

会议详细议程终版 (Final Program)



International Conference on Display Technology

2022 International Conference on Display Technology

July 16-19, 2022 (Saturday-Tuesday)

Fuzhou Digital China Convention and Exhibition Center

Fuzhou, China

Plenary Session

大会主旨演讲

Sunday, July 17/14:00-18:00/ Fuhai Hall, 2nd Floor

Chair: Fushan Li (李福山), Fuzhou University

Co-Chair: Xiongping Li (李雄平), Tianma

Title: Operation mechanism of TADF/hyperfluorescence OLEDs aimed for high stability (14:30-14:55)

Chihaya Adachi, Kyushu University

Title: Recent Advances in Flexible Optoelectronics (14:55-15:20)

Wei Huang (黄维), Northwestern Polytechnical University

Title: Blue light OLED efficiency and stability (15:20-15:45)

Yuguang Ma (马於光), South China University of Technology

Title: Progress in GaN-based Micro-LEDs for advanced display application (15:45-16:10)

Rong Zhang (张荣), Xiamen University

Title: Soft Mattonics: towards Multi-parameter Optical Field Control (16:20-16:45)

Yanqing Lu (陆延青), Nanjing University

Title: Gaining insights into Trends, Foreseeing the Future (16:45-17:10)

Xin Zhang (张鑫), TCL CSOT

Title: Innovation driven to infinite horizon (17:10-17:35)

Wenrui Liu (刘文瑞), BOE

Title: Display Trend in the Intelligent Era and Tianma Strategy (17:35-18:00)

Feng Qin (秦锋), Tianma

Short Course

短期课程

Short Course 1

Saturday, July 16/ 14:30-17:30/ Meeting Room 205

Topic: Metaverse and Display

Title: Interactive motion perception and reconstruction based on deep learning

基于深度学习的交互运动感知与重建

Feng Xu (徐枫), Tsinghua University

Title: Information Display and Visual Perception

信息显示与视觉感知

Yuning Zhang (张宇宁), Southeast University

Short Course 2

Saturday, July 16/ 14:30-17:30/ Meeting Room 206

Topic: OLED Device

Title: Degradation Mechanism and Device Physics of Printable Organic Light-Emitting Diodes

可印刷 OLEDs 的劣化机理与器件物理

Quan Niu (牛泉), South China University of Technology

Short Course 3

Saturday, July 16/ 14:30-17:30/ Meeting Room 202 (Online)

Topic: LCT Application

Title: Liquid crystal applications in displays and photonics: new possibilities

Vladimir Chigrinov, Nanjing Nanhui Intelligent Optical Sensing and Manipulation Research Institute

Short Course 4

Saturday, July 16/ 14:30-17:30/ Meeting Room 203

Topic: MicroLED

Title: Micro-LED Displays for AR/VR/XR and Metaverse

Micro-LED 半导体显示技术及其与 AR/VR/XR 元宇宙的关系

Zhaojun Liu (刘召军), South University of Science and Technology of China

Seminar

专题技术讲座

Seminar 1

Sunday, July 17/ 9:00-10:30/ Meeting Room 206

Topic: Flexible Display

Title: New Technology Development and Introduction of Flexible AMOLED

柔性 AMOLED 新技术发展及介绍

Qi Shan (单奇), Visionox

Seminar 2

Sunday, July 17/ 9:00-10:30/Meeting Room 202 (Online)

Topic: Virtual, Augmented, and Mixed Reality

Title: Virtual and Augmented Reality: Key Requirements, Current Status, and Future Trends towards the Metaverse

Achin Bhowmik, Starkey

Seminar 3

Sunday, July 17/ 10:45-12:15/Meeting Room 206

Topic: Quantum Dots Displays

Title: Colloidal quantum dots: raising star for display applications

量子点——显示“明星”材料

Yizheng Jin (金一政), Zhejiang University

Seminar 4

Sunday, July 17/ 10:45-12:15/Meeting Room 202

Topic: Display Measurement

Title: Material and Surface under Control - a comprehensive test standard for evaluation of the durability and functionality of displays

Wolfgang Weinhold, Institute for Surface and Product Analysis - ISPA, Germany

Display Industry Future Technology Strategy Summit (FTS) (invited only)

显示产业未来技术战略峰会（显示行业领袖峰会）（闭门会议）

Sunday, July 17/ 8:30-12:00/ Meeting Room 210-211

Empyrean Complete EDA Solution for FPD Design, Empower China FPD Industry

华大九天 FPD-EDA 全流程工具——助力中国平板显示

Sunday, July 17/9:00-11:00/ Meeting Room 205

Zixuan Wang (王梓轩), Empyrean

Roadshow of Innovation & Entrepreneurship Projects (Investment Conference)

创新创业项目路演

Sunday, July 17/ 9:35-11:00/ Chaoping Venue, 2nd Floor

Dedicated Time for Poster Session

海报报告

Sunday, July 17/ 10:00-12:00/ Chaoping Venue, 2nd Floor

New Technology and New Product Public Release

新技术新产品发布会

Sunday, July 17/ 11:00-12:00/ Chaoping Venue, 2nd Floor

"Display Future Star Cup" Debate Competition-1

“显示未来之星杯”辩论赛（上）

Monday, July 18/ 9:00-12:00/ Meeting Room 205

SID Beijing Chapter Technical Committee Meeting

SID 北京分会技术委员会会议

Monday, July 18/ 19:00-21:00 / Marina Meeting Room, 1st Floor, Fuzhou Marriott Hotel Riverside

Young Leader Conference

青年领袖论坛

Monday, July 18/ 13:30-15:30/ Meeting Room 205

Chair: Qijun Sun (孙其君), Beijing Institute of Nanoenergy and Nanosystems, CAS

1. Next-generation Cameras and Displays Incorporating Optics and Machine Intelligence (13:30-13:50, Online)

YIFAN (EVAN) PENG, Stanford University

2. 3D-Printed Sugar Scaffold for High-Precision and Highly-sensitive Active and Passive Wearable Sensors (13:50-14:10, Online)

Dong Hae Ho, Yonsei University

3. Investigation on the crosstalk effect of color-converted Mini-LED display (14:10-14:30)

Yongming Yin, School of Advanced Materials, Shenzhen Graduate School, Peking University

4. Elevated-Metal Metal-Oxide Thin-Film Transistor for Information Display and Flexible Electronics (14:30-14:50)

Zhihe Xia, The Hong Kong University of Science and Technology

5. Artificial Stimuli-Response System Capable of Conscious Response (14:50-15:10, Online)

Seongchan Kim, SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University

6. Emerging Zn Anode-Based Electrochromic Devices (15:10-15:30)

Haizeng Li, Shandong University

Nano-LED Forum

纳米发光显示研讨会

Monday, July 18/ 8:30-12:00/ Meeting Room 206

1. Fabrication of ultra-high resolution QLED devices by QD photolithography technology (8:30-8:50)

基于可光刻量子点的超高分辨 QLED 技术

Lei Qian (钱磊), Ningbo Institute of Materials Technology & Engineering, CAS

2. The processing of single quantum dot layer and based devices for the electroluminescence under alternating bias (8:50-9:10)

单量子点层纳米像元原型器件及其场致发光特性

Suling Zhao (赵谏玲), Beijing Jiaotong University

3. Several issues concerning working mechanisms of QLED (9:10-9:30)

量子点发光二极管中的若干机理问题

Song Chen (陈崧), Soochow University

4. Regulation of the luminescence of perovskite quantum dots and application in nano luminescent devices (9:30-9:50)

钙钛矿量子点发光性能调控及纳米发光器件应用

Hongli Liu (刘红丽), Tianjin University

5. Surface engineering for perovskite nanocrystals and nano-pixel (9:50-10:10)

钙钛矿纳米晶表面工程与纳米像元

Yin Xiao (肖殷), Tianjin University

6. Electroluminescence without carrier injection for nano-pixelement light emitting display (10:10-10:30)

应用于纳米像元发光显示的无注入发光技术

Chaoxing Wu (吴朝兴), Fuzhou University

7. Fabrication of GaN-based nanorod structures and their optical properties (10:30-10:50)

氮化物纳米 LED 制备与发光特性研究

Bin Liu (刘斌) / Tao Tao (陶涛), Nanjing University

8. Interface of Nitride Growth and Nano Pixels for High Resolution Flexible Display (10:50-11:10)

氮化物外延界面物理与无机柔性纳米像元

Zhiqiang Liu (刘志强), Institute of Semiconductors, CAS

9. Nano-LED arrays targeting for ultra high definition displays (11:10-11:30)

Xiaoyan Yi (伊晓燕), Institute of Semiconductors, Chinese Academy of Sciences

10. Working Mechanisms of Nanoscale Light-Emitting Diodes Operating in Non-Electrical Contact and Non-Carrier Injection Mode: Modeling and Simulation (11:30-11:50)

无注入型纳米发光二极管的工作原理：建模与仿真

Wenhao Li (李文豪), Fuzhou University

Business Conference

商业会议

Monday, July 18/ 14:00-17:05/ Meeting Room 206

Title: **Outlook for Smartphone Terminal and Display Supply Chain Trends in 2022 (14:00-14:25)**

2022 年智能手机终端及显示供应链趋势展望

Wray Wang (王子睿), Sigmaintell

Title: **TV Supply Chain Dynamics, Competition Landscape and Strategy (14:25-14:50, Online)**

电视供应链动态-竞争版图及策略

Nick Jiang (姜青树), Omdia

Title: **Analysis of the Future Development of 2022 Display Panel under the Situation of the Market Downturn (14:50-15:15)**

市场阴云下 2022 年显示器面板未来的发展分析

Tianhao Wei (魏天昊), AVC Revo

Title: **Global MiniLED/MicroLED technology trend dynamic and outlook (15:25-15:50)**

微显示 (MiniLED/MicroLED) 技术发展趋势解析

Xuecheng Chen (陈学诚), Sigmaintell

Title: **New Opportunities in the New Era- Commercial Display Pushing Forward Retail Market Digital Transformation (15:50-16:15)**

