

Contents

Part I Color Science and Technology

Test Criteria and Investigation of Uniform Color Spaces to Meet the Requirements of Future Imagery	3
Muhammad Safdar and Ming Ronnier Luo	
Image Colorization Method Using Texture Descriptors and ISLIC Segmentation	9
Liqin Cao, Lei Jiao and Zhijiang Li	
Study on Spectral Reconstruction Based on Sample Optimization Method of Color Digital Camera	17
Zhaoyang Jia and Guangxue Chen	
What Do We Need for Assessing Whiteness?	25
Shining Ma, Minchen Wei, Jing Liang and Ming Ronnier Luo	
Regional Culture Preferences to LED Light Color Rendering	33
Ran Wei, Xiaoxia Wan, Qiang Liu, Guo Cao and Haiwen Wang	
Gamut Testing of EPSON Stylus Photo R270 Color Ink-Jet Printer by ICC 3D	41
Xiaochun Li, Ming Zhu and Mingming Yin	
Research on Spectral Reflection Characteristics of Overprinted Color Inks and the Numeric Compensation to the Theoretical Model	49
Ji Qi, Yang Jin, Xinggen Qian and Yusheng Lian	
Dual Attributes of Color	55
Yechi Pang, Zhijie Li, Pengfei Zhao, Min Xu and Wensi Liang	
Extracting the Representative Colors in Facial Image Based on the Eye Tracking	65
Pei Deng	

Study on Color Model on Green Gamut Part for High Fidelity Printing	75
Xiaoyan She, Shisheng Zhou and Guanjin Zhu	
Polynomial Fitting Approach for Colorimetric Values Transform Based on Large Scale Spectral Dataset	83
Yijing Xun, Qiang Liu, Xiaoxia Wan, Zheng Huang, Guo Cao and Haiwen Wang	
Study on Color Matching Technology of Flexographic Printing Ink	91
Ben Liu, Maohai Lin, Guichun Hu and Meiqi Lin	
Study on Gamut Mapping Algorithm Based on GRNN	99
Pukang Yuan, Qiang Wang, Lingjun Kong and Quanhui Tian	
Performance Test of Liquid Crystal Display Parameters	105
Hongyan Chen, Li Cheng and Xiao Jin	
Simulation and Rejuvenation for Chinese Fading Paint Under Ultraviolet	117
Zhen Liu, Fang Cai, ShuangShuang Chen and Chong Sun	
Study on Observers' Categories Based on Color Matching Experiments	123
Chunjie Shi, Min Huang, Yu Liu, Zeyang Li and Haoxue Liu	
Measurement and Analysis of Colorimetric Values for Holographic Paper with Light Pillars	131
Zeyang Li, Min Huang, Yu Liu, Chunjie Shi, Haoxue Liu and Guihua Cui	
A Brief Review of Colour Quality Assessments of LED Lightings for Museums	139
Qiyang Zhai and Ming Ronnier Luo	
Testing the Performance of Color Difference Formulae Using Two Distinct Glossiness of Color Printing Atlas	145
Jing Liang, Buyun Yao, Siyu Ning and Liang Sun	
Color Restoration Method of Underwater Multispectral Images	153
Ping Yang, Yilu Guo, Hong Song, Jingnan Sun, Yong Wang, Xiandou Zhang and Qiang Wang	
Research on the Conversion Algorithms of Monitor Color Management Based on WCS	161
Rui Zhang, Congjun Cao, Nana Liu and Jingshang Fan	
Presumption Evaluation of Color Reproduction Based on Multi-feature Model in Digital Printing	171
Yang Zhao, Xiaozhou Li, Xuelin Li, Qian Cao and Jingqiang Jia	

