

# 会议详细议程终版 (Final Program)



International Conference on Display Technology

**2024 International Conference on Display Technology**

March 31-April 3, 2024 (Sunday - Wednesday)

Binhu Hefei International Convention and Exhibition Center

Hefei, China

## **Opening Remark**

开幕式

Monday, April 1/14:00-14:30/ Room 206-208

## **Plenary Session**

大会主旨演讲

Monday, April 1/14:30-18:30/ Room 206-208

Chair: Wen Qiao (乔文), Soochow University

Co-Chair: Dongchuan Chen (陈东川), Beijing BOE Display Technology Co., Ltd.

Title: On Challenges and Opportunities when MicroLEDs "go nano" (14:30-14:55)

Lars Samuelson, SUSTech and Lund University

Title: All-Media Ultra HD Broadcasting (14:55-15:20)

Wenbo Jiang (姜文波), China Media Group

Title: Materials Broadening Vision, Display Guiding Future (15:20-15:45)

Shou Peng (彭寿), China National Building Materials Group Co., Ltd.

Title: Next Frontiers in OLED Technology (15:45-16:10)

Julie J. Brown, Universal Display Corporation

Title: Scalability Consideration in AR/VR Displays (16:20-16:45)

Yun Wang, Meta/Facebook

Title: Spin Mixing: A Way for OLEDs to be the Ultimate Display? (16:45-17:10)

Jang-Joo Kim, Seoul National University, JooAm Co.

Title: The Road to Production of MicroLED Display (17:10-17:35)

Yun-Li (Charles) Li (李允立), PlayNitride

Title: Innovative Application of OPC Technology in FPD Field (17:35-17:55)

Xiaodong Yang (杨晓东), Empyrean

Title: Textile Displays (17:55-18:20)

Huisheng Peng (彭慧胜), Fudan University

**Short Course (Language is Chinese)**

**短期课程**

**Short Course 1**

**Sunday, March 31/ 9:00-12:00/ Room 212**

**Topic: OLEDs**

**Title: Basic Principle and Manufacturing of OLED**

**OLED 基本原理及制造**

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

**Short Course 2**

**Sunday, March 31/ 9:00-12:00/ Room 211**

**Topic: Perceptual Interaction**

**Title: Research on Consumer Electronics Sensory and Perceptual Interaction Experience and Evaluation**

**消费类电子产品感知交互体验及评价研究**

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

**Short Course 3**

**Sunday, March 31/ 9:00-12:00/ Room 204**

**Topic: 3D Display**

**Title: 3D Display Technologies**

**3D 显示技术**

**Qionghua Wang (王琼华), Beihang University**

**Short Course 4**

**Sunday, March 31/ 14:00-18:00/ Room 210**

**Topic: TFT**

**Title: Optical TFT Sensing Array**

**TFT 光感测阵列**

**Ya-Hsiang Tai (戴亚翔), National Yang Ming Chiao Tung University**

**Seminar**

**专题技术讲座**

**Seminar 1**

**Sunday, March 31/ 9:00-10:30/ Room 210**

**Title: Electronic Paper Display Technologies and Applications (Language is Chinese)**

**电子纸显示技术及其应用**

**Xidu Wang (王喜杜), Guangzhou OED Technologies Inc**

**Seminar 2**

**Sunday, March 31/ 10:45-12:15/ Room 210**

**Title: Balanced Oxide TFT Performance: Microstructural Ordering, Device Structure (Language is Chinese)**

优异综合性能的氧化物 TFTs: 微结构序构化、器件结构设计以及物理效应的理解  
Hongtao Cao (曹鸿涛), Ningbo Institute of Materials Technology and Engineering Chinese Academy of Sciences

**Seminar 3**

**Sunday, March 31/ 14:00-15:30/ Room 212**

Title: **Critical Bottlenecks and Recent Progresses of Micro-LED Displays (Language is Chinese)**

显示用 Micro-LED 当前面临的瓶颈及技术进展

**Kai Huang (黄凯), Xiamen University**

**Seminar 4**

**Sunday, March 31/ 15:45-17:15/ Room 212**

Title: **Introduction to the Fundamentals of Information Displays (Language is English)**

信息显示的基本原理介绍

**Ian Underwood, The University of Edinburgh**

**Seminar 5**

**Sunday, March 31/ 14:00-15:30/ Room 211**

Title: **Study on Visual Perception and Visual Health in Display Applications (Language is Chinese)**

显示应用中的视觉感知与视觉健康研究

**Yuning Zhang (张宇宁), Southeast University**

**Seminar 6**

**Sunday, March 31/ 15:45-17:15/ Room 211**

Title: **Metaverse Display and Interaction Technology (Language is Chinese)**

元宇宙显示与交互技术

**Lijun Wang (王立军), Xidian University Hangzhou Institute of Technology**

**Display Technology and Industry Standards Forum (Language is Chinese)**

显示技术和产业标准论坛

**Sunday, March 31 / 9:00-12:00/ Room 202**

**JSID Journal Publication Training Session**

JSID 期刊发表培训会

**Sunday, March 31/14:00-16:00/ Room 204**

**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）

**Monday, April 1/9:30-12:00/ Room 205**

**New Technology and New Product Public Release**

新技术新产品发布会

**Monday, April 1/9:05-11:05/ Exhibition Hall 3**

### **Dedicated Time for Poster Session**

海报报告

**Tuesday, April 2/8:30—12:00/ Exhibition Hall 3**

### **Roadshow of Innovation & Entrepreneurship Projects (Investment Conference)**

创新创业项目路演

**Tuesday, April 2/9:00-12:00/ Exhibition Hall 3**

### **ICDT “Display Future Star Cup” Debate Competition (Language is Chinese)**

ICDT “显示未来之星杯”辩论赛

**Tuesday, April 2/9:00-17:30/ Room 205**

### **Young Leader Conference**

青年领袖论坛

**Tuesday, April 2/9:00-12:00/ Room 210**

- 1. Improve Color Experience for New Multi-media Systems (9:00-9:20)**  
Minchen Wei, The Hong Kong Polytechnic University
- 2. Local Energy Band and Charge Carrier Modulation by Ferro-/piezo-phototronic Effect in Optoelectronic Devices (9:20-9:40)**  
Yuljae Cho, Shanghai Jiaotong University
- 3. Large-viewing-angle Holographic 3D Display System (9:40-10:00)**  
Di Wang, Beihang University
- 4. Miniaturized Ultrasound Imaging System for Intravascular Ultrasound Imaging (10:00-10:20)**  
Jaemyung Lim, Hanyang University
- 5. Efficient all-thermally Evaporated Perovskite LEDs for TFT-integrated Electroluminescence Displays (10:20-10:40)**  
Jiajun Luo, Huazhong University of Science and Technology
- 6. Advancing XR Display Technologies: Importance of Measurement and Calibration (10:40-11:00)**  
Lei Zhao, YongJiang Laboratory
- 7. Photolithographic Patterning (11:00-11:20)**  
Yiming Xiao, Visionox Technology Inc.
- 8. Silicone-driven Microlithography for Ultrahigh-density OLEDs (11:20-11:40)**  
Hyukmin Kweon, Hanyang University

### **Human Factor and Visual Health Special Forum**

人因与视觉健康专题论坛

**Tuesday, April 2/9:00-12:00/ Room 211**

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

- 1. Keynote: Combining Medical and Industrial Work to Jointly Build the Great Wall of Visual Health (9:00-9:30)**  
Jia Qu (瞿佳), Wenzhou Medical University

2. **Keynote: Establish a Standardized Human Factor Model Library to Promote the Healthy Development of the Display Industry (9:30-10:00)**  
Xiqiang Liu (刘喜强), TÜV Rheinland ( Shanghai) Co., LTD.
3. **Invited Talk: 3D Stereoscopic Display for Visual Human factor Research (10:00-10:20)**  
Chien-Yu Chen (陈建宇), Taiwan University of Science and Technology
4. **Invited Talk: Analysis of Key Factors of VR Visual Health (10:20-10:40)**  
Yingwei Zhou (周颖伟), PICO Interactive Inc.
5. **Invited Talk: Research Progress and Standards Development about Measure and Evaluation Method on Visual Health of Display Terminals (10:40-11:00)**  
Yunhong Zhang (张运红), China National Institute of Standardization
6. **Invited Talk: Visual Health Display Technology (11:00-11:20)**  
Dongchuan Chen (陈东川), Beijing BOE Display Technology Co., Ltd.
7. **Invited Talk: Decoding Health Display Myths: Metrics, Measurement, and Manufacturer (11:20-11:40)**  
Xi Mou (牟希), Hangzhou SanTest Technology Co., Ltd.
8. **Invited Talk: A Long-term Follow-up Report: High-efficacy Classroom Lighting Systems Contributed to a Three-year Decrease by 10.96 Percentage Point in Total Myopia Rate of School Students (11:40-12:00)**  
Walter Zhang (张文亦), Shenzhen Green Power Revolution AG Co., Ltd.

