example  
098 Research on Gamified Design of Fitness Products  
100 Application Value of Graffiti Art in Modern Packaging Design  
102 Research on Design of Mobile Mother and Infant Cabin Based on Users' Behaviors  
104 Research on Application of Minimalist Style in Interior Environment Design  
106 Gameplay Design of Preschool Kid Funitures  
108 Design of Children's Chairs Based on Sustainable Concept

Yang Sha  
Guo Tianshu  
Liu Shuaixian  
Yang Yan, Li Jin  
Zhang Siyu, Lin Wei  
Chi Ruifeng, Jiang Yusong  
Li Yongwei, Liu Zhaolong  
Chen Ming, Chen Bo  
Sun Yaru, Guan Jiazheng  
Huang Huiling, Huang Jinjie

Zhao Xiaoming, Gao Jingjing  
Teng Weiming  
Dai Wenyi  
Guo Tiejun, Liu Sining  
Jiang Xia, Yang Weidan  
Chen Huizhen, Yang Yaping  
Zhang Hao, Zhang Wen

### FRONTIERS AND DYNAMICS

- 110 Anlysis on Changes to Product Interactive Design in IOT Background  
113 Research on Strategies to Touch Spot Design for Elderly Travel Services  
115 Research on Design of Intelligent Housing System for the Joint Rent Groups  
117 Research on Design and Service Patterns of Intelligent Sleeping Cabin Based on Service Design Concept  
119 Research on Design of Household Intelligent Growing Products

Lu Runhua  
Li Wanyi, Huang Yushi, Song Qi  
Hu Zhi, Zhu Duxin  
Xu Jianghua, Weng Yi  
Li Ting, Xiu Ying, Li Xinmei

### CULTURE AND INHERITANCE

- 121 Research on the Definition of Cultural Landscape Heritage Value Based on Network Text Analysis—A Case Study of Lushan National Park  
123 Research on Artistic Features of Kuilong in Han Dynasty  
126 Research on Application of Snake Image in Jewelry Design  
128 Application of Traditional Chinese Auspicious Cultural Elements in Product Design  
130 Research on Re-Design of Traditional Folk Art Based on Cultural Reproduction Theory  
132 Research on Creative Products Design of Yu Yam Ancestral Garden  
134 Research on Protective Utilization and Activization of Ancient Jingtang Village in Qingzhou City  
136 Design of Tourist Cultural Creative Tea Sets in Baita Mountain  
138 Design and Promotion of Shengjing Cultural Creative Products  
140 Application of Chinese Ink Painting Elements in Animation Design  
142 Protection and Development of Weishan Historic and Cultural Ancient City in Dai  
144 Application of Digital Illustrations in Design of Dunhuang Cultural Creative Products  
146 Applicatino of Li Ethnic Traditional Architectural Elements in Beautiful Countryside Guide System  
148 Application of Participatory Design Methods in Black Pottery Product Design in Suiling  
150 Applicat ion of Huotang Culture in the Design of Southwestern Residential Buildings in New Era  
152 A Preliminary Discussion on Application of Mirror Materials in Exterior Design and Renovation of Traditional Residences

Chen Chen, Yang Xiaopeng, Kan Bin  
Yang Ruxi, Yao Jun  
Xiang Ting, Zhang Weixiao, Liu Kexin  
Qin Shuo, Zhou Junliang  
Liu Peifang  
Li Zishan  
Zhang Yuxue, Shen Yongnan, Yang Chunsuo  
Pan Yao, Wang Wenbing  
Bian Shengyang, Chen Yuzhu  
Li Yanmei  
Fang Jing  
Wei Yanyan, Liao Bin  
Xu Longxiang, Zhang Kaili  
Zhao Aili, Wang Liming, Yu Meng  
Zhang Wenxing, Huang Tingyuan, Lu Ying  
Zhang Yu

### TECHNOLOGY AND PRACTICE

- 154 Research on Autistic Chidren Auxiliary Intervention Products Based on System Design Theory  
157 Intelligent Design of Fire Extinguisher under the Concept of Situational Interaction  
159 Structural Optimized Design of Ming Dynasty Style Round-Backed Armchairs Based on Finite Element Method

Xu Chuxuan, Wang Siwei  
Wu Han  
Li Jinglong, Wen Guanning

### SECOND COVER

Cultural Creation Design on the First Congress of the Communist Party of China

### THIRD COVER

Subscription Info of *Industrial Design*

# 4

## Fourth