新时代、新机遇——商用显示助力零售市场数字化转型

Bella Jiang (蒋贝贝), AVC Revo

Title: **Development trend of Near-Eye display (16:15-16:40, Online)**

近眼显示市场发展趋势

Kimi Lin (林麟), Omdia

Title: **2022 Global DDIC Market trend and Outlook (16:40-17:05)**

2022 年全球显示驱动 IC 市场趋势及展望

Qi Cong (丛琦), AVC Revo

Micro/Mini LED Display Core Technology Road Map Forum

Micro/Mini LED 显示关键技术路线研讨会

Tuesday, July 19/8:30-12:00/ Meeting Room 210-211

the Award Ceremony of SID China Display Industry Award

SID 中国区显示行业奖颁奖仪式

Tuesday, July 19/9:00-10:00/ Chaoping Venue, 2nd Floor

"Display Future Star Cup" Debate Competition-2

“显示未来之星杯” 辩论赛（下）

Tuesday, July 19/9:00-12:00/ Meeting Room 205

Metaverse and Display Forum

元宇宙与显示论坛

Tuesday, July 19/13:30-17:20/ Meeting Room 206

Chair: Lijun Wang (王立军), North China University of Technology

1 Invited Paper: Real-Time Computer-Generated Integral Imaging Light Field Displays (13:30-13:50)

Zong Qin(秦宗), Sun Yat-Sen University

2 Invited Paper: Research on key performance of optical motion capture system (13:50-14:10)

Bo Qiaoq (乔波), Zhejiang Lab

3 Lightweight Super-Resolution for Panoramic Videos (14:10-14:30, Online)

Fanjie Shang, Xidian University

4 A Miniaturized Polarization-multiplexed Dual-plane Head-mounted Display System for Augmented Reality (14:30-14:50)

Zekun Yan, Shanghai Jiao Tong University

5 Porous Electronics in an Era of Metaverse (14:50-15:10, Online)

Yingjun Liu, Poro Technologies Ltd

6 Invited Paper: Floating 3D light field display in the air (15:20-15:40)

Xinzhu Sang (桑新柱), Beijing University of Posts and Telecommunications

7 Invited Paper: Dual-View 3D Display Using a Prism Array (15:40-16:00)

Huan Deng (邓欢), Sichuan Sniversity

8 Invited Paper: Light-field is the proper window to Metaverse (16:00-16:20, Online)

Tomas Sluka, CREAL

9 Invited Paper: Tabletop 3D Light-Field Display with 100 Degrees Frontal Viewing Angle Based on Views-Segmented Voxels (16:20-16:40)

Xunbo Yu (于迅博), Beijing University of Posts and Telecommunications

10 Optical realization of 360° cylindrical holography with planer SLM (16:40-17:00)

Jun Wang, Sichuan University

11 Near-eye light field displays with computational vision correction by manipulating vector sampling rays (17:00-17:20)

Yuqing Qiu, Sun Yat-Sen University

Postgraduate Workshop on Display Research (PGW)

两岸三地显示科技研究生论坛

Tuesday, July 19/13:00-17:55/ Meeting Room 205

Opening (13:00-13:05)

Session 1: MicroLED and QD

1.1 Ionic Liquid Post-Treatment in Blue Quasi-Two-Dimensional Perovskite Light-Emitting Diodes (13:05-13:20)

Jiayun Sun, South University of Science and Technology of China

1.2 Light recycling black matrix for color conversion of μ LED (13:20-13:35)

Xiang Zhang, Fuzhou University

1.3 Stable Nanorods on-chip LED for Healthy Indoor Lighting (13:35-13:50)

Chengbin Kang, The Hong Kong University of Science and Technology

1.4 Highly readable displays based on quantum-dot color conversion (13:50-14:05)

Liwen Deng, Fuzhou University

Session 2: Display Systems and Image Processing

2.1 Computational vision-correcting near-eye light field displays by manipulating vector sampling rays (14:10-14:25)

Yuqing Qiu, Sun Yat-sen University

2.2 Design of full-color pico-projector based on a single-integrated Micro-LED chip (14:25-14:40)

Haonan Jiang, Fuzhou University

2.3 Resolution-tripled integral imaging light field displays by recombining subpixels with zero sampling error (14:40-14:55)

Wenchao Yang, Sun Yat-sen University

2.4 Image Processing for the Differential Optical Fingerprint Signals (14:55-15:10)

Yi-Hsiang Lo, National Chiao Tung University

2.5 Adaptive Driving Algorithm for Field Sequential Color LCDs with mini-LED Backlight based on Deep Learning (15:10-15:25)

Guowei Zou, Sun Yat-sen University

Session 3: LC & Flexible displays

3.1 Force-induced Tunable Lens for Dark-zone Compensation in Stretchable Display (15:30-15:45)

Ziyi Wu, Sun Yat-sen University

3.2 Modulation of Chirality and Intensity of Circularly Polarized Luminescence Emitting from Cholesteric Liquid Crystals Triggered by Photo-responsive Molecular Motor (15:45-16:00)

Jinying Bao, Peking University

3.3 Facile Patterning of Silver Nanowire with Invisible Effect for Naked Eyes via Ink-jet Printing (16:15-16:30)

Hao Lu, Sun Yat-sen University

3.4 Fast Continuous 2π Phase Modulation Based upon Kerr Effect of Vertical Aligned Deformed Helix Ferroelectric Liquid Crystal (16:00-16:15)

Zheng-Nan Yuan, The Hong Kong University of Science and Technology

3.5 A Stretchable Electrophoretic Display Device with Microcavities Based on Carbon Nanotube Doped Hydrogel Electrode (16:30-16:45)

Simu Zhu, Sun Yat-sen University

Session 4: TFT & E-Paper

4.1 Permeable Electrode Based on Ti-doped ITO and its Application in AOS TFTs (16:50-17:05)

Bowen Sun, Peking University Shenzhen Graduate School

4.2 Simulation and Analysis of Edge Ghosting for Microcapsule E-Paper Based on Particles Dynamics (17:05-17:20)

Zheng Zeng, Sun Yat-sen University

4.3 PVDF and Dual-Gate Metal-Oxide Thin-Film Transistors Integrated Active-Matrix Tactile Sensor Array (17:20-17:35)

Tengteng Lei, The Hong Kong University of Science and Technology

4.4 Synchronously micropatterning and nanowelding silver nanowires for high-performance transparent electrodes (17:35-17:50)

Ting Wang, Sun Yat-sen University

Closing (17:50-17:55)

Technical Sessions

Session 1: Display Technologies for VR/AR/MR (AR&VR)

Monday, July 18/8:30-10:30/ Meeting Room 202

Chair: Yue Liu (刘越), Beijing Institute of Technology

1.1 Invited Paper: OLED Micro-display using RGB Direct Patterning Technology (8:30-8:50, Online)

Jae Hoon Jung, APS Research

1.2 Invited Paper: Creating a high quality optical experience for Augmented Reality Devices (8:50-9:10, Online)

Robert Visser, Chung-Chia Chen, Applied Materials

1.3 Active-matrix Addressed High Brightness and Ultra-high PPI Field-Sequential-Color Display based on Deformed Helix Ferroelectric Liquid Crystal for VR/AR (9:10-9:30, Online)

Zhibo Sun, HKUST

1.4 Full-color holographic Maxwellian near-eye display with extended eyebox (9:30-9:50)

Wang Zi, Hefei University of Technology

1.5 Integrated Micro-LED display embedded with pixel shift system (9:50-10:10)

Zhao Peng, Appotronics

1.6 Curved Computer-Generated Holograms Generation Method with Bidirectional phase compensation (10:10-10:30)

Yang Wu, Sichuan University

Session 2: Display and Vision 1 (Applied Vision)

Monday, July 18/8:30-10:30/ Meeting Room 203

Chair: Hao Chen(陈浩), Wenzhou Medical University

2.1 Invited Paper: An ERP Investigation on Non-Visual Effects of Blue Light on Attention (8:30-8:50)

Yunhong Zhang (张运红), China National Institute of Standardization

2.2 Invited Paper: The Effect of Tablet's Color Temperature on Ocular Health in Children (8:50-9:10)

Jingjing Xu (徐菁菁), Eye hospital of Wenzhou Medical University

2.3 Invited Paper: Stereoacuity Measurement and the Related Factors (9:10-9:30)

Tingting Zhang (张婷婷), Hohai University

2.4 Invited Paper: Summary of Eye Protection Technique of Display (9:30-9:50)

Weidong Huang (黄卫东), TCL CSOT

2.5 Modulation of Mean Luminance within the Fellow Eye Can Restore Binocular Balance Across Spatial Frequency in Adult Amblyopes (9:50-10:10)

Seung Hyun Min, Wenzhou Medical University

2.6 Influence of Screen Devices Using on Myopia in Children Aged 7-11 Years: a Multi-center Experimental Study (10:10-10:30)

Xi Yu, Wenzhou Medical University

Session 3: Device Physics (OLEDs)

Monday, July 18/8:30-10:10/ Meeting Room 208-209

Chair: Zugang Liu (刘祖刚), China Jiliang University

3.1 Invited Paper: Plasmonic PHOLED: Increasing Plasmon Outcoupling (8:30-8:50, Online)

Nicholas Thompson, Universal Display Corporation

3.2 Invited Paper: Polarization-Induced Exciton-Polaron Quenching in OLEDs and Its Control via Processing Conditions and Mixing (8:50-9:10, Online)

Russell J. Holmes, University of Minnesota

3.3 Invited Paper: Manipulation of charge and exciton distribution for white OLEDs/colloidal quantum well LEDs(9:10-9:30)

Baiquan Liu (刘佰全), Sun Yat-sen University

3.4 Key factors governing the external quantum efficiency of TADF OLEDs: evidence from machine learning (9:30-9:50)

Dandan Song, Beijing Jiaotong University

3.5 Advanced modeling of OLEDs: physics and applications (9:50-10:10)

Feilong Liu, South China Normal University

Session 4: Micro-LED Device & Process-1 (EMQ(Micro-LED))

Monday, July 18/8:30-9:50/ Meeting Room 210-211

Chair: Yongjing Wang (王勇竞), Photonic Crystal Co. LTD

4.1 Invited Paper: Analysis of Color Conversion in III-Nitride Micro-LEDs with Embedded Nanostructures (8:30-8:50, Online)

Jian Hsu, Pennsylvania State University

4.2 Invited Paper: CsPbBr₃ perovskite quantum-dot paper exhibiting highest 3-dB bandwidth and realizing flexible white-light system for visible-light communication (8:50-9:10, Online)

Hao-Chung Kuo (郭浩中), National Yang Ming Chiao Tung University

4.3 Invited Paper: Size effect and array fabrication of Micro-LED (9:10-9:30)

Weiling Guo (郭伟玲), Beijing University of Technology

4.4 Low Efficiency Attenuation and Stable Monochromaticity for Non-polar M-plane Micro-light-emitting-diodes (Micro-LEDs) (9:30-9:50, Online)

Yibo Liu, Hong Kong University of Science and Technology

Session 5: Display Driving Technology (Display Electronics)

Monday, July 18/8:30-9:50/ Meeting Room 306

Chair: Ziyi Zhao (赵梓夷), Silvaco China

5.1 A Novel PAM-PWM Hybrid Driving Method for Micro-LED Displays (8:30-8:50)

Yingteng Zhai, Tianma Microelectronics Co., Ltd.

5.2 A Method of Noise Reduction Based on Adaptive Digital Filter for Touch Panel Data Processing (8:50-9:10)

Yuxuan Liu, Galaxycore Co. Ltd.