#### **Business Conference (Language is Chinese)**

商业会议

**Tuesday, April 2/9:00-12:00/ Room 204**

Title: **Outlook for Global IT Set Market and AI PC Development in 2024 (9:00-9:25)**

**2024 年全球 IT 整机市场及 AI PC 趋势展望**

Yubin Zhang (张玉彬), Sigmaintell

Title: **Summary and Forecast of China MNT Online Market (9:25-9:50)**

**TV&MNT 面板市场总结与展望**

Rita Zhong (仲锐), AVC Revo

Title: **Development Trend of Near-Eye Display (9:50-10:15)**

**近眼显示市场发展趋势**

Kimi Lin (林麟), Omdia

Title: **Summary and Prospect of Chinese Educational Tablet and Learning Machine Market (10:25-10:50)**

**中国教育平板&学习机市场总结与展望**

Li Wang (王丽), AVC Revo

Title: **Automotive Display Market Review and Outlooks (10:50-11:15)**

**车载显示市场趋势与展望**

Wray Wang (王子睿), Omdia

Title: **Outlook for Global Tablet Market and Display Supply Chain Trends in 2024 (11:15-11:40)**

**2024 年全球平板电脑市场及供应链趋势展望**

Xuecheng Chen (陈学诚), Sigmaintell

**AI for Imaging and Display Special Forum**

**AI 赋能成像与显示专题论坛**

**Tuesday, April 2/9:00-12:00/ Room 212**

**Chair: Xinqun Jiang (姜幸群), BOE Technology Group Co., Ltd.**

1. **Keynote: Artificial Intelligence Multimodal Interaction Technology for Display (9:00-9:30)**  
Xinqun Jiang (姜幸群), BOE Technology Group Co., Ltd.
2. **Keynote: Display Technologies for AIoT Applications (9:30-10:00)**  
Boru Yang (杨柏儒), Sun Yat-Sen University
3. **Invited Talk: AI-Enabled OLED Materials Discovery: Molecular Representation, Property Prediction, and Structure Generation (10:00-10:20)**  
Wei Xu (徐炜), TCL AI Lab
4. **Invited Talk: Machine Learning Guided High Throughput Screening of Organic Luminescent Materials (10:20-10:40)**  
Dandan Song (宋丹丹), Beijing Jiaotong University
5. **Invited Talk: Innovative Research and Application of Display Yield Management Based on AI (ViT and LLM) (10:40-11:00)**  
Ronghua Liu (刘荣华), Wuhan Jingce Electronic Group Co., Ltd.

**OLED Materials and Devices Forum (Invited only)**

**OLED 材料与装备闭门论坛 (仅限邀请)**

**Tuesday, April 2/9:30-12:00/ Room 202**

**2024 Workshop on Future Trends of Display Technologies Development (Language is Chinese)**

**2024 新型显示技术未来发展趋势研讨会**

**Tuesday, April 2/ 14:00-18:30/ Room208**

**SID Beijing Chapter Technical Committee Meeting**

**SID 北京分会技术委员会会议**

**Tuesday, April 2/19:00-21:00/ Binhu Room, 2nd Floor, Hilton Garden Inn**

**Symposium on Interactive Display and Metaverse Technology and Industry Ecology**

**首届交互显示暨元宇宙产业生态研讨会**

**Wednesday, April 3/9:20-12:10/ Room 205**

**Chair: Lijun Wang (王立军), Xidian University**

1. **Keynote: Metaverse and Smart Health (9:20-9:50)**  
Yi Pan (潘毅), Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences
2. **Keynote: Light Field 3D Display Based on Integral Imaging for Metaverse (9:50-10:20)**  
Qionghua Wang (王琼华), Beihang University
3. **Keynote: Revolutionizing Metaverse Experiences with Cutting-Edge Liquid Crystal Optics (10:20-10:50)**  
Lu Lu, Meta Platforms, Inc.
4. **Invited Talk: 4K Fast LCD —— Key Solutions for AR/VR Display (10:50-11:10)**  
Jianyun Xie (谢建云), Beijing BOE CHUANGYUAN Technology Co., Ltd.
5. **Invited Talk: Augmented Reality 3D Display towards Metaverse (11:10-11:30)**  
Wen Qiao(乔文), Soochow University
6. **Invited Talk: Artificial Retina-Based Metaverse with Bionic Vision Processing (11:30-11:50)**  
Chaoping Chen (陈超平), Shanghai Jiao Tong University
7. **Invited Talk: Exploration of AI and New Quality Productive Forces Practice (11:50-12:10)**  
Jun Liu (刘俊), Unilumin Group Co.,Ltd.

**the Award Ceremony of SID China Display Industry Award**

**SID 中国区显示行业奖颁奖仪式**

**Wednesday, April 3/9:30-10:30/ Exhibition Hall 3**

**Micro/Mini LED Display Core Technology Road Map Forum (Language is Chinese)**

**Micro/Mini LED 显示关键技术路线研讨会**

**Wednesday, April 3/13:30-18:00/ Room 206**

## Technical Sessions

### Session 1: High Performance Oxide TFT (Active-Matrix Device)

Monday, April 1/8:30-9:50/ Room 212

Chair: Yuzhi Li (李育智), Institute of Semiconductors, Guangdong Academy of Sciences

#### 1.1 *Invited Paper*: High Performance Tin Oxide TFT (8:30-8:50)

Lei Liao (廖蕾), Hunan University

#### 1.2 *Invited Paper*: Self-aligned Top-gate Amorphous ITZO TFTs with High-k AlO<sub>x</sub> Insulator with Oxygen-plasma Formed Source/Drain (8:50-9:10)

Man Wong (王文), The Hong Kong University of Science and Technology

#### 1.3 Oxide Semiconductor Thin-Film Transistors with High Mobility and Stability (9:10-9:30)

Fa-Hsyang Chen, Kunshan Govisionox Optoelectronics Company

#### 1.4 High Performance of InSnO Thin-Film Transistors Enabled by Anodization Techniques (9:30-9:50)

Huan Yang, Peking university

### Session 2: E-paper (E-Paper and Flexible Displays)

Monday, April 1/8:30-10:50/ Room 210

Chair: Biao Tang (唐彪), South China Normal University

#### 2.1 *Invited Paper*: Color E-Paper Technologies and Evaluating Methods (8:30-8:50)

Xidu Wang (王喜杜), Guangzhou OED Technologies, Inc.