Part II Image Processing Technology

A New Parallel Hierarchical K-Means Clustering Algorithm for Video Retrieval	179
Kaiyang Liao, Ziwei Tang, Congjun Cao, Fan Zhao and Yuanlin Zheng	
Comprehensive Imaging Quality Assessment Method for Laser Printer Based on SVM	187
Yaohua Yi, Luolan Zhou, Yuan Yuan and Rui Li	
An Efficient Approach of Color Image Matching by Combining Color Invariant and ORB Feature.	195
Shenghui Li, Ruizhi Shi and Hui Ye	
Color Printing Image Quality Evaluation Method Based on Full Quaternion Matrix.	205
Yunfei Zhong, Ruoqing Wang, Lujing Fu, Yaojian Hu and Lu Chen	
An Output of Oil Painting Stylized Digital Image from Photographs with Optimum Tone Reproduction	213
Jing Geng, Congjun Cao, Jingshang Fan, Hirokatsu Shimizu, Naokazu Aoki and Hiroyuki Kobayashi	
Contrastive Analysis on Emotional Cognition of Skeuomorphic and Flat Icon.	225
Xiaoming Zhang, Qiang Wang and Yan Shi	
Reproduction of HDR Image Based on Multiple Bilateral Filtering	233
Yang Zhao, Xiaozhou Li, Jingqiang Jia and Qian Cao	
BOF Image/Video Retrieval Model with Global Feature	241
Mingzhu Zhang, Kaiyang Liao, Congjun Cao, Fan Zhao and Yuanlin Zheng	
Applications of Personalized QR Code on Packaging Design	249
Xianjing Bao, Yunfei Zhong, Pengcheng Su and Ruoqing Wang	
Research on Augmented Reality of Printed Matter Based on Random Ferns and Orientation Gradient with Integral Graph.	257
Da Li, Ruizhi Shi, Xuhui Zhao and Hui Ye	
BM3D Image Denoising Algorithm Based on K-Means Clustering	265
Jinru Gao and Qiang Wang	
Person Re-identification Based on Fusing Appearance Features in Perceptual Color Space.	273
Caixia Fan, Yajun Chen and Lei Cao	
A Night Image Enhancement Algorithm Based on Guided Filtering.	283
Xuxin Tang, Zhijiang Li and Yuhang Chen	

Three-Dimensional Color Gamut Visualization and Interaction for Digital Images	289
Zhijin Li, Maohai Lin, Guangyuan Wu, Yehong Chen and Meiqi Lin	
Application of Multi-spectral Technology in Presswork Forgery Prevention	297
Yan Li and Dongsheng Jiang	
Scene Text Segmentation Method Based on MSER and MLBP	305
Miaomiao Guo, Yaohua Yi, Juhua Liu and Ying Li	
Research on Stereo Image Rendering Based on Micro Lens Array	311
Wei Liu, Guangxue Chen and Mengyu Li	
Research on Reading Recognition Technology of Gas Meter Based on Key Feature Matching	317
Wenfa Qi, Bowen Xue and Yuxin Liu	
Image Quality Assessment Scheme Based on Structural Contrast Index and Gradient Similarity	325
Li Liu, Yuanlin Zheng and Wei Wang	
Study on Memory Color Extraction Method of Image Processing	333
Jingnan Sun, Ping Yang and Qiang Wang	
Part III Digital Media Technology	
Semantic Based Text Similarity Computation	343
Yaqi Liu and Zhijiang Li	
Design and Manufacture of 3D Printers of Virtual Assembly Display Platform	349
Haiyue Zhang and Zhanjun Si	
Research on the Application Process of Mobile Augmented Reality in Printed Product	357
Hui Ye, Ruizhi Shi, Shenghui Li and Da Li	
Research and Application of Online Image Processing Technology Based on HTML5	367
Chunxia Dong and Zhanjun Si	
Information Publishing System Based on the Framework of Django	375
Shenliang Li and Zhanjun Si	
Trends of Digital Publishing: A Case Study of Taiwan's Tourist Press	383
Yungcheng Hsieh, Mingchw Wei and Yungchao Ting	