5.3 Brightness Decline Mechanism at Low Frequency Display on LTPS LCD (9:10-9:30)

You Pan, Wuhan China Star Optoelectronics Technology Co., Ltd, Hubei, China

5.4 Introduction to SmartDRC/LVS - The New High-performance Physical Verification Solution in Display manufacture flow (9:30-9:50)

Ziyi Zhao, Silvaco China

Session 6: Novel Display System Application and Backlight (Display System)

Monday, July 18/8:30-9:30/ Meeting Room 307

Chair:

6.1 Autostereoscopic Display with a Multidirectional Backlight System and an Eye tracker (8:30-8:50)

Ziyin Li, Zhejiang University

6.2 Visual perception based non-reference binocular tone mapping algorithm (8:50-9:10)

Yu Song, Suzhou University of Science and Technology

6.3 Harnessing Plenoptic Function with Composite Thin Films for Display (9:10-9:30)

Yong He, Sun Yat-sen University

Session 7: High Performance Light Source and It's Application (Projection)

Monday, July 18/8:30-9:50/ Meeting Room 315

Chair: Enguo Chen (陈恩果), Fuzhou University

7.1 Invited Paper: μ -LED Based Pico-projector (8:30-8:50)

Enguo Chen (陈恩果), Fuzhou University

7.2 Invited Paper: High Power GaN-based Blue and Green Laser Diodes (8:50-9:10)

Jianping Liu (刘建平), Suzhou Institute of Nano-tech and Nano-bionics, Chinese Academy of Science

7.3 GaN-based High Power Blue and Ultraviolet Laser Diodes (9:10-9:30)

Degang Zhao, Institute of Semiconductors, Chinese Academy of Sciences

7.4 Performance of Laser-Driven Phosphor Wheel Based on Phosphor Ceramics and Perovskite Quantum-Dots (9:30-9:50)

Aochen Du, Fuzhou University

Session 8: Standardization and Performance Evaluation of VR/AR/MR Products and Systems (AR&VR)

Monday, July 18/10:40-12:20/ Meeting Room 202

Chair: Tongsheng Mou (牟同升), Zhejiang University

8.1 Invited Paper: The Performance Quantification of Virtual Images and See-through Scenes in Augmented Reality (AR) Devices (10:40-11:00)

Tongsheng Mou (牟同升), Zhejiang University

8.2 Invited Paper: Visual Evoked Potentials Study in Binocular Disparity and Stereoscopic Visual Fatigue with Virtual Reality Environment (11:00-11:20)

Yue Liu (刘越), Beijing Institute of Technology

8.3 Invited Paper: Recent measurement and standards development of VR/AR eyewear displays concerning the eye's characteristics (11:20-11:40)

Jianping Wang (王建平), Hangzhou SanTest Technology

8.4 Anatomy Education Method using Autostereoscopic 3D Image Overlay and Mid-Air Augmented Reality Interaction (11:40-12:00)

Tianqi Huang, Tsinghua University

8.5 Near Eye Display's Optical Properties and Image Quality Measurement (12:00-12:20)

Luning Liu, Wuhan Jingce Electronics group co., ltd

Session 9: Display and Vision 2 (Applied Vision)

Monday, July 18/10:40-12:20/ Meeting Room 203

Chair: Hao Chen(陈浩), Wenzhou Medical University

9.1 *Invited Paper*: Pupil Size Estimation Model Based on Revised Spatially Weighted Corneal Flux Density and Chromaticity Coordinates† (10:40-11:00)

Yuning Zhang (张宇宁), Southeast University

9.2 *Invited Paper*: Bayesian Adaptive Assessment of the Visual Function (11:00-11:20)

Fang Hou (侯方), Eye Hospital, Wenzhou Medical University

9.3 *Invited Paper*: The Effect of Spatial Dynamic Distortions on Visually Induced Motion Sickness: A Pilot Study on the Head-mounted Displays (11:20-11:40)

Zhenping Xia (夏振平), Suzhou University

9.4 Sensitivity to S-Cone Stimuli Decreased in Thyroid-Associated Ophthalmopathy Patients without Obvious Optic Neuropathy (11:40-12:00)

Haochen Jin, Eye Hospital, Wenzhou Medical University

9.5 Plasmonic Nanostructure-Loaded Filtering Film for Color Blindness Management (12:00-12:20)

Wen Chen, Southeast University

Session 10: OLED Display (OLEDs)

Monday, July 18/10:20-12:00/ Meeting Room 208-209

Chair: Zhengguo Xiao (肖正国), University of Science and Technology of China

10.1 *Invited Paper*: Active-Matrix WOLED Displays Based on a-Si LCD Backplanes (10:20-10:40, Online)

Max Lemaitre, Matrix Technologies

10.2 Development of Ultra Large 95inch 8K 120Hz OLED Display (10:40-11:00)

Zhongyuan Wu, BOE Technology Group Co. Ltd.

10.3 31-inch AMOLED Display with TG IGZO Oxide Backplane Produced in the G11 Generation Line (11:00-11:20)

Maoyuan Jiang, Wuhan China Star Optoelectronics Semiconductor Display Technology Co., Ltd

10.4 A Novel Method to Estimate Color Separation of Reflected Light in COE Panels (11:20-11:40)

Chuanxiang Xu, BOE Technology Group

10.5 A 12.3-inch Automotive AMOLED Display with Small Bending Radius (11:40-12:00)

XUEYING He, BOE

Session 11: MicroLED Manufacturing Technology (ISA Joint Session)

Monday, July 18/10:00-11:20/ Meeting Room 210-211

Chair: Fei Hu (胡飞), Chengdu Vistar Display Company

11.1 *Invited Paper*: Production-Worthy Massive Parallel Transfer Technology for the Assembly of Micro-LED Based Displays (10:00-10:20, Online)

Makarem Hussein, LuxNour Technologies

11.2 *Invited Paper*: Study of Green LED Growth for Advanced Display Applications (10:20-10:40)

Jason Hu, AMEC, China

11.3 *Invited Paper*: MicroLED End-to-End Process Control (10:40-11:00, Online)

John Robinson, KLA Corporation

11.4 *Invited Paper*: An Alternative Method for Cost Effective Probing in MicroLED High-Volume Manufacturing (11:00-11:20, Online)

Matthew Davies, Attolight

Session 12: AMOLED & Metal Oxide Electronics (Display Electronics)

Monday, July 18/10:00-11:20/ Meeting Room 306

Chair:

12.1 *Invited Paper*: Comprehensive Solution for High Image Quality in Medium and Large-size AMOLED Displays Throughout Display Usage Cycle (10:00-10:20, Online)

Denis Strikhilev, Ignis Innovation Inc., Waterloo, Ontario

12.2 High Performance AMOLED Pixel Circuit Using Interleaved Emit Signals Based on Low-Temperature Poly-Si and Oxide (LTPO) TFTs (10:20-10:40)

Jia Fu, Peking University

12.3 A novel Emission Gate Driver with Pulse Width Modulation Based on Low-Temperature Poly-Si Oxide Thin-Film Transistors (10:40-11:00)

Wanming Wu, Institute of Microelectronics of the Chinese Academy of Sciences

12.4 A 3-Bit Flash Analog-to-Digital Converter Based on Compensated Metal-Oxide Thin-Film Transistor Circuits (11:00-11:20, Online)

Xuchi Liu, Hong Kong University of Science and Technology

Session 13: Ultra High Definition Display (Display System)

Monday, July 18/9:40-11:00/ Meeting Room 307

Chair: Di Wang (王迪), Beihang University

13.1 *Invited Paper*: Learnings from Small Form-Factor Pluggable PC Design for 8K Display (9:40-10:00, Online)

Jiun kai Beh, Intel

13.2 *Invited Paper*: The Main Technologies of Super Large Size 8K LCD Display System (10:00-10:20)

Xiao Zhang (张晓), BOE TECHNOLOGY GROUP CO., LTD.

13.3 Review of subjective evaluation method of high-quality TV images (10:20-10:40)

Pengfei Li, TCL

13.4 Hardware implementation design for V-By-One standard High speed high definition video interface (10:40-11:00)

Changjun Song, Southeast University

Session 14: Printed TFT & Novel Application of Printing Process (Printed Display)

Monday, July 18/10:00-11:40/ Meeting Room 315

Chair: Jingyao Song (宋晶尧), Guangzhou ChinaRay optoelectronic materials co., LTD

14.1 *Invited Paper*: R2R gravure printed flexible carbon nanotube-based TFT active matrixes and its flexible display application (10:00-10:20)

Junfeng Sun (孙俊峰), Huzhou University

14.2 *Invited Paper*: Outlook for Low Cost Printed Active-Matrix Light-Emitting Displays Enabled by Vertical Light-Emitting Transistor Technology (10:20-10:40, Online)

Bo Liu (刘博), Matrix Technologies

14.3 The effect of phase separation of organic hole transport materials and QDs on the performance of QLED (10:40-11:00, Online)

Ji Hun Kim, Kyung Hee University

14.4 Inkjet Printing Patterned Quantum Dot Microarrays (11:00-11:20)

Gaoling Yang, Beijing Institute of Technology

14.5 Perovskite Quantum Dot Color Conversion Pattern Fabricated by an In-situ Inkjet Printing (11:20-11:40)

Mengyao Tian, Key Laboratory of Optoelectronic Devices and Systems of Ministry of Education and Guangdong Province, Shenzhen University

Session 15: Diffractive Optics for AR/MR (AR&VR)

Monday, July 18/13:30-15:30/ Meeting Room 202

Chair: Yixing Chen (陈弈星), Smartvision

15.1 *Invited Paper*: High-performance diffractive waveguide near-eye display based on polarization volume grating (13:30-13:50)

Yishi Weng (翁一士), Southeast University

15.2 Waveguide-Based Near-Eye Display with Dual-Channel Field of View (13:50-14:10)

Chaoping Chen, Shanghai Jiao Tong University

15.3 Design and Realization of Full-Color VHG Holographic Waveguide Display (14:10-14:30)

Zhongwen Shen, Nanjing Vocational University of Industry Technology

15.4 Polarization Behavior and Imaging Simulation of Reflective Polarization Volume Gratings (14:30-14:50)

Ran Wei, Southeast University

15.5 Two-Dimensional Exit-pupil Expansion in Augmented Reality (AR) (14:50-15:10)

Zhiyuan Gu, Lingxi AR Technology Co., Ltd. Beijing, China

15.6 Holographic Waveguide Display with Large Field of View Based on Volume Holographic Grating (15:10-15:30)

Chuang Wang, Southeast University

Session 16: Measurement and Characterization for News Display Technologies (Display Measurement)

Monday, July 18/13:30-15:30/ Meeting Room 203

Chair: Qian Li (李倩), EVERFINE Corporation

16.1 *Invited Paper*: Measurement of Perceived Pixel Luminance of Large LED Displays (13:30-13:50)

Xi Mou (牟希), Hangzhou SanTest Technology

16.2 *Invited Paper*: Rapid Measurement and Quality Control Solutions for Low Luminance Performance of OLED Display (13:50-14:10)

Li Song (宋立), EVERFINE Corporation

16.3 Towards High Precision One Shot EOL Testing for Acquiring Pixel Level Luminance Data (14:10-14:30)

Bob Liu, Light-All Co., Ltd

16.4 Bandwidth effect correction used for wide color gamut display measurement (14:30-14:50)

Shiwen Luo, JingCe

16.5 Key technologies and algorithm of Measurement for Mini-LED-backlit LCDs (14:50-15:10)

Xian Tang, EVERFINE Corporation

16.6 Which Rotation Measurement Provides a Better Approach in Eyewear Displays: Pupil or Eyeball Center? (15:10-15:30)

Jianping Wang, Hangzhou SanTest Technology

Session 17: Device Characteristics (OLEDs)

Monday, July 18/13:30-15:10/ Meeting Room 208-209

Chair: ChungChun Lee (李重君), visionox

17.1 Invited Paper: Efficient Light Extraction Methods in Top-Emitting OLEDs (13:30-13:50, Online)

Jang Hyuk Kwon, Kyung Hee University

17.2 Invited Paper: Efficient light-emitting diodes using solution processed perovskite nanocrystals (13:50-14:10)

Zhengguo Xiao (肖正国), University of Science and Technology of China

17.3 The study on minimizing angular color shift in high resolution Micro-OLED with Color Filter (14:10-14:30, Online)

Dong Wan Kang, LinkGlobal21 Co., Ltd.