#### 2.2 *Invited Paper*: Basic Physics and Technical Progress of Electrowetting-Based Electronic Paper (8:50-9:10)

Biao Tang (唐彪), South China Normal University

#### 2.3 Color Development of Electrophoretic Display (9:10-9:30)

Lin Zhu, Shanghai Yangtze River Delta ePaper industry technology promotion center

#### 2.4 Optimizing Thermal Annealing Temperatures Towards Improved and Stable Electrochromic Polymeric Films and Devices (9:30-9:50)

Rui Ji, Suzhou Institute of Nano Tech

#### 2.5 PEDOT: PSS-Based Electrochromic Patterned Displays by in Situ Photo-Crosslinking (9:50-10:10)

Guojian Yang, Ningbo Institute of Materials Technology and Engineering, CAS

#### 2.6 Charging and Transport Behaviors of Species in Nonpolar Media for Lateral Driven Transparent Electrophoretic Display (10:10-10:30)

Jinglan Yang, Sun Yat-Sen University

#### 2.7 The Display Principle and Innovative Applications of Prism Color-changing Film (10:30-10:50)

Jun Zhang, Seekink

### Session 3: Visual Health (Applied Vision)

Monday, April 1/8:30-10:50 / Room 211

Chair: Weidong Huang (黄卫东), TCL China Star Optoelectronic Technology Co, Ltd

#### 3.1 *Invited Paper*: Study on Perceived Brightness for Display Application and Innovation (8:30-8:50)

Yuning Zhang (张宇宁), Southeast University



**3.2 Invited Paper: Assessment of Visual Fatigue Caused by Stereoscopic Disparity based on Multimodal Measurement (8:50-9:10)**

Lixiu Jia (贾立秀), Nanjing Institute of Technology

**3.3 Invited Paper: Virtual Reality Headset Use and Myopia: Should We Concern? (9:10-9:30)**

Fang Hou (侯方), Wenzhou Medical University

**3.4 Invited Paper: Color Image Enhancement for Elderly People Based on Aged Lens Model (9:30-9:50)**

Ruiqing Ma (马瑞青), Taiyuan University of Technology

**3.5 Invited Paper: Prediction Model for Visual Fatigue Caused by Smartphone Display Based on EEG (9:50-10:10)**

Yunyang Shi (史韞杨), Nanjing Tech University

**3.6 Human Perception as a Measure: Evaluating Waveguide Non-Uniformity in Augmented Reality Technology (10:10-10:30)**

Pengfei Li, Yongjiang Laboratory

**3.7 Binocular Contrast Sensitivity and Associated Factors in Healthy Chinese University Students with Different Refractive Errors (10:30-10:50)**

Na Liao, Wenzhou Medical University Eye Hospital

**Session 4: Laser Display (Projection)**

**Monday, April 1/8:30-9:50/ Room 204**

**Chair: Zhixiang Ye (叶志祥), HOLOKOOK Co., Ltd.**

**4.1 Invited Paper: Effective Speckle Reduction in Laser Projection Systems Using a Low Cost Screen with Multilayer Structure (8:30-8:50)**

Zhixiang Ye (叶志祥), HOLOKOOK Co., Ltd.

**4.2 Equal-Intensity Beam Splitters for Laser Speckle Reduction (8:50-9:10)**

Zhaomin Tong, Shanxi University

**4.3 Novel Full Color Photoluminescent Display on Optic-Clear Pixel-Less Emissive Screen (9:10-9:30)**

Ted Sun, Sun Innovations Inc. (Presented by business partners: Darwin Hu)

**4.4 Design of MLA-Based Integrated Projection System Using Radial Basis Function Mapping Method (9:30-9:50)**

Xilong Dai, Beijing Institute of Technology

**Session 5: AI (AI for Imaging and Display)**

**Monday, April 1/8:30-10:10/ Room 209**

**Chair: Wei Xu (徐炜), TCL AI Lab**

**5.1 Invited Paper: Digital Chemistry, Data Processing, and Ideation: Pioneering Novel Display Materials for Next-Generation Organic Electronics (8:30-8:50)**

Christopher Brown, Schrödinger

**5.2 Adaptive Scene Display Technology based on Neural Network (8:50-9:10)**

Feng Hou, BOE Technology Group Co., Ltd.

**5.3 Bioinspired Mechano-photonic Artificial Synapse based on Graphene/MoS<sub>2</sub> Heterostructure (9:10-9:30)**

Ziwei Huo, Beijing Institute of Nanoenergy and Systems, Chinese Academy of Sciences

**5.4 Predicting External Quantum Efficiency of Red Phosphorescent Organic Light-Emitting Devices by Machine Learning (9:30-9:50)**

Wenzheng Gao, Beijing Eternal Material Technology Co., Ltd.

**5.5 Unveiling Privacy Challenges: Big Data-Driven Digital Twins in Smart City Applications (9:50-10:10)**

Yujia Zheng, North China University of Technology

**Session 6: Holographic Optical Elements for AR/VR/MR (VR/AR/MR)**

**Monday, April 1/8:30-10:30/ Room 202**

**Chair: Di Wang (王迪), Beihang University**

**6.1 Invited Paper: Color Holographic 3D Display System with Large Viewing Angle (8:30-8:50)**

Di Wang (王迪), Beihang University

**6.2 Invited Paper: Research on Some Key Issues in Holographic Near-Eye Display (8:50-9:10)**

Zi Wang (王梓), Hefei University of Technology

**6.3 Invited Paper: Towards Eyeglass-Style Augmented Reality Near-Eye Displays Based on Holographic Optical Element (9:10-9:30)**

Xinxing Xia (夏新星), Shanghai University

**6.4 Multi-Dimensional Convertible Optical See-Through Head-Mounted Display Using Multiplexed Holographic Optical Element (9:30-9:50)**

Qiang Li, Xidian University

**6.5 Holographic Display Enabled with Light Modulation in both Amplitude and Phase in A Single LCoS-Based Spatial Light Modulator (9:50-10:10)**

Darwin Hu, Sysview Technology, Inc.

**6.6 Quasi-Maxwellian View Based Free-Focusing Holographic Augmented Reality System Design (10:10-10:30)**

Rui Tan, Kyushu University

**Session 7: MicroLED and Ultra High Definition Display (Display System)**

**Monday, April 1/8:30-9:30/ Room 206**

**Chair: Ping Su (苏萍), Tsinghua university**

**7.1 Ultra-High PPI Virtual Reality Display Based on Field Sequential Color Technology (8:30-8:50)**

Yutong Li, TCL China Star Optoelectronics Technology Co., Ltd.

**7.2 Power Consumption Evaluation of Field Sequential Color LCD Systems with Mini-LED Backlight (8:50-9:10)**

Jinglun He, Hisense Visual Technology Co., Ltd.

**7.3 Eliminating Tic-Tac-Toe Image Retention in MLED Displays Through Temporal and Spatial Compensation Methods (9:10-9:30)**

Zheyuan Song, BOE Technology Group

**Session 8: Novel LEDs and Flicker in Lighting (Lighting)**

**Monday, April 1/8:30-10:10/ Room 203**

**Chair: QiuHong Hu (胡秋红), Zhejiang Smart Lighting Technology Co., Ltd,**

**8.1 Invited Paper: Lead-Free Tin Perovskite Light-Emitting Diodes (8:30-8:50)**

Ning Wang (王宁), Jilin University

**8.2 Invited Paper: Flicker in LED Lighting: Health Impacts and Mitigation Strategies (8:50-9:10)**

QiuHong Hu (胡秋红), Zhejiang Smart Lighting Technology Co., Ltd,

**8.3 High Power Solid State Lighting via Transparent Ceramics Protecting Quantum Dots Diffusion Plates (9:10-9:30)**

Aochen Du, Fuzhou University

**8.4 The Micro-Scale Adsorption of QDs on Select Surface by Click Chemistry (9:30-9:50)**

Shang Li, Southern University of Science and Technology

**8.5 Underwater Fluorescent Remediation and Optimization for CsPbBr<sub>3</sub>/PS Film by Evaporative CsBr (9:50-10:10)**