Design and Implementation of Interactive Courseware Based on Mobile Terminal	393
Ying Wang, Zhanjun Si and Lu Zhang	
Generating Customized PDF Document Based XML Source Data	401
Rubai Luo, Meng Wang and Shisheng Zhou	
Research on Presswork to eBook Conversion Method	409
Ying Hu and Huiqiang Lu	
Interactive Design of Mobile Game Interfaces Based on UCD	415
Jing Zhao, Lei Guo and Chunhong Zhang	
Research and Implement of HTML5 Game Based on WebSocket	423
Ke Shen, Zhanjun Si and Lu Zhang	
Part IV Printing Engineering Technology	
Research on a New Reflectance Model for Printing Based on Dot Shape	431
Qi Wang, Xi Yang and Honghao Liu	
Impact of Screening Parameters for Electrostatic Imaging Quality	441
Kaili Zhang and Guangxue Chen	
Effect of Paper Optical Properties on the Color Reproduction in Ink Jet Printing	447
Guichun Hu, Haoran Fang, Maohai Lin and Fuqiang Chu	
Study on Fidelity of Inkjet Dots Based on Multiple Linear Regression Analysis	453
Fangfang Lu, Zhitao Zhang, Yang Zou and Yanfen Zhang	
Study on the Mode of the Printing Industry in Cloud Computing	461
Yunzhi Chen, Yongkai Wang and Chong Gu	
A Pre-actuation Method for Initial Droplets Accurateness of Inkjet Printing with Volatile Materials	467
Zhiqiang Gao, Cheng Sun, Liqiang Huang and Xing Yin	
Analysis of Print Quality of UV Flatbed Inkjet Printer	475
Ying Wu and Ang Xu	
Process Analysis of Seamless Adhesion for Cutting Model Printed by Color Paper-Based 3D Printing	483
Jiangping Yuan, Yimin Liu, Guangxue Chen and Liuxi He	

Study of Printing Process of Creative Prints Based on TFEL Technology	489
Rubai Luo, Ming Lu and Shisheng Zhou	
Study on the Influence of Paper Surface Efficiency on Ink Color Effect	497
Li Cheng, Xuejun Tian and Xi Xiong	
Effect of Different Basic Weight of Paper on Microfluidic Devices Fabricated by UV Inkjet Printing	509
Yingzhe He, Guangxue Chen and Junfei Tian	
Performance Study of Flexible Capacitive Pressure Sensor Based on Dielectric Structures	515
Qichao Hou, Mengmeng Liang, Ruping Liu and Wei Wang	
Paper Suitable Analysis Based on Printed Electronics	525
Zhongmin Jiang and Yingmei Zhou	
Water Washing Improving the Conductivity of Flexography Printed ITO-Free Transparent Electrode for Polymer Solar Cells	531
Yi Fang, Lu Fu, Yuanyuan Li, Yafang Feng, Shiqi Zhu, Yanfang Xu, Li Yang and Luhai Li	
Study of the Screen Printing Technology on RFID Tag Antenna	539
Wei Liu, Guangxue Chen and Yusi Zhang	
Research on the Covering Property of White Ink Applied on Transfer Paperboard	547
Xinting Wang, Guorong Cao, Ling Cheng and Xu Wang	
Research on Theory and Application of Computer Ink Color Matching	555
Guhong Liu, Qifeng Chen and Guangxue Chen	
PTC Effect of Conductive Composites Based on Resin Mixed with Carbon Nanoparticle	561
Mengmeng Liang, Qichao Hou, Ruping Liu, Xudong Wu, Wei Wang and Luhai Li	
Part V Packaging Engineering Technology	
Preservation Effect of Thymol Active Packaging Films on Sugar Oranges	571
Xiaowen Liu, Yabo Fu, Dongli Li and Wencai Xu	
Experimental Investigation of Influence Factors for Compression Strength of Thin Honeycomb Paperboard Box	581
Shibao Wen, Xiaoke Chu and Jujie Sun	