17.4 the role of dopant materials on current efficiency roll-off in organic light-emitting diodes (14:30-14:50)

Bin Liu, Yungu (Gu'an) Technology Co., Ltd.

17.5 Composite Cathode OLED Device Structure Design for Transparent Display (14:50-15:10)

Xiaohu Li, CHENGDU BOE OPTOELECTRONICS TECHNOLOGY CO., LTD

Session 18: Micro-LED Application (ISA Joint Session)

Monday, July 18/13:30-15:10/ Meeting Room 210-211

Chair: Xuan Cao (曹轩), Chengdu Vistar Display Company

18.1 Invited Paper: Large-Area Low-Cost MicroLED TV Displays (13:30-13:50, Online)

Reza Chaji, Vue Real, Canada

18.2 Invited Paper: Design of Naked Eye Light Field Display Based on Micro-LED (13:50-14:10)

Wei Xiaodan (魏晓丹), Beijing YiShiXin Technology Development Co., LTD, China

18.3 Invited Paper: Micro-LED-on-CMOS digital light projection systems (14:10-14:30, Online)

Martin Dawson, University of Strathclyde, United Kingdom

18.4 AR Glasses Using Angular Color MicroLED and Waveguide (14:30-14:50)

Yongjing Wang, Photonic Crystal Co. LTD, China

18.5 High performance Micro-LED Transparent Display (14:50-15:10)

Liqun Chen, Tianma Microelectronics Co., Ltd, China

Session 19: E-Paper Technology (E-Paper and Flexible Displays)

Monday, July 18/13:30-15:10/ Meeting Room 306

Chair: Guofu Zhou (周国富), South China Normal University

19.1 Invited Paper: Electrochromic Display Based on Semiconducting Polymer (13:30-13:50, Online)

Jian Wang (王坚), Furcifer Inc., USA

19.2 *Invited Paper*: Driving and Evaluating Methods for Color Electronic Paper (13:50-14:10)

Xidu Wang (王喜杜), Foshan ESLEET technologies Co., Ltd

19.3 *Invited Paper*: For ID application using no battery IoT system (14:10-14:30)

Quanzhong Wang (王全忠), BOE Technology Group Co., Ltd

19.4 Simulation and Analysis of Edge Ghosting for Microcapsule E-Paper Based on Particles Dynamics (14:30-14:50)

Zheng Zeng, Sun Yat-sen University

19.5 Reconfigurable microfluidic interface programmed by conductive-microstructure induced localized instability (14:50-15:10)

Hao Feng, South China Normal University

Session 20: 3D Display System (Display System)

Monday, July 18/13:30-15:30/ Meeting Room 307

Chair: Qionghua Wang (王琼华), Beihang University

20.1 *Invited Paper*: Curved Hologram Generation Method for Speckle Noise Suppression (13:30-13:50)

Di Wang (王迪), Beihang University

20.2 *Invited Paper*: Nano-optics Based Glasses-free 3D Display (13:50-14:10)

Wen Qiao (乔文), Soochow University

20.3 Depth-enhanced Integral Imaging 3D Display System (14:10-14:30)

Xiao-Li Ma, Beihang University

20.4 2D/3D Mixed Display Based on Polarization Division Multiplexing (14:30-14:50)

Qiang Li, Sichuan University

20.5 Weighted Simultaneous Algebra Reconstruction Technique (wSART) for Additive Light Field Synthesis (14:50-15:10)

Chen Gao, Zhejiang University

20.6 On “3D Vertigo Syndrome”--- And also Drive-in Cinemas (15:10-15:30)

Chao Li, Central China Display Laboratories

Session 21: Fabrication for Printed Displays (Printed Display)

Monday, July 18/13:30-15:10/ Meeting Room 315

Chair: Junfeng Sun (孙俊峰), Huzhou University

21.1 *Invited Paper*: Inkjet Printing Perovskite Quantum Dot Light-emitting Devices (13:30-13:50)

Junbiao Peng (彭俊彪), South China University of Technology

21.2 *Invited Paper*: Custom-shaped Display made by Inkjet Printing (13:50-14:10)

Li Sun (孙力), Hefei BOE Joint Technology Co. Ltd.

21.3 *Invited Paper*: Avoiding Mini-LED circuit scratch in process (14:10-14:30)

Tenggang Lou (楼腾刚), Shanghai Tianma MICRO-ELECTRONICS Co., Ltd.

21.4 *Invited Paper*: A competitive next-generation technology for large-size display-IJP OLED (14:30-14:50)

Jinchuan Li (李金川), Shenzhen China Star Optoelectronics Semiconductor Display Technology Co., Ltd

21.5 *Invited Paper*: All-solution preparation of double emitting layers flexible white OLEDs with color-tunable from blue to white emission (14:50-15:10)

Suling Zhao (赵谔玲), Beijing Jiaotong University

Session 22: VR/AR/MR Devices (AR&VR)

Monday, July 18/15:40-17:00/ Meeting Room 202

Chair: Wen Qiao (乔文), Soochow University

Co-Chair: Tianqi Huang (黄天琪), Tsinghua University

22.1 *Invited Paper*: Single mode Red, Green and Blue Laser Diodes and their Applications for HMD, AR/VR Glasses (15:40-16:00, Online)

Yasuaki Hirano, Sharp

22.2 *Invited Paper*: A Review of Microdisplay Panels Based on Silicon Backplane (16:00-16:20)

Yixing Chen (陈弈星), Smartvision

22.3 Intraocular Augmented Reality Device with Retinal Prosthesis (16:20-16:40)

Jiaxun Ye, Shanghai Jiao Tong University

22.4 Fast Hologram Generation Using Optical Fourier Lenses (17:00-17:20)

XiangLi Lei, Sichuan University

Session 23: Quantum Dot Electroluminescence 1 (EMQ(QL))

Monday, July 18/15:40-17:00/ Meeting Room 203

Chair: Huaiting Shi (施槐庭), BOE

Co-Chair: Xuyong Yang (杨绪勇), Shanghai University

23.1 *Invited Paper*: Inkjet printing quantum dot light-emitting devices (15:40-16:00)

Fushan Li (李福山), Fuzhou University, China

23.2 *Invited Paper*: Device physics and material chemistry of quantum-dot light-emitting diodes (16:00-16:20)

Yizheng Jin (金一政), Zhejiang University, China

23.3 *Invited Paper*: A Methodology for Building Charge-Injection Balance in Inverted QLED Based on Cross-Linkable Electron Blocking Material (16:20-16:40)

Qing Li (李青), Southeast University, China

23.4 *Invited Paper*: Challenges for Realizing QD-LED (16:40-17:00, Online)

Shota Okamoto, Sharp Display Technology Corporation

Session 24: Lighting, Health, Safety and Engineering Applications (Lighting)

Monday, July 18/15:20-17:00/ Meeting Room 208-209

Chair: Qihong Hu (胡秋红), Zhejiang Smart Lighting Technology Ltd

24.1 *Invited Paper*: On Evaluation and Standardization of Photobiological Health for Children (15:20-15:40)

Qihong Hu (胡秋红), Zhejiang Smart Lighting Technology Ltd, Hangzhou, China

24.2 *Invited Paper*: Measuring scalar illuminance: simulations, error analysis, and the way to improve its accuracy (15:40-16:00)

Ling Xia (夏岭), Hohai University

24.3 Study on the Mechanism of Glare in Road Traffic (16:00-16:20)

Yunpeng Guo, Faculty of Architecture, Civil and Transportation Engineering, Beijing University of Technology, Beijing, China

24.4 High Efficient Persistent Luminescence from Förster Resonance Energy Transfer Processes

(16:20-16:40)

Zhiyong Yang, School of chemistry, Sun Yat-sen University

24.5 Thermally Robust Orange-red-emitting Color Converters for Laser-driven Warm White Light with High Overall Optical Properties (16:40-17:00)

Taoli Deng, Xiamen University

Session 25: Sensor Integration in Displays (Touch & Interactive Displays)

Monday, July 18/15:20-16:40/ Meeting Room 210-211

Chair: Hang Zhou(周航), Peking University Shenzhen Graduate School

25.1 *Invited Paper*: Novel design and Study of NFC(Near Field Communication) Coil integrated in OLED display Panel and MFPC(Main Flexible Printed Circuit) (15:20-15:40)

Wang Wei (王伟), Chengdu BOE Optoelectronics Technology Co., LTD

25.2 High Detectivity Perovskite-IGZO Phototransistor with Tunable Photoconductive Gain (15:40-16:00)

Hang Zhou, Peking University Shenzhen Graduate School

25.3 Integrated Self-Capacitance Touch Panel for Flexible OLED Display (16:00-16:20)

Feng Lu, Shanghai Tianma Microelectronics Co., Ltd.

25.4 Effects of Different Input Devices on Performance and Fatigue (16:20-16:40)

Ying Li, CNIS

Session 26: Flexible Electronics & Materials (E-Paper and Flexible Displays)

Monday, July 18/15:20-16:40/ Meeting Room 306

Chair: Xidu Wang (王喜杜), Foshan ESLEET technologies Co., Ltd

26.1 *Invited Paper*: Organic TFTs for Biaxially formed Active Surfaces (15:20-15:40, Online)

Michael Banach, FlexEnable

26.2 *Invited Paper*: Computational chemistry study of an aggregation-induced delayed fluorescence material: synthesis and properties (15:40-16:00)

Yue Zhang(张悦), Qingdao University of Technology

26.3 Synchronously micro-patterning and nano-welding silver nanowires for high-performance transparent electrodes (16:00-16:20)

Ting Wang, Sun Yat-sen University

26.4 Force-induced Tunable Lens for Dark-zone Compensation in Stretchable Display (16:20-16:40)

Zi-yi Wu, Sun Yat-sen University

Session 27: Mini-LED Backlight (Display System)

Monday, July 18/15:40-17:20/ Meeting Room 307

Chair: Honglei Ji (季洪雷), TCL

27.1 POB Technology Applied in Mini LED Backlight (15:40-16:00)

Honglei Ji (季洪雷), TCL

27.2 Ultra-thin mini-LED backlight using a light coupling structure (16:00-16:20)

Zibin Lin, Fuzhou University

27.3 A Novel Hybrid Driving Method for Mini/Micro LED Display (16:20-16:40)

Limin Wang, China Star Optoelectronics Semiconductor Display Technology Co., Ltd.