Junhu Cai, Fuzhou University

**Session 9: Structure Engineering for Oxide TFTs (Active-Matrix Device)**

**Monday, April 1/10:00-12:00/ Room 212**

**Chair: Penghui He (何鹏辉), Hunan University**

**9.1 Invited Paper: Multimodal Thin-Film Transistors for AMOLED and  $\mu$ LED Displays (10:00-10:20)**

Radu Sporea, University of Surrey

**9.2 Heterojunction-Boosted Mobility in InZnO Bilayer Thin-Film Transistor (10:20-10:40)**

Xiao Li, Peking University

**9.3 Electrical Analysis of IGZO Schottky-Barrier Thin-Film Transistors with Cu Schottky Contact (10:40-11:00)**

Yuzhi Li, Institute of Semiconductors, Guangdong Academy of Sciences

**9.4 Two-Layers of 3D Monolithically Stacked Vertical Channel IGZO TFTs (11:00-11:20)**

Chunyu Zhang, Institute of Microelectronics of the Chinese Academy of Sciences

**9.5 Compact Model for Thin-Film Transistors with Capacitance Frequency Dispersion (11:20-11:40)**

Pujian Lin, Peking University

**9.6 TFT Compact Models and Dynamic Simulation Approach for Display Technology (11:40-12:00)**

Ke Liu, Silvaco

**Session 10: Flexible Display (E-Paper and Flexible Displays)**

**Monday, April 1/11:00-12:20/ Room 210**

**Chair: Xidu Wang (王喜杜), Guangzhou OED Technologies, Inc.**

**10.1 Invited Paper: Exploration of Driving Schemes and Device Structures for Wearable Electroluminescence and Reflective Displays (11:00-11:20)**

Boru Yang (杨柏儒), Sun Yat-Sen University

**10.2 Research on Ow Brightness Motion Blur in Low Temperature Poly-Silicon Display Field (11:20-11:40)**

Guangyuan Sun, Yungu (Gu'an) Technology Co., Ltd

**10.3 Self-Aligned Top-Gate Amorphous ITZO TFTs with High-K AlO<sub>x</sub> Insulator with Source/Drain Regions Formed by Oxygen-Plasma (11:40-12:00)**

Wei Jiang, Hong Kong University of Science and Technology

**10.4 Design and Analysis of Ln-IZO TFTs for Electrophoretic Display Driving (12:00-12:20)**

Lei Zhou, South China University of Technology

**Session 11: Display Quality (Applied Vision)**

**Monday, April 1/11:00-12:20 / Room 211**

**Chair: Yunyang Shi (史韞杨), Nanjing Tech University**

**11.1 *Invited Paper*: Enhanced Text Display with Balanced Anti-Reflection and Anti-Glare Design (11:00-11:20)**

Song Yang (杨松), Shanghai Tianma Microelectronics

**11.2 *Optimizing TV Gamma Settings for Enhanced Viewer Satisfaction: A Comprehensive Study on Backlight Brightness and Color Gamut Influences (11:20-11:40)***

Steve Shaw Jong Liu, Roku Inc.

**11.3 *Evaluating HDR Video Quality with Local Gray Fidelity Analysis (11:40-12:00)***

Jongseo Lee, Google, LLC

**11.4 *Creating Custom Monitor Color Space in Pen Display (12:00-12:20)***

Zhiling Ma, HUION

**Session 12: Emerging LC Technology 1 (Liquid-Crystal Technology)**

**Monday, April 1/10:00-12:00/ Room 204**

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

**12.1 *Invited Paper*: Planar Liquid Crystal Photonic Devices and Their Advanced Applications in Light Field Regulation (10:00-10:20)**

Huapeng Ye (叶华朋), South China Normal University

**12.2 *Invited Paper*: High Efficient Polyfunctional Substrates for “Shock-Free” FLC, Nematic, Terahertz LC Devices, Photonics and Optoelectronics (10:20-10:40)**

Vladimir Bezborodov, Belarusian State Technological University

**12.3 *Invited Paper*: Passive Vibration Sensors Using Photoaligned Liquid Crystals (10:40-11:00)**

Abhishek Srivastava, The Hong Kong University of Science and Technology

**12.4 *High-resolution Fast Ferroelectric Liquid Crystal Displays on Gen 4.5(11:00-11:20)***

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

**12.5 *Liquid Crystal Based All Optical Diffraction Neural Networks (11:20-11:40)***

Quanzhou Long, Shenzhen University

**12.6 *A Liquid Crystal Polymer Matrix-Based Solution for Linear Polarization Color Conversion—Photoalignment Lithography Pixelated Color Filters (11:40-12:00)***

Jianxin Song, The Hong Kong University of Science and Technology

**Session 13: Imaging and AI for Driving (AI for Imaging and Display)**

**Monday, April 1/10:20-12:00/ Room 209**

**Chair: Yuyu Liu (刘玉宇), BOE Technology Group Co.,Ltd.**

**13.1 *Invited Paper*: Optical Imaging Based on Metasurfaces (10:20-10:40)**

Shuming Wang (王漱明), Nanjing University

**13.2 *Invited Paper*: Possible Disparity Mismatch when Viewing Images Rendered by Unity (10:40-11:00)**

Minchen Wei (魏敏晨), Hong Kong Polytechnic University

**13.3 *Invited Paper*: Real-Time Light Field Volume Rendering for Medical Imaging (11:00-11:20)**

Tianqi Huang (黄天琪), Tsinghua University

**13.4 A Lightweight Inference Network-based Algorithm for Low-Light Image Brightness Adjustment (11:20-11:40)**

Chenwei Huang, ICD Microelectronic Technology Co., Ltd

**13.5 Simulation Methods for Under-Display Sensing: Near-Field and Far-Field Light Propagation (11:40-12:00)**

Qimeng Wang, Sun Yat-Sen University

**Session 14: Waveguide in AR/VR/MR (VR/AR/MR)**

**Monday, April 1/10:40-12:20/ Room 202**

**Chair: Xinxing Xia (夏新星), Shanghai University**

**14.1 Invited Paper: Advanced Technologies for Large FOV Waveguide for AR/MR Glass (10:40-11:00)**

Satoshi Shiraga, Cellid

**14.2 Invited Paper: Photopolymer Based Volume Holographic Grating Waveguide: Opportunities and Challenges (11:00-11:20)**

Chengzhe Chai (柴诚哲), YONGJIANG Laboratory

**14.3 Research Progresses and Challenges for Polarization Volume Gratings Based Waveguide Display (11:20-11:40)**

Yuning Zhang, South East University

**14.4 High-Refractive Index Nanocomposites for Extended Reality (11:40-12:00)**

Vincent Jao, Pixelligent

**14.5 Eyebox-Extended Retinal Projection Augmented Reality Display With Gaze- Matching (12:00-12:20)**

Jiafu Lin, Sichuan University

**Session 15: MicroLED Epitaxy and Chips (EMQ-MicroLED)**

**Monday, April 1/9:40-11:00/ Room 206**

**Chair: Ping Su (苏萍), Tsinghua university**

**15.1 Invited Paper: Pixel-level Collimation Method Suitable for self-emissive Light Sources (9:40-10:00)**

Enguo Chen (陈恩果), Fuzhou University

**15.2 Invited Paper: Improvement in Quantum Efficiency of Green GaN-based Micro-LED by Trapezoidal Quantum Well (10:00-10:20)**

Ping Su (苏萍), Tsinghua university

**15.3 MOCVD Solution for Mini and Micro-LED based Advanced Display Applications (10:20-10:40)**

Jason Hu, AMEC

**15.4 Efficiency Improvement Mechanism Analysis of Sidewall Passivation GaN based Micro-LEDs by Atomic Layer Deposition (10:40-11:00)**