Research on Application of WSN in Cold Chain Logistics’ Warehousing and Transportation	589
Hanyue Zhang and Shijuan Yang	
Effect of Pressure Sensitive Adhesive Polypropylene Tape on Performance of Corrugated Box	599
Bingjie Shi and Xiaohui He	
Finite Element Analysis of Moisture Diffusion in Damp-Proof Packing	607
Hongtao Miao	
Analysis of the Dynamic Performance of the Cushion Material Composed of EPE and EPS Based on Finite Element Method	617
Xiaoli Song, Gaimei Zhang, Jiandong Lu and Fanjun Meng	
Modal Analysis on Laptop and Its Packaging System Based on Finite Element Method	627
Gaimei Zhang, Xiaoli Song, Xiongbin Zhao, Jingting Zhang, Yue Shi and Fan Su	
Analysis of Mechanical Properties of Glass Packaging	635
Jiang Chang, Xue Gong and Zhihui Sun	
Investigation of Active MAP Film with Menthol on Sugar Orange Preservation	643
Hui Liu, Yabo Fu, Dongli Li and Wencai Xu	
Effect of Oxygen Permeability and Water Vapor Permeability of Fresh-Keeping Bags on the Preservation Effect of Nectarine	651
Juanping Li and Dongli Li	
Identification Method of Egg Freshness by Principal Component and Discriminant Analysis	659
Yinghao Xing, Qigen Tong, Xiujuan Zhi and Bin Du	
Application of Ultra-High Pressure Technology in the Processing of Shellfish Shell	667
Xue Gong, Jiang Chang and Zhihui Sun	
Research on Storage Location Technology Based on RFID	673
Hanyue Zhang, Xixi Feng and Jiao Wen	
Simulation Research About the Influence of Particle Characteristics on Transition of Particles in the Horizontal Screw Conveyor	683
Jiandong Lu, Tianshu Zhao, Lizheng Zhang and Xiaoli Song	
Design and Material Selection of Shopping Malls Point-of-Purchase Displays	689
Deqing Chen and Miaomiao Zhong	

Present Situation and Ideas of Express Packaging Greenization	697
Ling Cheng and Guorong Cao	
Problems and Solutions for Express Logistic Packaging	705
Chenyang Liu and Lijiang Huo	
Research on Packaging Evaluation System of Fast Moving Consumer Goods Based on Analytical Hierarchy Process Method	711
Lizheng Zhang, Jiandong Lu, Guorong Cao and Hongtao Miao	
Research on the Embedding of Brocade Pattern of Li Nationality in Tourism Product Packaging	719
Wenjia Liu, Junwei Hu and Jinmin Gao	
Part VI Mechanical Engineering & Numerical Control Technology	
Research on Warpage Deformation Mechanism & Control Method of Fused Deposition Parts	729
Linlin Liu, Chuliang Wan, Kaikai Li and Jimei Wu	
Incomplete 3D Model's Repair Based on AFPF Technology	739
Shun Pan, Jiong Liang, Kun Hu and Yonghao Xiao	
Object Tracking Algorithm Based on Adaptive Learning Parameter by Online Loss Detection	745
Yehong Chen, Pil Seong Park, Pingli Lv and Maohai Lin	
Structure Design of Front-Edge Paper Feeder in the Production Line of Corrugated Carton	753
Jin Wang, Rongyu Ge and Jiatai Wang	
Traction Characteristics of Guide Roller with the Air Entrainment	759
Mingyue Shao, Jimei Wu, Li'e Ma and Zhen Tian	
Virtual Design of Web-Fed Typed Paper—Feeding Mechanism with Virtual Prototyping Technology	767
Hongqiang Wan, Minru Yao and You Li	
Transducer Torque Control System of the Web Wind-up Tension in Gravure Press	775
Qiumin Wu, Hanxiao Zhang and Jimei Wu	
Study on the Flow Mixing Results of Revolving Static Mixer Used in Solventless Laminator	783
Hongwei Xu, Wei Li, Xusheng Wang, Hang Zhang and Donghong Liu	