27.4 Design of Double Freeform Lens for Mini-LED Backlight Modules (16:40-17:00)

Ling Yang, Hefei University of Technology

27.5 Adaptive Driving Algorithm for Field Sequential Color LCDs with mini-LED Backlight Based on Deep Learning (17:00-17:20)

Guowei Zou, SUN YAT-SEN UNIVERSITY

Session 28: Materials for Printed Displays (Printed Display)

Monday, July 18/15:20-16:40/ Meeting Room 315

Chair: Junbiao Peng (彭俊彪), South China University of Technology

28.1 Invited Paper: Development of Low-temperature Cross-linked Hole Transport Layer for High Efficient QLEDs (15:20-15:40)

Wenming Su (苏文明), SINANO, CAS

28.2 Invited Paper: Blue OLED Materials Design and Device Architecture Development (15:40-16:00)

Jingyao Song (宋晶尧), Guangzhou ChinaRay optoelectronic materials co., LTD

28.3 Invited Paper: Latest Development of Soluble OLED Materials and its Application to Mid-to Large-sized Panel Production (16:00-16:20, Online)

Daisuke Fukushima, Sumitomo Chemical

28.4 Through-Space Charge Transfer Polymers for Solution-processed OLEDs (16:20-16:40)

Shiyang Shao, Changchun Institute of Applied Chemistry

Session 29: Display Panels and Materials (Display Application)

Tuesday, July 19/8:30-10:10/ Meeting Room 206

Chair: Zhifu Li (李治福), TCL CSOT

29.1 Invited Paper: The key technology of professional BD cell Monitor (8:30-8:50)

Kai Diao (刁凯), BOE Technology Group Co., Ltd

29.2 Invited Paper: A Brief Introduction to Advantages of LTPS Technology in High-end Notebook (8:50-9:10)

Jingfeng Xue (薛景峰), Wuhan China Star Optoelectronics Technology Co., Ltd

29.3 Perovskite-Oxide Heteronanocrystals for Light Emitting Application (9:10-9:30)

Shu Xu, Hebei University of Technology

29.4 An Advanced LCD with ultra-wide frame rate by using hybrid TFTs array technology (9:30-9:50)

Chengzhi Luo, Wuhan China Star Optoelectronic Technology Co. Ltd

29.5 Enhanced depth of field of integral imaging display using bifocal microlens array fabricated by two-step lithography (9:50-10:10)

Wenwen Wang, Fuzhou University

Session 30: Oxide TFT -Modeling, Performance & Reliability (Active-Matrix Devices)

Tuesday, July 19/8:30-9:30/ Meeting Room 202

Chair: Bowen Zhu (朱博文), Westlake University

30.1 Invited Paper: High performance optoelectronic devices based on IGZO thin-film-transistors (8:30-8:50, Online)

Sung Kyu Park, Chung-Ang University

30.2 Invited Paper: Device Physics and Compact Modeling of Metal Oxide Thin-Film Transistors (8:50-9:10)

Wanling Deng (邓婉玲), Jinan University

30.3 Invited Paper: Analytical Extraction Method of Density of States (DOS) for Metal Oxide Thin Film Transistors (9:10-9:30)

Weijing Wu (吴为敬), South China University of Technology

Session 31: Quantum Dot Electroluminescence 2 (EMQ(QL))

Tuesday, July 19/8:30-9:50/ Meeting Room 203

Chair: Bo Qiao (乔泊), Beijing Jiaotong University

31.1 Invited Paper: Highly Efficient Light-emitting Devices Based on Quantum dots/Perovskites (8:30-8:50)

Xuyong Yang (杨绪勇), Shanghai University

31.2 Invited Paper: High-Efficiency Blue Cadmium-Free Quantum Dot Light-Emitting Diodes (8:50-9:10)

Kai Wang (王恺), Southern University of Science and Technology

31.3 Invited Paper: Top-Emission Quantum-Dot Light-Emitting Diodes with High Operational Stability and Brightness (9:10-9:30, Online)

Jeonghun Kwak, Seoul National University

31.4 High-performance, ultrahigh resolution quantum dot light-emitting diodes (9:30-9:50)

Tingtao Meng, Fuzhou University

Session 32: Recent Materials Advances (OLEDs)

Tuesday, July 19/8:30-9:50/ Meeting Room 208-209

Chair: Junyou Pan (潘君友), Guangzhou East-Crown Intelligent Technology Co., Ltd

32.1 Invited Paper: Ultrapure and highly efficient blue organic light-emitting diodes (8:30-8:50, Online)

Jun Yeob Lee, Sungkyunkwan University

32.2 Invited Paper: Next Generation OLEDs (8:50-9:10, Online)

Mike Weaver, UDC

32.3 Invited Paper: Advanced Merck OLED materials: latest innovation (9:10-9:30)

Xin-Yang Wang (王忻扬), Merck Display

32.4 Invited Paper: Constructing Charge-Transfer Excited States for Narrowband Electroluminescence Materials with High Color Purity and Efficiency (9:30-9:50)

Yue Wang (王悦), Jihua Lab

Session 33: LC Beyond Display (LCT)

Tuesday, July 19/8:30-9:50/ Meeting Room 306

Chair: Qi-Huo Wei (韦齐和), Southern University of Science and Technology

33.1 Invited Paper: Our recently development on nonmechanical optical beam steering using liquid crystal antenna (8:30-8:50)

Xiangru Wang(汪相如), University of Electronic Science and Technology of China

33.2 Invited Paper: Tunable liquid crystal lens using 2D nano colloid (8:50-9:10, Online)

Jang-Kun Song, Sungkyunkwan University

33.3 *Invited Paper*: Polarization dependent light-driven liquid crystal elastomer actuators based on photothermal effect (9:10-9:30)

Dan Luo (罗丹), Southern University of Science and Technology

33.4 A Tunable Filter with Single Layer Twist Structure Liquid Crystals (9:30-9:50)

Yao Gao, Shanghai Jiao Tong University

Session 34: Fabrication of Display Panels (Display Manufacturing)

Tuesday, July 19/8:30-10:10/ Meeting Room 307

Chair: Xiaolian Li (李晓莲), Dalian University of Technology

34.1 *Invited Paper*: Multi - Color Tungsten Oxide Reflection Electrochromic Device for Display (8:30-8:50)

Honglong Ning (宁洪龙), South China University of Technology

34.2 *Invited Paper*: High Image Quality ADS PRO TV Comparable to OLED (8:50-9:10)

Dongchuan Chen (陈东川), BOE TECHNOLOGY GROUP CO.,LTD

34.3 High Resolution and High Speed Inspection Equipment for Mini-LED Substrates (9:10-9:30)

Ryan Ge, Shenzhen Nanovision Corporation

34.4 3-inch, 3000-ppi Silicon Nitride Masks for Direct Patterning of OLED Micro displays (9:30-9:50, Online)

Shoucheng Dong, Hong Kong University of Science and Technology

34.5 Study on different matching of sealant, liquid crystal and lamp for LCD (9:50-10:10)

Xintong Wang, Shenzhen China Star Optoelectronics Technology Co., Ltd

Session 35: Vehicle Display: Standards and Methods (Vehicle Display)

Tuesday, July 19/8:30-9:30/ Meeting Room 315

Chair: Zong Qin(秦宗), Sun Yat-Sen University

35.1 *Invited Paper*: The Development Trend of Vehicle Display Technology (8:30-8:50)

Pengtao Li (李鹏涛), BOE

35.2 *Invited Paper*: The latest published VDE test standard for the durability and functionality testing of display (8:50-9:10)

Wolfgang P. Weinhold, Institute for Surface and Product Analysis - ISPA

35.3 Study on Technology to Enhance the Strength of Display Module for Vehicle (9:10-9:30)

Liang Huang, Tianma Micro-electronics

Session 36: Display Effect Improvement Algorithm (Display Application)

Tuesday, July 19/10:20-12:00/ Meeting Room 206

Chair: Shu Xu (徐庶), Hebei University of Technology

36.1 *Invited Paper*: White-balanced Healthy Displays based on Quantum-dot Color Conversion (10:20-10:40)

Sheng Xu (徐胜), Fuzhou University

36.2 A New Driving Method for Improving the Image Quality of Viewing Angle Controllable Display (10:40-11:00)

Limei Jiang, InfoVision Optoelectronics (Kunshan) Co.,LTD

36.3 A Dynamic Contrast Enhancement Method for TV Picture Quality Improvement (11:00-11:20)

Qichong Tian, TCL

36.4 A Content-adaptive Filtering Algorithm based on Dual-cell LCDs (11:20-11:40)

Xiangjun Peng, BOE Technology Group Co., LTD, Beijing, China

36.5 A Comprehensive Quality Assessment of Video Super-Resolution for Ultra High-Resolution Application (11:40-12:00)

Danni Deng, Southeast University

Session 37: Oxide TFT - Process & Structure (Active-Matrix Devices)

Tuesday, July 19/9:40-11:20/ Meeting Room 202

Chair: Weijing Wu (吴为敬), South China University of Technology

37.1 Invited Paper: LTPO TFT Technologies for Advanced AMOLED Displays (9:40-10:00, Online)

Jin Jang, KHU, Korea

37.2 Invited Paper: Nanosheet High Mobility SnO₂-SnO Complementary TFTs for System-on-Display and Monolithic Three-Dimensional Integrated Circuit (10:00-10:20, Online)

Albert Chin, National Yang Ming Chiao Tung University

37.3 Development of High Performance Oxide TFTs Using Back-Channel-Etch Structure With Copper Electrodes (10:20-10:40)

Zijie He, TCL China Star Optoelectronics Technology Co., Ltd

37.4 Self-Aligned Top-Gate Amorphous ZnSnO Thin-Film Transistor with Thermal-Stable Al Reaction-Doped Source/Drain (10:40-11:00)

Huan Yang, Peking University

37.5 Solution-Processed Metal Oxide Semiconductors Thin-Film Transistors for Dynamic Sensor Arrays (11:00-11:20)

Bowen Zhu, Westlake University

Session 38: Quantum Dot Photoluminescence (EMQ(QL))

Tuesday, July 19/10:00-11:20/ Meeting Room 203

Chair: Kai Wang (王恺), Southern University of Science and Technology

38.1 Invited Paper: Air-stable quantum dots for barrierless applications (10:00-10:20, Online)

ZhongSheng Luo, Nanosys

38.2 Invited Paper: Enabling High Resolution Photopatternable Quantum Dot Downconverters (10:20-10:40, Online)

Yu Kambe, NanoPattern

38.3 Invited Paper: Green CdSeS nanoplatelets with continuously tunable emission, high PLQYs and efficient biexciton emission (10:40-11:00)

Yunan Gao (高宇南), Peking University

38.4 Synthesis of Highly Luminescent InP-based Core/shell/shell Colloidal Quantum Dots (11:00-11:20)

Xueqing Xu, Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences

Session 39: Phosphorescent Materials (OLEDs)

Tuesday, July 19/10:00-11:00/ Meeting Room 208-209

Chair: Xin-Yang Wang (王忻扬), Merck Display

39.1 *Invited Paper*: High Performance Red and Green Phosphorescent Emitters Suitable for BT.2020 Color Gamut (10:00-10:20)

Huiqing Pang (庞惠卿), Beijing Summer Sprout Technology

39.2 Low Efficiency Roll-off Blue Phosphorescent OLEDs at High Brightness Based on [3+2+1] Coordinated Iridium (III) Complexes (10:20-10:40)