Mengyuan Zhanghu, Southern University of Science and Technology

**Session 16: Vehicle Display (Vehicle Display)**

**Monday, April 1/10:20-12:00/ Room 203**

**Chair: Xiongping Li (李雄平), Tianma Microelectronics Co., Ltd**

**16.1 Invited Paper: Research on Optical Measurement of Vehicle Display under Adjustable Environments (10:20-10:40)**

Xiong Yang (杨雄), Everfine Corporation

**16.2 Invited Paper: 3D HUD with Depth Controllable and Wide FOV CG Technologies (10:40-11:00)**

Haruhiko OKUMURA, Toshiba Corporation

**16.3 The Challenge and Development in AR-HUD (11:00-11:20)**

Shanshan Zhang, Tianma Microelectronics Co., Ltd

**16.4 DMS Safety Fluorinated Liquid Crystal Materials Application in Vehicle Display (11:20-11:40)**

Xiaolian Li, Dalian University of Technology

**16.5 High-performance Holographic Waveguide Based on Polarization Volume Grating for Head-up Displays (11:40-12:00)**

Chuang Wang, Southeast university

**Session 17: Channel Engineering for Oxide TFTs (Active-Matrix Device)**

**Tuesday, April 2/13:30-14:50/ Room 212**

**Chair: Mengmeng Li (李蒙蒙), Institute of Microelectronics, Chinese Academy of Sciences**

**17.1 Invited Paper: High-Performance Solution-Processed Tb-Incorporated Indium Oxide Thin-Film Transistors (13:30-13:50)**

Penghui He (何鹏辉), Hunan University

**17.2 Developing High-Performance P-Channel TFTs: from Emerging Semiconductors to Amorphous (13:50-14:10)**

Ao Liu, University of Electronic Science and Technology of China

**17.3 Persistent Photoconductivity Suppression in Amorphous Oxide Thin-Film Transistors with Double-Stacked Channel Layers (14:10-14:30)**

Liangdong Li, Shanghai Jiaotong University

**17.4 Characterization of A-In-Ga-Zn-O Field Effect Transistors with ALD-Grown IGZO Channel Layer (14:30-14:50)**

Chen Gu, Institute of Microelectronics of the Chinese Academy of Sciences

**Session 18: Flexible Display Design and Manufacturing (E-Paper and Flexible Displays)**

**Tuesday, April 2/13:30-14:50/ Room 210**

**Chair: Biao Tang (唐彪), South China Normal University**

**18.1 Composite UTG Cover Window Selectively Reinforced with Glass-Cloth for Improvement of Both Pen-Drop Resistance and Foldability (13:30-13:50)**

Byeong-Soo Bae, KAIST

**18.2 The Influence of Bending FFC Transmission Line on High-Speed Signal Channels (13:50-14:10)**

Yuqi Liu, TCL China Star Optoelectronics Technology Co., Ltd.

**18.3 Research on Improving the Back Impact Resistance of Flexible OLED Modules (14:10-14:30)**

Zikai Feng, Wuhan China Star Optoelectronics Semiconductor Display Technology Co., Ltd.

**18.4 Mechanical Stress-Induced Recoverable and Unrecoverable Deteriorations of Flexible a InGaZnO Thin-Film Transistor (14:30-14:50)**

Jilin Li, Peking University

**Session 19: Display Materials and Parts (Display Manufacturing)**

**Tuesday, April 2/13:30-15:10/ Room 211**

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

**19.1 *Invited Paper*: Development of INVAR alloy foil used in FMM (13:30-13:50)**

Junyi Luo (罗俊义), Advanced Technology & Materials Co., Ltd

**19.2 *Invited Paper*: Transparent Electrodes Based on Wide-Gap Oxide Multilayer Structures (13:50-14:10)**

Victor Belyaev, State University of Education

**19.3 *Invited Paper*: Nanocomposites and Alloys Based on Porous Silicon Filled with Metals and Semiconductors (14:10-14:30)**

Vitaly Bondarenko, Belarusian State University of Informatics and Radioelectronics

**19.4 *Invited Paper*: Progress in localization of OLED evaporation equipment (14:30-14:50)**

Jingbo Cao (曹景博), Hefei Sineva Intelligent Machine Co.,Ltd.

**19.5 Development and Evaluation of G6H Collimating & Recycling Linear Source for AMOLED Mass Production (14:50-15:10)**

Sungmoon Kim, Depolab

**Session 20: Emerging LC Technology 2 (Liquid-Crystal Technology)**

**Tuesday, April 2/13:30-15:10/ Room 204**

**Chair: Tianzi Shen (沈田子), Beihang University**

**20.1 *Invited Paper*: Electrically Tunable Liquid Crystal Polymer Vortex Beam Generator Based on Two-Photon Polymerization Direct Laser Writing (13:30-13:50)**

Wanlong Zhang (张万隆), Shenzhen University

**20.2 *Invited Paper*: Laser Processing of Liquid Crystal Microdroplet in 3D (13:50-14:10)**

Jinkun Guo (郭金坤), Xidian University

**20.3 *Invited Paper*: Transparent Multicolor Electrochromic Displays with Ingenious Hues Adjustment by Integrating Cholesteric Liquid Crystal with Viologen Gel (14:10-14:30)**

Shiqing Zhao (赵世晴), Suzhou University of Science and Technology

**20.4 A Novel Liquid Crystal Planar Display Structure Based on Fringe Field Effect (14:30-14:50)**

Anran Li, The Hong Kong University of Science and Technology

**20.5 Broadband Achromatic Templated-Cholesteric Liquid Crystals Grating (14:50-15:10)**

Mingyuan Tang, Shanghai Jiao Tong University

**Session 21: New Materials for Blue OLEDs (OLEDs)**

**Tuesday, April 2/13:30-15:10/ Room 209**

**Chair: Junyou Pan (潘君友), Guangzhou Brilliant-Optoelectronics Co., Ltd.**

**21.1 *Invited Paper*: Hot Excitons and High Efficiency Blue Fluorescence OLEDs (13:30-13:50)**

Dongge Ma (马东阁), South China University of Technology

**21.2 *Invited Paper*: Printable Hot Exciton Blue Light-emitting Materials for OLEDs (13:50-14:10)**

Lei Ying (应磊), South China University of Technology

**21.3 Towards Efficient and Stable Blue TADF Materials and Devices (14:10-14:30)**

Linsong Cui, University of Science and Technology of China

**21.4 Quantifying Localized Trap Evolution in Blue TADF OLED (14:30-14:50)**

Sandra Jenatsch, Fluxim AG

**21.5 Longevity Gene Responsible for Robust Blue Organic Materials Employing Thermally Activated Delayed Fluorescence (14:50-15:10)**

Juan Qiao, Tsinghua University

**Session 22: AR/VR/MR System (VR/AR/MR)**

**Tuesday, April 2/13:30-14:50/ Room 202**

**Chair: Tao Jia (贾韬), Yongjiang Laboratory**

**22.1 Invited Paper: Gaze Dependent Optical Artifacts and Compensation for Virtual Reality Headsets (13:30-13:50)**

Tao Jia (贾韬), Yongjiang Laboratory

**22.2 Invited Paper: Field Sequential Color Micro-LCD Enabling High-resolution Light Field Displays (13:50-14:10)**

Zong Qin (秦宗), Sun Yat-Sen University

**22.3 Deep Reinforcement Learning for Improved VR Visual Experience (14:10-14:30)**

Qi Wu, Communication University of China

**22.4 Virtual Reality Technology in The Field of Mental Decompression Research (14:30-14:50)**

Zhuo Yang, North China University of Technology

**Session 23: MicroLED Processing Technology (EMQ-MicroLED)**

**Tuesday, April 2/13:30-15:30/ Room 206**

**Chair: Jie Sun (孙捷), Fuzhou University**

**23.1 Invited Paper: High-Resolution Additive Manufacturing for Next-Generation Micro-LED and OLED Displays (13:30-13:50)**

Filip Granek, XTPL S.A.

**23.2 Invited Paper: Roll-to-Roll Manufacturing of GaN-Based LED Sheets for MicroLED Application (13:50-14:10)**

Vladimir Matias, iBeam Materials, Inc.