Effect of High Temperature on Morphology and Structure of a New Composite as Raw Material of Filament for Fused Deposition Modeling Processes	791
Yonghao Xiao, Jia Yan, Kun Hu, Lin Zhu, Shun Pan, Luhai Li and Yen Wei	
Mechanical Property and Structure Improvement of Sleeve Mandrel in Central Impression Flexographic Press	797
Li'e Ma, Jierui Li, Jimei Wu, Shuaichao Huang and Shanhui Liu	
Digital Stamping Control System Design Based on the STM32 SCM	803
Ming Mu and Yujie Ouyang	
Print-Defect Detection Method Based on the Modified Artificial Immune Algorithm	813
Guanjun Zhu, Shisheng Zhou and Xiaoyan She	
Design of the Remote Fault Diagnosis System for the Printing Machines Based on the Internet of Things and Fuzzy Inference	825
Hongbo Liang, Shaozhong Cao, Xinpei Li and Hongfeng Xiang	
A Method of Printing Press Fault Diagnosis Based on Image Texture Information	837
Xueqian Bai, Haiyan Zhang, Weibo Chun, Zhuofei Xu and Qianqian Xu	
A Method of Diagnosis for Printing Press Ink Roller Bearing Based on Acoustic Signal and Spectrum Analysis	845
Yanyan Li, Haiyan Zhang, Qianqian Xu and Zhuofei Xu	
Part VII Ink and Related Technology	
Study of Factors on Ethanol Resistance Stability of Water-Based Acrylic Resin Emulsion	857
Changming Yin, Xiaoyu Li and Haiqiao Wang	
Research of Water-Based Graphene Conductive Screen Printing Ink and Its Property	865
Minghui Zhang, Xianfu Wei, Beiqing Huang and Bin Long	
Effect of the Polyols Content on the Properties of the Waterborne Polyurethane	875
Xin Wang and Fuqiang Chu	
Study of Dispersion of the Yellow UV-LED Inkjet Ink	883
Yiran Li, Xianfu Wei and Beiqing Huang	
Double-Layer Corrosion Protection of Aluminium Pigments Applied in Water-Based Silver Ink	893
Wenlong Zhao, Shisheng Zhou and Zhengneng Wu	

Wettability and Dispersion of Phthalocyanine Blue Pigment and Evaluation of Its Effect on Printing Quality	903
Ruichun Cao, Xianfu Wei, Qi Wang and Hui Zhang	
Preparation and Characterization of Nano Silver Applied in UV-Curing Conductive Ink	911
Ting Mi, Qifeng Chen and Guangxue Chen	
Effect of Ketone and Hydrazine Self-Crosslinking Reaction on Polyurethane Emulsion	917
Yunlong Huang, Zhigang Hu, Ying Chen, Xiaoyu Li and Haiqiao Wang	
Luminescent Properties of Rhodamine 6G Doped with DNA-CTMA and Its Application in Fluorescent Ink-Jet Ink	925
Hui Hao, Xia Li, XiaoYu Zhu, Huan Zheng, Beiqing Huang, Xianfu Wei and Lijuan Liang	
Luminescence Properties of Eu(TTA)₃(H₂O)₂ Doped with DNA-CTMA and Its Application in Fluorescent Inkjet Ink	933
Tong Zhao, Chunrui Lin, Xiaoyu Zhu, Huan Zheng, Lianfang Li, Beiqing Huang, Xianfu Wei and Lijuan Liang	
Influence of Coalescent on the Gloss of Plastic Water-Based Flexographic Ink	941
Xue Gao, Zhiyong Sun, Yun Ouyang, Xiaofang Wang, Xiaoli Liu, Li Yang and Xiaojuan Feng	
Study on Properties of Magenta Water-Based Flexo Ink Used on BOPP Film	949
Yang Liu, Beiqing Huang, Xianfu Wei and Ying Shen	
Preparation of Acrylate Latex via RAFT Soap-Free Emulsion Polymerization	959
Weiwei Liu, Zhi Qiao, Jinqiang Tu, Xiaoyu Li and Haiqiao Wang	
Effect of Defoamer on the Performance of Plastic Water-Based Flexographic Ink	967
Xiaoli Liu, Yun Ouyang, Xiaofang Wang, Zhiyong Sun, Xue Gao and Yanchao Yu	
Research on the Performance Optimization of Silver Water-Based Gravure Ink	975
Tengfei Zhou, Beiqing Huang, Xihao Li and Xianfu Wei	

Part VIII Paper and Related Technology

Revealing the Components at Work in Classical Liquid Imbibition Models: Inertial, Bosanquet and Viscous Lucas-Washburn Applied to Printing	987
Guodong Liu, Xinya Zhang, Meiyun Zhang and Patrick Gane	
Effect of Main Composition of Dissolving Pulp on Its Reactivity	997
Wei Liu, Guangxue Chen and Siwang Li	
Study on the Antistatic Coating Technology and Coated Paperboard Performance	1005
Qinghua Gao, Junyan Huang, Shangjie Jiang and Huizhong Zhang	
Influence of Silica Pigments with Different Sizes on the Performances of Coated Ink-Jet Printing Paper	1015
Xu Liu, Yunzhi Chen and Zhengjian Zhang	
Study on the Neutral Deinking Technology of Old Digital Printing Paper (ODP)	1021
Longkang Cong, Xiaolin Zhang, Liu Shi and Xiangsheng Deng	