Guodan Wei, Tsinghua University

39.3 Highly Efficient Near-Infrared Phosphorescent OLEDs (10:40-11:00, Online)

Zhiqiang Ji, Universal Display Corporation

Session 40: LC Phase Modulator (LCT)

Tuesday, July 19/10:00-11:40/ Meeting Room 306

Chair: Dan Luo (罗丹), Southern University of Science and Technology

40.1 *Invited Paper*: Energy Manipulation of Liquid Crystal Phase Modulators (10:00-10:20)

Jiangang Lu (陆建钢), Shanghai Jiao Tong University

40.2 *Invited Paper*: Flat Liquid Crystal Optics for AR/VR Applications (10:20-10:40)

Qi-Huo Wei (韦齐和), Southern University of Science and Technology

40.3 *Invited Paper*: 2D/3D compatible display based on liquid crystal lens array (10:40-11:00)

Qionghua Wang (王琼华), Beihang University

40.4 A polarization-independent liquid crystal device with large phase retardation (11:00-11:20)

Yumeng Zhang, Shanghai Jiao Tong University

40.5 Fast Fringe-field-effect Free Continuous 2.25π Phase Modulation Based on Non-linear Kerr Effect of Vertical Aligned Deformed Helix Ferroelectric Liquid Crystal (11:20-11:40, Online)

Zhengnan Yuan, HKUST

Session 41: Display Materials Processing (Display Manufacturing)

Tuesday, July 19/10:20-11:40/ Meeting Room 307

Chair: Honglong Ning (宁洪龙), South China University of Technology

41.1 *Invited Paper*: On Production of a Fine Metal Mask for AMOLED: Opportunities & Challenges (10:20-10:40, Online)

Dean Chen (陈鼎国), Magic Star Technology (Ningbo) Co., Ltd.

41.2 *Invited Paper*: Preparation and Optic-Property of Dichroic Dyes Doped Thin PDLC Films (10:40-11:00)

Xiaolian Li (李晓莲), Dalian University of Technology

41.3 *Invited Paper*: Molybdenum Titanium based Sputter Targets for TFT Application (11:00-11:20)

Hendrik Hotz, Plansee

41.4 Novel Photolithography using Near Infrared Exposure and its Photoresist including Black Photoresist (11:20-11:40, Online)

Akihiko Igawa, eChem Solutions Japan

Session 42: Flexible Printed Electronics (OE-A Joint Session)

Tuesday, July 19/9:40-10:40/ Meeting Room 315

Chair: Zhe Liu (刘哲), LinkZill

42.1 *Invited Paper*: 31" FHD Flexible Printed OLED TV Display Technology (9:40-10:00, Online)

Jueng Gil(James) Lee, Guangdong Juhua Printing

42.2 Invited Paper: Universal TFT platform for high-throughput and low-cost optical/pressure/bio sensors (10:00-10:20)

Zhe Liu (刘哲), LinkZill

42.3 Invited Paper: Wearable Healthcare Devices Powered by Soft Battery (10:20-10:40)

Xiachang Zhang (张霞昌), Enfucell Flexible Electronics

Session 43: Oxide TFT – Application (Active-Matrix Devices)

Tuesday, July 19/13:30-15:10/ Meeting Room 202

Chair: Xuehuan Feng (冯雪欢), Hefei BOE Joint Technology Co.

43.1 Invited Paper: Newly structured Oxide TFT for the implementation of metaverse (13:30-13:50, Online)

Sang-Hee Ko Park, KAIST

43.2 Invited Paper: Active-Matrix Digital Microfluidics Platform based on TFT Array (13:50-14:10)

Hanbin Ma (马汉彬), Suzhou Institute of Biomedical Engineering and Technology

43.3 Invited Paper: Large-Area Imagers using Metal Halide Perovskites (14:10-14:30, Online)

Gerwin Gelinck, TNO/Holst Centre

43.4 Metal-Oxide Thin-Film Transistors for Driving High-Resolution Active-Matrix Ferroelectric Liquid-Crystal Displays (14:30-14:50, Online)

Sisi Wang, HKUST

43.5 Temperature Sensor Based on a Pseudo-E Inverter Built with Metal-Oxide Thin-Film Transistors (14:50-15:10, Online)

Runxiao Shi, Hong Kong University of Science and Technology

Session 44: Quantum Dot Electroluminescence 3 (EMQ(QL))

Tuesday, July 19/13:30-14:50/ Meeting Room 203

Chair: YU Chen (陈煜), Soochow University

44.1 Invited Paper: Carbon Dots as Versatile Auxiliary Components of Perovskite-Based Light-Emitting Devices (13:30-13:50)

Xiaoyu Zhang (张晓宇), Jinlin University

44.2 Invited Paper: Solution Processed Light Emitting Diodes based on Organic, Inorganic and Nanostructured Materials (13:50-14:10)

Zugang Liu (刘祖刚), China Jiliang University

44.3 Invited Paper: Single Component White-emitting ZnTeSe Quantum Dots for Electroluminescence QD-LED application (14:10-14:30, Online)

Armin Wedel, Functional Material and Devices, Fraunhofer Institute for Applied Polymer Research IAP

44.4 Invited Paper: Quantum Dot Infrared Image Sensors for the Future Display Interfaces (14:30-14:50, Online)

Pawel Malinowski, IMEC

Session 45: TADF and Hyper-fluorescent Materials (OLEDs)

Tuesday, July 19/13:30-14:50/ Meeting Room 208-209

Chair: Huiqing Pang (庞惠卿), Beijing Summer Sprout Technology

45.1 Invited Paper: OLED materials and devices based on TADF-sensitized fluorescence emission (13:30-13:50)

Dongdong Zhang(张东东), Tsinghua University

45.2 Invited Paper: Design of High Performance Organic Thermally Activated Delayed Fluorescence Dendrimer Emitters for Solution-Processed Organic Light-Emitting Diodes (13:50-14:10, Online)

Eli Zysman-Colman, University of St Andrews

45.3 Improving Lifetime of High-Efficiency Blue OLED Based on Thermally Activated Sensitized Fluorescence (14:10-14:30)

LICHANG ZENG, Beijing Eternal Materials Technology

45.4 The Architecture of Hyper-fluorescent Emitter via Proper Management of Molecular Aggregation (14:30-14:50, Online)

Ezhakudiyar Ravindran, Department of Information Display, Kyung Hee University

Session 46: Micro-LED Displays (EMQ(Micro-LED))

Tuesday, July 19/13:30-15:30/ Meeting Room 210-211

Chair: Jie Sun (孙捷), Fuzhou University

46.1 Invited Paper: MicroLED Technology and Applications by PixeLED Solutions (13:30-13:50, Online)

Falcon Liu (刘应苍), PlayNitride Display Co., Ltd.

46.2 Invited Paper: 4.82-inch LTPS TFT Micro-LED Display for Tiled Display Modules (13:50-14:10)

Xuan Cao (曹轩), Vistar Corporation

46.3 Invited Paper: 7.1-inch Full Color Flexible Micro-LED Display Based on Topgate IGZO Backplane (14:10-14:30)

Limei Zeng (曾丽媚), TCL Shenzhen China Star Optoelectronics Technology Co., Ltd

46.4 Invited Paper: Image quality improvement technology for mini/micro LED (14:30-14:50)

Guojing He (何国经), NovaStar

46.5 Laser Processes for MicroLED Display Manufacturing (14:50-15:10)

Stephen Li, Coherent Laser Systems GmbH&Co.KG

46.6 A Study on Micro-LED ACF Bonding Technology: Requirement and Challenges (15:10-15:30)

Saisai Han(韩赛赛), Chengdu Vistar Display Company

Session 47: High Perceptive LCDs (LCT)

Tuesday, July 19/13:30-14:50/ Meeting Room 306

Chair: Jiangang Lu (陆建钢), Shanghai Jiao Tong University

47.1 Invited Paper: Color Gamut Larger than 115%NTSC in LCD With YAG Backlight Using Polarization Interference Filter (13:30-13:50)

Yubao Sun(孙玉宝), Hebei University of Technology

47.2 A 15.6 FHD LTPS Product Display With Wide Refresh Rate from 5Hz to 480Hz (13:50-14:10)

Jian Tao, Wuhan China Star Optoelectronics Technology

47.3 A New Generation of LCD's Based on Ferroelectric Liquid Crystals Showing Uniform and Stable Orientation (14:10-14:30, Online)

Valeri Lapanik, Institute of Applied Physical Problems

47.4 Ultra Wide Color Gamut and High Luminous Efficiency LCD by Environment-friendly Organic Material without Cadmium (14:30-14:50)

Weifan Yang, BOE Technology Group Co., Ltd

Session 48: Fabrication of TFT Backplanes (Display Manufacturing)

Tuesday, July 19/13:30-14:50/ Meeting Room 307

Chair: Ryan Ge (葛仁彦), Shenzhen Nanovision Corporation

48.1 Invited Paper: Development of TFT-Based Driving Circuit for mobile AM-uLED displays (13:30-13:50, Online)

Yong-Sang Kim, Sungkyunkwan Univ.

48.2 Inline Low Temperature Polycrystalline Silicon Roughness and Grain Size Metrology Enabled by Electron Beam Review for a Better Process Control of Excimer Laser Annealing (13:50-14:10)

Lin Meng, Applied Materials China

48.3 Formation of potential barriers at grain boundaries in multicomponent ZnO-based transparent thin films (14:10-14:30, Online)

Victor Belyaev, Moscow Region State Univ

48.4 Variable Top Gate Oxide TFT Structures for Premium High-end Display with Process Simplicity and Device Stability (14:30-14:50)

Hyun-Sik Seo, TCL China Star Optoelectronics Display Technology Co. Ltd

Session 49: Flexible Printed Electronics (OE-A Joint Session)

Tuesday, July 19/13:30-14:50/ Meeting Room 315

Chair: Jueng Gil(James) Lee, Guangdong Juhua Printing

49.1 Invited Paper: Functional Inkjet Printing Factors, Applications, and Markets (13:30-13:50, Online)

Lou Dadok, FUJIFILM Dimatix

49.2 Invited Paper: Printing conductive copper traces for sustainable production of Displays and PCBs: Shifting from Etching to printing (13:50-14:10, Online)

Ofer Shochet, Copprint

49.3 Invited Paper: Flexible touch display innovations with new conductive polymer solutions (14:10-14:30, Online)

Armin Sautter, Heraeus

49.4 Invited Paper: High-volume Production of Flexible Printed Electronics (14:30-14:50, Online)

Florian Ullrich, Innovation Lab

Session 50: TFT Device and Circuit (Active-Matrix Devices)

Tuesday, July 19/15:20-17:00/ Meeting Room 202

Chair: Hanbin Ma (马汉彬), Suzhou Institute of Biomedical Engineering and Technology

50.1 Invited Paper: A ultra-thin channel oxide-TFT for next-generation inverter circuit (15:20-15:40, Online)

Kenji Nomura, UCSD

50.2 Invited Paper: Ultralow Power Stretchable TFTs and Circuits (15:40-16:00, Online)

Arokia Nathan, Chen Jiang(蒋琛), Darwin College, University of Cambridge, UK

50.3 Invited Paper: Contact-controlled transistors: critical design parameters (16:00-16:20, Online)

Radu Sporea, University of Surrey

50.4 Invited Paper: A new MoS₂-HZO neuromimetic transistor for intelligent display (16:20-16:40)

Miao Zhao (赵妙), Institute of Microelectronics of the Chinese Academy of Sciences

50.5 MPRT Enhancement Gate Driver Circuit Employing IGZO TFTs for Image-Quality Improvement (16:40-17:00)

Xuehuan Feng, Hefei BOE Joint Technology Co.