**23.3 Invited Paper: Fabrication of Super Uniform Nickel Bumps Using Electroless Plating on Micro-LEDs' TFT Driver Substrates (14:10-14:30)**

Jie Sun (孙捷), Fuzhou University

**23.4 Application of Laser-Assisted Bonding in Micro-LED Display Technology (14:30-14:50)**

Yongxin Cui, Chengdu Vistar Optoelectronics Co., Ltd.

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

Stephen Li, Coherent

**23.6 Application of Non-Conductive Paste (NCP)-Assisted Bonding for Interconnection between Micro-LED and Backplane (15:10-15:30)**

Xiaobiao Dong, Chengdu Vistar Optoelectronics Co., Ltd.

**Session 24: QD Light Emitting-Diodes Mechanism (EMQ-Quantum Dots)**

**Tuesday, April 2/13:30-15:10/ Room 203**

**Chair: Huaibin Shen (申怀彬), Henan University**

**24.1 Invited Paper: Observation of Trap Formation in Degraded Quantum-Dot Light-Emitting Diodes (13:30-13:50)**

Quan Niu (牛泉), South China University of Technology

**24.2 Invited Paper: Degradation Mechanisms of Quantum-Dot Light-Emitting Diodes (13:50-14:10)**



Yizheng Jin (金一政), Zhejiang University

**24.3 Reversible Stability Issues in Quantum-Dot Light Emitting Diodes: Fatigue Effects and Warming-up Effects (14:10-14:30)**

Menglin Li, Beijing Institute of Technology

**24.4 Exploring the Aging Phenomenon in Quantum Dot Light-Emitting Diode (QLED) Devices from the Perspective of Individual Quantum Dot Aging (14:30-14:50)**

Mi Gu, Southern University of Science and Technology

**24.5 Exploring Luminescent Mechanisms in Non-Carrier-Injection QLEDs via Spontaneous Spreading Method (14:50-15:10)**

Zebang Zhao, Beijing Jiaotong University

**Session 25: New Material TFTs (Active-Matrix Device)**

**Tuesday, April 2/15:00-16:00/ Room 212**

**Chair: Lei Liao (廖蕾), Hunan University**

**25.1 *Invited Paper*: CuI Based Transparent P-Type Electronics (15:00-15:20)**

Myung-Gil Kim, Sungkyunkwan University

**25.2 *Invited Paper*: Effect of Self-Alignment on BGTC IGZO AMeTFTs (15:20-15:40)**

Andre Zeumault, Amorphyx Inc.

**25.3 High-Performance Hybrid CMOS Inverters Based on Polymer Monolayer TFTs and Indium-Gallium-Zinc-Oxide TFTs (15:40-16:00)**

Mengmeng Li, Institute of Microelectronics, Chinese Academy of Sciences

**Session 26: Emerging Wearable Sensors for Intelligent Interaction (E-Paper and Flexible Displays)**

**Tuesday, April 2/15:00-16:40/ Room 210**

**Chair: Xidu Wang (王喜杜), Guangzhou OED Technologies, Inc.**

**26.1 *Invited Paper*: Triboelectric Potential Modulated FET and Artificial Intelligent Sensation (15:00-15:20)**

Qijun Sun (孙其君), Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences

**26.2 Self-Powered Sensing System Based on Triboelectric Nanogenerator and Supercapacitor (15:20-15:40)**

Wen He, Anhui University

**26.3 Energy Autonomous Paper Modules and Functional Circuits (15:40-16:00)**

Nuo Xu, Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences

**26.4 Scalable Spinning, Winding, and Knitting Graphene Textile TENG for Energy Harvesting and Human Motion Recognition (16:00-16:20)**

Yao Xiong, University of Chinese Academy of Sciences

**26.5 A Wearable Glucose Sensor Integrated with Hollow Microneedles and Reverse Iontophoresis Extraction (16:20-16:40)**

Lulu Liu, Shanghai University

**Session 27: Display Manufacturing Methods (Display Manufacturing)**

**Tuesday, April 2/15:20-17:00/ Room 211**

**Chair: Chengyuan Dong (董承远), Shanghai Jiaotong University**

**27.1 Invited Paper: Nanostructuring of Al and Si Thin Layers for ITO-Free All-Silicon Optoelectronics Devices (15:20-15:40)**

Aliaksandr Smirnov, Belarusian State University of Informatics and Radioelectronics

**27.2 Invited Paper: Reproducible Characterization of Microdisplays Using Imaging Luminance Measurement Devices (ILMDs) (15:40-16:00)**

Ingo Rotscholl, TechnoTeam Bildverarbeitung GmbH

**27.3 Invited Paper: The Opportunities and Challenges of Advanced LED Display Technology In the "Post-Moore Era" (16:00-16:20)**

Xinzhong Xie (颜信忠), Shanxi High-tech Huaye Electronics Group Co., Ltd.

**27.4 Progress in High-Performance AMOLED Display with ViP Technology (16:20-16:40)**

Yiming Xiao, Hefei Visionox Technology Co., Ltd.

**27.5 Application of Glass Wet-Etching Technique in Foldable Display Manufacturing (16:40-17:00)**

Cheng-Chung Chiang, ShineX Advanced Material

**Session 28: LC Photonic Device (Liquid-Crystal Technology)**

**Tuesday, April 2/15:20-16:40/ Room 204**

**Chair: Wanlong Zhang (张万隆), Shenzhen University**

**28.1 Invited Paper: Large-Aperture, High-Quality Liquid Crystal Planar Optics Enabled by Ultrafast Pulse Polarization Direct Writing (15:20-15:40)**

Wenbin Huang (黄文彬), Soochow University

**28.2 Invited Paper: Self-Assembled Liquid Crystal Architectures for Multifunctional Optics (15:40-16:00)**

Ling-Ling Ma (马玲玲), Nanjing University

**28.3 Invited Paper: Templated Liquid Crystal Photonic Devices (16:00-16:20)**

Jiangang Lu (陆建钢), Shanghai Jiao Tong University

**28.4 Study of the Diffraction Properties of Gradient Period Polarization Volume Gratings (16:20-16:40)**

Canran Yang, Southeast University

**Session 29: New Materials and Machine Learning for OLEDs (OLEDs)**

**Tuesday, April 2/15:20-17:00/ Room 209**

**Chair: Wei Quan (全威), Hefei BOE Joint Technology Co., Ltd.**

**29.1 Invited Paper: Emitter-Host-Interaction in Green Phosphorescent OLEDs (15:20-15:40)**

Haitao Wang, Merck

**29.2 Invited Paper: Full-Color Narrowband Emitters for Organic Light-Emitting Diodes that Satisfying BT.2020 (15:40-16:00)**

Dongdong Zhang (张东东), Tsinghua University

**29.3 Invited Paper: Circularly Polarized Organic Single-crystal Light-emitting Diode based on Photonic Spin-orbital Interactions (16:00-16:20)**

Hongbing Fu (付红兵), Capital Normal University

**29.4 Dopant Distribution Optimization towards High Performance Phosphor-Assisted Fluorescence Devices (16:20-16:40)**

Minghan Cai, Yungu (Gu'an) Technology Co., Ltd.

**29.5 Exploring the Influence of Molecular Structures on Transition Dipole Orientation in TADF Emitters: A Quantitative Analysis through Machine Learning (16:40-17:00)**

Yiming Shi, Beijing Jiaotong University

**Session 30: Liquid Crystal Elements for AR/VR/MR (VR/AR/MR)**

**Tuesday, April 2/15:00-16:40/ Room 202**

**Chair: Tianzi Shen (沈田子), Beihang University**

**30.1 *Invited Paper*: Chiral Liquid Crystal Layers with Patterned Photoalignment for Thin Diffractive Optical Components (15:00-15:20)**

Kristiaan Neyts, HKUST / ECE Department

**30.2 Varifocal Optical See-Through AR Display with Fast-Response Pancharatnam-Berry Phase LC Lens (15:20-15:40)**

Shuxin Liu, Shanghai Jiao Tong University

**30.3 Bioplastic Tunable Liquid Crystal Lenses for Dynamic Focus in VR and AR (15:40-16:00)**

Elena Xie, FlexEnable Technology Ltd.