Part IX Film and Related Material Technology

Preparation and Properties of Nano Zinc Oxide/Poly Lactic Acid Antibacterial Packaging Films	1029
Xing Yin, Cheng Sun, Zhiqiang Gao and Li Xue	
Barrier Mechanism Analysis of Silicon Oxide Film by SEM	1039
Lihua Zhu, Yan Li, Wensi Liang, Jun Wu, Yunjin Sun and Yun Ouyang	
Preparation and Characterization of Cellulose Gel Films	1045
Junran Li, Xiaojun Ma, Yunfei Wang and Xuejiao Zhang	
Preparation and Research of POSS Modified PLLA Films: Mechanical Properties	1053
Xiaohui Zhang and Feiyan Zheng	
Preparation and DSC Analysis of γ-Poly Glutamic Acid Ester	1061
Wei Xiao, Zhihui Sun, Fengqing Wang and Jing Dong	
Application of Anti-static Release Coating in Packaging Film	1067
Jichao Huang, Shenghong Chen, Chengzhi Li, Chunxiu He and Yun Xiang	
Edible Coating Packaging and Its Preservation Effect to Cherry Tomatoes	1075
Liya Zhou, Junyan Huang, Hao Xing, Qinghua Gao, Yaoqi Li and Xiaomin Li	

Part X Novel Functional Material Technology

Highly Sensitive Flexible Pressure Sensor with Microstructural Dielectric Layer	1087
Zhengbo Li, Lianfang Li, Lixin Mo, Zhenguo Wang, Wei Yang, Hui Zhou, Haichao Zhang and Luhai Li	
Hydrophilic Modification and Characterization of Bagasse Cellulose	1095
Tingli Liu and Guangxue Chen	
Synthesis of 2-Allyloxy-3, 6, 7, 10, 11-Pentabutoxytriphenylene and Its Mesophases Study	1103
Wanyang Zhang, Xingtian Hao, Feng Hong, Jianchuang Wang, Shuaifeng Zhang, Chunxiu Zhang and Jialing Pu	
Research on the Preparation of Silver Nanoparticles by Chemical Reduction Method	1109
Yanxiang Li and Fuqiang Chu	
Optical Emission Spectroscopy Diagnostics of HMDSO/O₂ Magnetized Plasma	1115
Zhonghua Bian, Xinyue Wang, Yunjin Sun and Qiang Chen	
Experimental Analysis of the Effect of Vacuum Degassing Technology on the Solventless Laminating Adhesive Performance	1123
Hongwei Xu, Xusheng Wang, Ruining Lei, Xuhong Chen and Donghong Liu	
Effect of Monomer and Promoter on UV-LED Varnish Performance	1131
Xiaoli Li, Shiyong Luo and Wencai Xu	
Study of Printability of Hybrid Light Curable Material Used in 3D Printing—Product Flexographic Plate	1139
Beiqing Huang, Xiaoyue Shang, Yiran Li, Xianfu Wei and Changlong Guo	
Discussing the Preparation Conditions of Graphene	1155
Xiaotong Xiong, Beiqing Huang and Xianfu Wei	
Study on the UV Curing Molding Material in 3D Printing Modification of Expanding Monomer	1163
Lu Zhang, Beiqing Huang and Xianfu Wei	
Preparation of Branched Polymers Using a Polymerizable RAFT Agent	1171
Guiyu Ma, Zhongxiao Li, Yingqun Qi and Ti Wu	

Advanced Graphic Communications and Media
Technologies

Zhao, P.; Ouyang, Y.; Xu, M.; Yang, L.; Ouyang, Y. (Eds.)

2017, XXVIII, 1176 p. 601 illus. In 2 volumes, not
available separately., Hardcover

ISBN: 978-981-10-3529-6