Session 51: Perovskite (EMQ(QL))

Tuesday, July 19/15:00-16:40/ Meeting Room 203

Chair: Yunan Gao (高宇南), Peking University

51.1 Invited Paper: Interface Modulation for Efficient Emissive Materials (15:00-15:20)

YU Chen (陈煜), Soochow University

51.2 Invited Paper: The inorganic lead halide perovskite nanocrystals: the materials control and stability approach (15:20-15:40)

Bo Qiao (乔泊), Beijing Jiaotong University

51.3 Invited Paper: How perovskite quantum dots are supporting the rise of mini-LED based LCD displays Norman (15:40-16:00, Online)

Lüchinger, Avantama AG

51.4 High-efficiency Red Perovskite Light-Emitting Diodes based on Sr²⁺ doped CsPbI₃ Nanocrystals (16:00-16:20)

Cheng Chen, Xiamen University

51.5 In-situ Fluorescence Monitoring Technique for Highly Reproducible Perovskite Light-emitting Diodes (16:20-16:40)

Huibo Yan, Shenzhen University

Session 52: Degradation and Lifetime (OLEDs)

Tuesday, July 19/15:00-16:20/ Meeting Room 208-209

Chair: Dongdong Zhang(张东东), Tsinghua University

52.1 Invited Paper: Analysis of TADF-OLED degradation induced by extrinsic impurities (15:00-15:20, Online)

Kentaro Harada, Opera Solutions

52.2 Invited Paper: Digital Twins for OLED Lifetime Predictions (15:20-15:40)

Feilong Liu (刘飞龙), South China Normal University, Simbeyond B.V.

52.3 Mechanism of Perforated Encapsulation Failure in Reliability Test of Foldable Display (15:40-16:00)

Xi-Ping Li, CHENGDU BOE OPTOELECTRONICS TECHNOLOGY CO.,LTD

52.4 Suppression of Initial Degradation for High-Efficiency Solution-Processed Organic Light Emitting Diodes (16:00-16:20, Online)

Thi Na Le, Kyung Hee University

Session 53: Micro-LED Device & Process-2 (EMQ(Micro-LED))

Tuesday, July 19/15:40-17:20/ Meeting Room 210-211

Chair: Guojing He (何国经), NovaStarshort

53.1 *Invited Paper*: Process optimization of passive matrix GaN micro-LED displays (15:40-16:00)

Jie Sun (孙捷), Fuzhou University

53.2 *Invited Paper*: High Resolution UPD Technology for MicroLED Microbonding based on High Viscosity Paste (16:00-16:20, Online)

Filip Granek, XTPL S.A.

53.3 Atomic-scale sidewall passivation for microLED devices (16:20-16:40, Online)

Jouko Lång, Comptek Solutions Oy

53.4 Quantum Dot Micro-LED Display Research (16:40-17:00)

Jing Chen, KONAKA Photoelectric Technology Research

53.5 Low IR Drop 480×540RGB Mini-LED Display Based on High Mobility Ln-IZO TFT (17:00-17:20)

Lei Zhou, Guangzhou New Vision Opto-electronic Technology

Session 54: New Materials and Alignment Technology (LCT)

Tuesday, July 19/15:00-17:00/ Meeting Room 306

Chair:

54.1 *Invited Paper*: Highly efficient Quantum Rods LEDs for LCD backlights (15:00-15:20, Online)

Abhishek Srivastava, HKUST

54.2 *Invited Paper*: Flat Liquid Crystal Microlens Based on Spatially-variant Photoalignment (15:20-15:40)

Huapeng Ye (叶华朋), South China Normal University

54.3 *Invited Paper*: Surface control of LC Alignment for Creation of Liquid crystal Lenses Arrays (15:40-16:00, Online)

Alexander Muravsky, Institute of Chemistry of New Materials NAS Belarus

54.4 *Invited Paper*: Photoaligned ferroelectric liquid crystals for displays and photonics: what next (16:00-16:20, Online)

Vladimir G. Chigrinov, Moscow Region State University

54.5 Novel, Liquid Crystal Formula to Overcome LTPS LCD Image Sticking Without Adjustment of Gamma Code, Optical, VHR and IS Evaluation (16:20-16:40)

Bo-Cheng Tao, AU Optronics (Kunshan) Co.

54.6 An original approach to creating liquid crystals and anisotropic materials with a wide range of practical application (16:40-17:00, Online)

Vladimir Bezborodov, Belarusian State Technological University

Session 55: Fabrication of Electrodes (Display Manufacturing)

Tuesday, July 19/15:00-16:00/ Meeting Room 307

Chair:

55.1 *Invited Paper*: Thin Metallic Nano-Patterned Transparent Electrodes for Optoelectronic Applications (15:00-15:20, Online)

A. Hubarevich, Y. Mukha and Alex Smirnov, Belarusian State University

55.2 Low Resistive Metallization and High Adhesion Layer of Ni Alloy in Stretchable Display Backplane (15:20-15:40, Online)

Jong Hyun Seo, Korea Aerospace University

55.3 Deposition of Conductive and Insulating Features at Micrometer Scale for Flexible Electronics and Printed Displays (15:40-16:00, Online)

Aneta Wiatrowska, XTPL SA

Session 56: Vehicle Display: Local dimming & AMOLED (Vehicle Display)

Tuesday, July 19/15:00-16:40/ Meeting Room 315

Chair:

56.1 *Invited Paper*: The challenge of mini LED backlit application in automotive display (15:00-15:20)

Ronghua Li (李荣华), Tianma Microelectronics

56.2 *Invited Paper*: Novel Bistable Liquid Crystal Materials for AR/VR Technology, Vehicle and Flexible Display (15:20-15:40, Online)

Valeri Lapanik, Institute of Applied Physical Problems

56.3 *Invited Paper*: Exterior Displays for Autonomous Cars: Technologies, Icons, Evaluation (15:40-16:00, Online)

Karlheinz Blankenbach, Pforzheim University

56.4 *Invited Paper*: Optimized Algorithm and BLU for Local Dimming of Automotive Displays (16:00-16:20, Online)

Chihao Xu, Saarland University

56.5 High Temperature Operation Stability Optimization for Flexible Automotive AMOLED by Rational Design (16:20-16:40)

Xin Mou, BOE

Poster Session

P 1. AMD

P 1.1 Co-sputtering-deposited Hf-doped ITO Thin Films for Thin Film Transistors Application

Jingye Xie, Beijing Information Science and Technology University

P 1.2 Improvement of Mobility and Reliability of a-IGZO TFTs by Dual-Gate Driving

Chuanbao Luo, TCL China Star Optoelectronics Technology Co., Ltd

P 1.3 The Improve of Pixel Design and Circuit Signal on Short Time Image Sticking for Flexible AMOLED

Xia Tang, Chengdu BOE Optoelectronics Technology CO., LTD

P 1.4 Analysis of the Hump Characteristics in Poly-Si Thin Film Transistor & Process a Method to Suppress Hump Effect

Yiyu Guo, Wuhan China Star Optoelectronics Technology Co. Ltd., Wuhan, Hubei, China

P 1.5 Dynamic Current Stress-Induced Instabilities of a-InGaZnO TFTs

Fayang Liu, Peking University

P 1.6 Proximity Pattern Identification Using an Artificial Compound Eye with Monolithically Integrated Amplifiers and Photodetectors (Online)

Zhichao Zhou, Hong Kong University of science and technology

P 1.7 The Mechanisms and a Solution for Drain Current Drop in Amorphous InGaZnO Thin-Film Transistors

Guowei Chen, Sun Yat-sun University

P 1.8 A New n+-Formation Process by NH₃ Plasma Treatment for Top Gate Coplanar IGZO Thin-film Transistors

Chuanke Chen, Institute of Microelectronics of The Chinese Academy of Science

P 1.9 Effect of Wavelength on Photoresponse Characteristics of Amorphous InZnO Thin Film Transistors

Hao Liu, Peking University

P 1.10 The Effects of Annealing Atmosphere on Dual Gate Dielectric ITO TFTs

Guangchen Zhang, Beijing Institute of Technology

P 1.11 High-mobility ZnO Thin-film Transistors with HfO₂/Al₂O₃ Bilayer Dielectric

Qi Li, Peking University

P 1.12 Vacuum Annealing Treatment on High-Performance AlZnO Thin Film Transistors

Dengqin Xu, Peking University

P 1.13 A 10.1-inch-high Stability 120Hz Metal Oxide in-Cell Touch LCD Display

Yuhuai Chen(陈宇怀), Mantix Display Technology

P 1.14 Optimizing the Electric Characteristics of Oxide ESD Device by Employing Novel Device Design and Modified Process.

Yi Zhang, Guangzhou China Star Optoelectronics Semiconductor Display Technology Co., Ltd.

P 1.15 TFT-based Addressing and Readout Circuits for Hybrid LAE-CMOS Interfacing

Zhongyi Zhou, Sun Yet-Sen University

P 1.16 Frontend Amplifier with Unipolar Oxide TFTs for Heart Rate Measurement

Yukming Tsui, South China University of Technology

P 1.17 Ultraviolet Light Response of Amorphous Oxide Thin-Film Transistors with Double-Stacked Channel Layers

Zenghui Fan, Shanghai Jiao Tong University

P 1.18 Comparison of the Short-Channel Effects in Source-Gated Transistors and Conventional Thin Film Transistors

Jiawei Zhang, Shandong University

P 1.19 10000PPI Active-Matrix Micro-LED Driver Circuit Design

Yuxin Li, Southern University of Science and Technology

P 1.20 Solution-Processed Hybrid Light-Emitting Field-Effect Transistors

Penghui He, Hunan University

P 2. AR&VR

P 2.1 Resolution-tripled Integral Imaging Light Field Displays by Recombining Subpixels with Zero Sampling Error

Wenchao Yang, Sun Yat-Sen University

P 2.2 Rapid Generation of Pinhole-type Holographic Stereogram in Near-eye Display

Xu Zhang, Hefei University of Technology

P 2.3 The development of virtual reality technology and the origin of metaverse

Chuang Wang, North China University of Technology

P 2.4 Development and Prospect of Medical Action Recognition Technology for Virtual Reality (VR)

Jianwen Song, North China University of Technology

P 2.5 Overview and Prospect of the Application of Immersive VR in Simulating Emergency Response

Hao Wang, North China University of Technology

P 2.6 Based on the Status Quo of Virtual Reality and Prospects for Future Development

Yaohui Hou, North China University of Technology

P 2.7 Optimization of Field of View in a Full-color Waveguide Display Based on Polarization Volume Grating