**30.4 Liquid Crystal Technology for Next Generation Advanced Augmented Reality (AR) Devices (16:00-16:20)**

Norihiko Tanaka, Merck Japan

**30.5 Compact Binocular Holographic Near-Eye 3D Display System Based on Polarized Liquid Crystal Grating (16:20-16:40)**

Fanchuan Lin, Beihang University

**Session 31: MicroLED Device (EMQ-MicroLED)**

**Tuesday, April 2/15:40-17:00/ Room 206**

**Chair: Yue Lin (林岳), Xiamen University**

**31.1 *Invited Paper*: Advances in Micro-LED Technology for Single Pixel Imaging and Optical Wireless Communication (15:40-16:00)**

Martin Dawson, University of Strathclyde

**31.2 *Invited Paper*: Exploring Future Display: Innovative Applications of Metal-Oxide, LTPS, and LTPO Backplane for Micro-LED Displays (16:00-16:20)**

Yong-Sang Kim, Sungkyunkwan University

**31.3 Progressive Emission Method Using Pulse Width Modulation for Micro-LED Display (16:20-16:40)**

Shangjun Xu, Chengdu Vistar Optoelectronics Co., Ltd.

**31.4 Enhancing Micro-LED Pixel Circuit Performance through Threshold Voltage Compensation Utilizing LTPO Technology (16:40-17:00)**

Yan Li, Sungkyunkwan University

**Session 32: High Performance QD Light-Emitting Diodes (EMQ-Quantum Dots)**

**Tuesday, April 2/15:20-17:00/ Room 203**

**Chair: Yizheng Jin (金一政), Zhejiang University**

**32.1 *Invited Paper*: High Stability QD-LED at High Brightness (15:20-15:40)**

Huaibin Shen (申怀彬), Henan University

**32.2 *Invited Paper*: Cross-Linkable Hole-Transporting Materials for High-Efficiency Inkjet-Printed QLEDs (15:40-16:00)**

Wenming Su (苏文明), Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences

**32.3 Transition Dipole Orientation Enabled 35.6% EQE from QD-LEDs (16:00-16:20)**

Fengjia Fan, University of Science and Technology of China

**32.4 Realization of Bright and Flexible InP Quantum Dot Light-Emitting Diodes by Proper Substrate Engineering (16:20-16:40)**

Taesoo Lee, Seoul National University

**32.5 High-Performance Inverted InP-based Quantum Dot Light Emitting Diodes with Exciplex emitter as Exciton Harvesters (16:40-17:00)**

Truong Thi Thuy, KyungHee University

**Session 33: TFT Sensors (Active-Matrix Device)**

Tuesday, April 2/16:10-17:50/ Room 212

Chair: Ao Liu, University of Electronic Science and Technology of China

**33.1 *Invited Paper*: Flexible Optical Pressure Sensor Based on Organic Imager (16:10-16:30)**

Tomoyuki Yokota, University of Tokyo

**33.2 *Invited Paper*: Oxide Thin-Film Transistors as Detectors and Circuit Blocks on Flexible Ionizing Radiation Detection Platforms (16:30-16:50)**

Pedro Barquinha, NOVA School of Science and Technology (FCT-NOVA)

**33.3 *Invited Paper*: Neuromorphic Vision Sensors Based on Low-Toxic Quantum Dots Sensitized IGZO Phototransistor Arrays (16:50-17:10)**

Hang Zhou (周航), Peking University Shenzhen Graduate School

**33.4 In-Display Temperature Sensor Based on Dual-Gate Thin-Film Transistors (17:10-17:30)**

Qiyi Su, Sun Yat-Sen University

**33.5 High Responsivity and Low Dark Current Phototransistor Based on Perovskite/InZnO Heterostructure (17:30-17:50)**

Bosi Lin, Peking University Shenzhen Graduate School

**Session 34: Novel Display System Application (Display System)**

Tuesday, April 2/16:50-18:30/ Room 210

Chair: Jia Jia (贾甲), Pengcheng Laboratory

**34.1 *Invited Paper*: High Performance Smart Windows for Large-Scale Manufacturing (16:50-17:10)**

Anthony Slack, eLstar Dynamics

**34.2 *Invited Paper*: Using the Varied-Line-Spacing and the Flexible Curved H-PDLC Gratings with Focal Power as Waveguide Couplers in Display (17:10-17:30)**

Jihong Zheng (郑继红), University of Shanghai for Science and Technology

**34.3 *Invited Paper*: Application and development of the LED display control system (17:30-17:50)**

Guojing He (何国经), Xi'an Novastar Tech Co., Ltd.

**34.4 Why Novel Display Technology Start-ups Are Hard to Survive (17:50-18:10)**

Peter Ren, New Vision Display

**34.5 Research on LCD Partition Backlight Visual Stimulator Based on SSVEP (18:10-18:30)**

Weicheng Tang, Southeast university

**Session 35: Fabrication of TFT Backplanes (Display Manufacturing)**

**Tuesday, April 2/17:10-18:50/ Room 211**

**Chair: Yiming Xiao (肖一鸣), Hefei Visionox Technology Co., Ltd.**

**35.1 Invited Paper: High-Quality High-k ZrO<sub>2</sub>-Based Dielectric Film with Low Leakage Current (17:10-17:30)**

Xianzhe Liu (刘贤哲), Wuyi University

**35.2 Invited Paper: High Entropy Metal Oxides as Dielectric Layers Prepared by Spin-Coating and Application in Thin Film Transistors (17:30-17:50)**

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

**35.3 A Simple Fabrication Process for Self-Aligned Top-Gate IGZO TFT with Controllable Source/Drain Electrode Series Resistance (17:50-18:10)**

Cong Peng, Shanghai University

**35.4 A New Metal Oxide TFTs Integrated Gate Driver Employing Discharged-Sweep-Signal-Generated Module for Micro-LED Analog PWM Pixel Circuit (18:10-18:30)**

Lirong Zhang, Shunde Polytechnic

**35.5 High-Mobility and High-Negative Bias Illumination Stress Stability Based on ITZO/IGZO Bilayer Thin Film Transistors (18:30-18:50)**

Ting Li, Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences

**Session 36: LCD Image Quality (Liquid-Crystal Technology)**

**Tuesday, April 2/16:50-18:30/ Room 204**

**Chair: Wenbin Huang (黄文彬), Soochow University**

**36.1 Low-frequency Flicker Mechanism and Improvement Solutions of a Liquid Crystal Display (16:50-17:10)**

LiangLong Huang, Wuhan China Star Optoelectronics Technology Co., Ltd.

**36.2 Analyzing and Enhancing Display Quality in FRC Algorithm (17:10-17:30)**

Yanyan Wang, Suzhou ESWIN Computing Technology Co., Ltd.,

**36.3 Research on Partitioned Color Calibration Principle and Frame Rate Reduction Technology Based on Liquid Crystal Displays (17:30-17:50)**

Xiangzhi Xiao, Fuzhou University

**36.4 Analysis of Halo Improvement Factor of Mini-LED Backlit Display Based on Visual Sensitivity (17:50-18:10)**

Nailong He, Southeast University

**36.5 Research on the Structure of Low Color Crosstalk Grillless Optical Cavity Based on Partition Toning Technique (18:10-18:30)**

Wenlin Wu, Fuzhou University

**Session 37: Device Architectures of OLEDs (OLEDs)**

**Tuesday, April 2/17:10-18:50/ Room 209**

**Chair: Lei Ying (应磊), South China University of Technology**

**37.1 Invited Paper: Effect of Organic Charge Generation Layer on Performance of White OLED Devices (17:10-17:30)**

Wei Quan (全威), Hefei BOE Joint Technology Co., Ltd.