Yuchen Gu, Southeast University

P 2.8 Research on Multi-user Interaction Design in Augmented Reality

Sensen Zhao, North China University of Technology

P 2.9 The Research of Multi-user Cooperative Interaction Model in Augmented Reality

Lijun Wang, North China University of Technology

P 2.10 Design of a Freeform Surface Lens Based on the Optimization Target Illumination Distribution

Le Zhang, Hefei University of Technology

P 2.11 Research on Virtual Reality Key Optoelectronic Parameters

Xu Hao, SUN YAT-SEN UNIVERSITY

P 2.12 Application Status and Prospect of Mixed Reality in Medical Surgery

Sensen Zhao, North China University of Technology

P 2.13 Full-color Augmented Reality Using Quantum-dot Color Conversion Film

Ziping Zhou, Fuzhou University

P 2.14 Application of Virtual Reality in Primary School English Teaching

Dong Wang, School of Advanced Manufacturing, Fuzhou University

P 3. Display Application

P 3.1 Convolutional Neural Network based Image Segmentation Algorithm for Dual-Layer LCDs

Kai Su, Hefei University of Technology

P 3.2 Research on the Structure and Optical Performance of Reflective Liquid Crystal Display

Kun Ma, Wuhan China Star Optoelectronics Technology Co., Ltd.,

P 3.3 A HDR Image Layering Method Based on Improved Guided Filter

Wenxuan Nie, Shanghai University

P 3.4 Strategies to Improve the Photoelectric Performance of a-Si: H pin Ambient Light Sensor

Jiyue Song, Wuhan China Star Optoelectronics Technology Co., Ltd

P 3.5 Multi-period Folding Risk Analysis of Foldable AMOLED Display Module

Wenxin Zhang, Hebei University of Science & Technology

P 3.6 Local Compensation in 3D Light Field Display

Yiyi Pu, Shenzhen Yinglun Technology Ltd

P 3.7 An Improved Dehazing Algorithm for Fog Image at Night

Xue Nan, Shanghai University

P 3.8 Research on Improving Blueness Around QD + Edge-in Blue LED Architecture Modules

Yuan Jia, BOE Technology Group Co., Ltd.

P 3.9 An Approximating Natural Light LCD Technology

Yu Zhang, Beijing BOE Display Technology Co., Ltd, Beijing, China

P 3.10 Mini LED Technology Trend and Innovative Application

Sha Liu, Beijing BOE Display Technology Co., Ltd., China

P 3.11 An Improved Compression Method of HDR Image Dynamic Range

Qinyi Yang, Shanghai University

P 3.12 An Improved Color Restoration Method for High Dynamic Range Images

Yang Ruilin, Shanghai University

P 3.13 A Polarization Modulated Directional Backlight Autostereoscopic Display

Yunjia Fan, Sun Yat-sen University

P 3.14 Development of Thin Film Design based on IGZO-TFT Displays for Transmittance and Picture Quality Improvement

Wang Hang, TCL China Star Optoelectronics Technology Co., LTD

P 3.15 Verification and Analysis on Display In-folding Droplet-like Morphology and Influencing Factors

Lijuan Zhao, Lu Liu, Shiming Shi, BOE Technology Group Co., LTD.

P 3.16 A Novel Lens with Hybrid Structure for Ultra-thin Backlight Units

Qiyu sun, Hefei University of Technology

P 3.17 Programmable Virtual Illuminance Modulation in Directional Backlight Autostereoscopy

Zhanhong Li, State Key Laboratory of Optoelectronic Materials & Technology, School of Physics, Sun Yat-sen University, Guangzhou, China

P 3.18 Design of Microstructure Optical Film for Ultra-thin MiniLED Backlight Module

Huili Xiao, Hefei University of Technology

P 3.19 Demonstration of Underwater Wireless Optical Communication System Using a Green Micro-LED and FPGA-based PPM Modulation

Rui Chen, Southern University of Science and Technology

P 3.20 A Novel Algorithm for Nighttime Image Dehazing

Zhenjie Jin, Shanghai University

P 3.21 Chromodot: Non-electrical Color Changeable Pixel Dots for Board/Window Signage Display Using Light Control and Color Generating Technologies

Kunio Sakamoto, Konan University

P 3.22 One-way Observable Aero Signage Display Using Optical Prisms Doped with Dye and Pigments Which Enable to Make Transparent from Back Side

Kunio Sakamoto, Konan University

P 3.23 Multiple Regional-iteration Algorithm for Holographic Projection with Suppressed Speckle Noise

Min Guo, Hefei University of Technology

P 4. Display Electronics

P 4.1 Dual-Gate Indium-Gallium-Zinc Oxide Thin-Film Transistor with an Inserted Top Gate (Online)

Yuqi WANG, HKUST

P 4.2 De-Mura Processing Integrated in Display Drivers for AMOLED Display

Jian Cai, Peking University

P 4.3 Research on the effect of V_{gh} on LCD screen luminosity

Tengfei Ding, BOE

P 4.4 Multifunctional Laminated Organic Passivation Layer on InSnZnO Thin-Film Transistors for Enhanced Reliability

Delang Lin, the School of Microelectronics, South China University of Technology

P 4.5 TFT characteristic Improvement of Amorphous Silicon by Design of Experiments

Ming Wang, BOE Technology Group Co., Ltd

P 4.6 High-efficiency and High-power 660 nm Laser Diode

Yehua Xie, Shenzhen Raybow Optoelectronics Incorporation

P 5. Display Manufacturing

P 5.1 FPC Bending Simulation and Analysis for Wearable Products

Yaxin sun, Beijing BOE Optoelectronics Technology Co., Ltd

P 5.2 Study of Air Sampling and Database Analysis on Mask Haze in TFT Manufacturing

Yannan Gao, L&K Engineering (Suzhou) Ltd. Co.

P 5.3 Customization of Metal Wire Taper Specifications

Chunliu Yang, TCL

P 5.4 The Improvement of Wet Stripping Residuals in Cu Process

Jiawei He, InfoVision Optoelectronics Co., Ltd., Kunshan

P 5.5 Research of Laser Cleaning Technique Application for Mini/micro-Led

Sha Feng, BOE MLED Technology Co., Ltd.

P 5.6 Analysis of ITO Residue in 4mask process applied in Extra large-size FFS LCDs

Wei Wu, TCL CSOT

P 5.7 Selective Laser Lift-off of GaN Micro-LED from a Sapphire Substrate Using 266-nm Solid-state Laser

Junchao Yuan, Southern University of Science and Technology

P 5.8 Improving Cross Line Defects of Ultra Narrow Bezel Displays

Xintong Wang, Shenzhen China Star Optoelectronics Technology Co., Ltd

P 5.9 Realize the High Resolution of BM by adjusting the Process, Equipment and Material Composition

Hongshan Yin, CSOT

P 5.10 Mini-LED Circuit Scratch in Process

Tenggang Lou, Shanghai Tianma MICRO-ELECTRONICS Co., Ltd.

P 5.11 Research and Improvement of PFA Peeling of TFT-LCD Display

Lanyan Li, TCL China Star Optoelectronics Technology CO., LTD

P 5.12 PI Less Technology Application on Narrow Border and Surface Screen: from Design to Verification

Kunkun Jiang, Shenzhen China Star Optoelectronics Semiconductor Display Technology

P 5.13 Research on the Dyeability of High-Transmittance Color Photoresist Containing Dye

Yuxiu Zhang, TCL China Star Optoelectronics Technology Co., Ltd

P 5.14 One-way Observable Window Signage with Vivid Colors Using Dye-doped and Scattering Layers Which Enable to Make Images Invisible from Back Side

Kunio Sakamoto, Konan University

P 6. Display Measurement

P 6.1 Evaluation Uniformity and Stability of Quantum Dot Pixels by Microscale Fluorescence Spectroscopy System

Shuchen Shi, Xiamen University

P 6.2 How to Reliably Access the Quality of Display Products-A Novel Mutually-Supervised Subjective Evaluation Method

YiFan Song, BOE Technology Group Co., Ltd.

P 6.3 The Analysis and Improvement of TFT Vth Shift Effect on AMOLED Panel Lifetime Test

Ai Yu, BOE

P 7. Display system

P 7.1 Use of Deep Learning in Garbage Image Detection

Dong Wang, Fuzhou University

P 7.2 Water-drop Shape Folding Hinge for Foldable Device (Online)

Insun Hwang, AUFLEX

P 7.3 Research on Touch Input System Based on In-Graphic Identification

Junfeng Qiu, Fuzhou University

P 7.4 Research on Ultra-thin Narrow Bezel Technology of Liquid Crystal Display Module under 5G Mobile Phone

Yaodong WANG, Beijing BOE Optoelectronics Technology Co., Ltd.

P 7.5 A Professional Display System with Multiple 12G-SDI Interfaces

Lihua Geng, BOE Technology Group Co., Ltd

P 7.6 Research on Small Target Detection and Behavior Recognition Algorithm for Beach Monitoring System

Zhiyang Xiao, Fuzhou University

P 7.7 One-way Observable Active Window Signage Using Dye-doped Water Drops Which Enable to Make Transparent View from Back Side

Kunio Sakamoto, Konan University

P 7.8 Characteristic Analysis on Special-shaped Pupil of Holographic Stereogram

Yunpeng Liu, Department of Information Communication, Army Academy of Armored Forces

P 7.9 Autostereoscopic Imaging Based on Mutual Filtering of Sum and Ratio Real-Amplitude Images (Online)

Vasily Ezhov, 3D TechVision, LLC

P 7.10 Display Illumination with Tailored Viewing Volume

Xiaoming Huang, Sun Yat-Sen University

P 7.11 A Hardwareable Local Dimming Algorithm Design for MINI LED Backlight Display Quality Improvement

Tiankuo shi, BOE

P 7.12 Research on Small Hole Punching Technology of Backlight Units by Used Aluminum Alloy Material

Yaodong WANG, Beijing BOE Optoelectronics Technology Co., Ltd.

P 7.13 Enhanced High Dynamic Tone Mapping Using Guided Filter

Jianfeng Yang, R&D center, TCL Electronics Holdings Ltd

P 7.14 Design of Matching Circuit for NFC Antenna Integrated with Display

Yujie LIU, BOE

P 7.15 A Large size Mini-LED Backlight System

Fan Yang, BOE Technology Group Co., Ltd

P 7.16 Design of ORGB LED Array Based BLU for Night Vision Compatible Application

Gang Liu, Jiangsu Jinling photoelectric Co.,Ltd

P 7.17 3D Display with Multi-Projectors and Freeform Mirror

Guangyong Zhang, Sun Yat-Sen University

P 7.18 A 75" 8K Professional Monitor Based on FPGA System (Online)

Ran Duan, BOE TECHNOLOGY GROUP CO., LTD.

P 7.19 Virtual-Point-Light-Source-Based Design Method for Double Freeform Surfaces Lenses in Direct-Lit Backlight Units

Huijuan Li, Hefei University of Technology

P 8. Micro-LED

P 8.1 High-performance AlGaInP Based Red Micro-LED

Mengyuan Zhanghu, Southern University of Science and Technology

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Wenjun Huang, Southern University of Science and Technology

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