**37.2 Invited Paper: Intermolecular Charge Transfer for High-Performance Organic Light-Emitting Diodes (17:30-17:50)**

Zhen Zhang (张震), Shanghai University

**37.3 Invited Paper: Novel Stacked OLED and Pixel Design for Enhanced Lifetimes and Improved PPI (17:50-18:10)**

Can Yuan (袁燊), Hefei BOE Joint Technology Co., Ltd.

**37.4 N-Doped High-Tg Phenanthroline Derivatives as Charge-Generation Layer for Stable Tandem OLEDs (18:10-18:30)**

Xu-Hui Zhu, South China University of Technology

**37.5 Device Engineering for High-Performance White OLEDs/Quantum-Well LEDs (18:30-18:50)**

Baiquan Liu, Sun Yat-sen University

**Session 38: AR/VR/MR Measurement and Standards (VR/AR/MR)**

**Tuesday, April 2/16:50-18:50/ Room 202**

**Chair: Li Song (宋立), Everfine Corporation**

**38.1 Invited Paper: Optimizing Eyewear Displays: Optical Measurement Aligning with Visual Ergonomics (16:50-17:10)**

Jianping Wang (王建平), Hangzhou SanTest Technology Co., Ltd.

**38.2 Invited Paper: Characteristics and Classifications of Near-Eye Display of Extended Reality (XR) Products (17:10-17:30)**

Lei Zhao (赵蕾), Yongjiang Laboratory

**38.3 Invited Paper: Evaluating Optical Performance and Image Quality in Augmented Reality Eyewear: Standardization, Challenges, and Measurement Methods (17:30-17:50)**

Xi Mou (牟希), Hangzhou SanTest Technology Co., Ltd.

**38.4 Redefine Display User Metrics and Measurements in VR/AR with a User-Experience-Driven Approach (17:50-18:10)**

Jerry Jia, Guardian Glow Limited

**38.5 Characterization and Metrology of AR Waveguides Using Littrow Diffractometry (18:10-18:30)**

Thomas Kerst, OptoFidelity Oy

**38.6 Correction of Distortions in Near-Eye Displays (18:30-18:50)**

Ming Wen, Wuhan Jingce Electronic Technology Corp

**Session 39: MicroLED Displays (EMQ-MicroLED)**

**Tuesday, April 2/17:10-18:50/ Room 206**

**Chair: Xian Huang (黄显), Tianjin University**

**39.1 Invited Paper: Innovating for a Better Tomorrow with Sustainable Micro-Pixel Fabrication (17:10-17:30)**

Reza Chaji, VueReal Inc.

**39.2 Invited Paper: Direct View Mirco-LED Displays: Readiness Towards Commercialization (17:30-17:50)**

Nag Patibandla, Applied Materials

**39.3 *Invited Paper*: RGB Nanowire Based Micro-LED Chips for Efficient and High Performance Ultra Fine Pitch Direct View Displays (17:50-18:10)**

Ivan-Christophe Robin, ALEDIA

**39.4 *Invited Paper*: High-Definition Vertical Stack R/G/B Micro-LED Pixel Architectures Fabricated by Advanced Epitaxy (18:10-18:30)**

Young Joon Hong, Sejong University

**39.5 *Invited Paper*: NanoLEDs for Augmented Reality Applications (18:30-18:50)**

Victor Hsia, NS Nanotech, Inc.

**Session 40: QD Light Emitting-Diodes Display (EMQ-Quantum Dots)**

**Tuesday, April 2/17:10-18:10/ Room 203**

**Chair: Huaiting Shi (施槐庭), BOE Technology Group Co.,Ltd.**

**40.1 *Invited Paper*: Performance Enhancement of Blue QLEDs via a P-Type Doped Hole Transport Layer (17:10-17:30)**

Qing Li (李青), Southeast University

**40.2 *Invited Paper*: Enhanced Performance of Quantum Dot Light-Emitting Diodes by Core/Shell Interface Modification (17:30-17:50)**

JEONGHUN Kwak, Seoul National University

**40.3 *Invited Paper*: Green and Bio-Renewable Solvent Selection for Solution-Processed Inverted QDLED (17:50-18:10)**

Jang-Kun Song, Sungkyunkwan University

**Session 41: TFT Circuits and Systems (Active-Matrix Device)**

**Wednesday, April 3/8:30-10:10/ Room 212**

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

**41.1 *Invited Paper*: Internal Compensation Type OLED Display Using a-IGZO TFTs (8:30-8:50)**

Pan Xu (徐攀), Hefei BOE Joint Technology Co. Ltd.

**41.2 *Invited Paper*: Active-matrix Digital Microfluidic System for High-Throughput Droplet Sample Processing (8:50-9:10)**

Jun Yu (于俊), Shandong University

**41.3 *Invited Paper*: Thin-Film-Transistor-Based Active-Matrix Neurostimulation Systems (9:10-9:30)**

Chen Jiang (蒋琛), Tsinghua University

**41.4 Exploration of Critical Performance Metrics in AMOLED Pixel Circuits Using an all AOS 2T1C as a Foundation (9:30-9:50)**

Andrew Russell, Amorphyx

**41.5 A High-Accuracy Display Compensation Method for Full-Display with Camera (9:50-10:10)**

Chao Zeng, Chengdu BOE Optoelectronics Technology Co., Ltd.

**Session 42: New Display Interaction Technology (Display System)**

**Wednesday, April 3/8:30-10:10/ Room 210**

**Chair: Zhidong Yuan (袁志东), Hefei BOE Joint Technology Co., Ltd.**

**42.1 *Invited Paper*: Fast and Accurate Eye Positioning in Eye Tracking-Based 3D Display (8:30-8:50)**

Jia Jia (贾甲), Pengcheng Laboratory

**42.2 Spatial Reality Display System Based on Eye Tracking and Pixel Interleaving Technology (8:50-9:10)**

Xitong Ma, BOE Technology Group Co., Ltd.

**42.3 Intelligent Color Calibration Scheme for LCD Displays a Cost-Efficient and Industry-Applicable Method (9:10-9:30)**

Yuefeng Su, Lenovo (Beijing) Co. LTD.; TCL CSOT Co. LTD.

**42.4 Binocular Camera Eye Tracking Algorithm for Naked Eye 3D Display (9:30-9:50)**

Tingting Wang, BOE Technology Group Co., Ltd.

**42.5 Research on Lip Recognition Algorithm in Display Interaction (9:50-10:10)**

Chao Liu, Southeast University

**Session 43: Printable Display Technology (Printed Display)**

**Wednesday, April 3/8:30-9:50/ Room 211**

**Chair: Meng Xu (徐萌), Shanghai University**

**43.1 *Invited Paper*: The Latest Update of Flexible Printed OLED TV Display Technology (8:30-8:50)**

Juenggil(James) Lee, Guangdong Juhua Printed Display Technology

**43.2 *Invited Paper*: Recent Developments of High PPI Printing OLED Display Technology (8:50-9:10)**

Huifeng Wang (王辉锋), Hefei BOE Joint Technology Co., Ltd.

**43.3 *Invited Paper*: The Development of Printable Materials for Flexible Electronics (9:10-9:30)**

Wen-Yong Lai (赖文勇), Nanjing University of Posts & Telecommunications

**43.4 *Advanced Laser Technologies for Display Applications (9:30-9:50)***

Weiping Wu, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences

**Session 44: LC Materials & Alignment Technology (Liquid-Crystal Technology)**

**Wednesday, April 3/8:30-10:10/ Room 204**

**Chair: Tong Li (李同), Suzhou Institute of Nano-Tech and Nano-Bionics (SINANO), Chinese Academy of Sciences**

**44.1 *Invited Paper*: Absorption Problem of Multilayer Optical Structures Based on High Anchoring Azo-dye Photoalignment of Polymerizable Liquid Crystals (8:30-8:50)**

Alexander Muravsky, MTLCD

**44.2 *Invited Paper*: Liquid Crystal Photoalignment by Azodye Nanolayers: New Liquid Crystal Photonics Devices (8:50-9:10)**

Vladimir Chigrinov, The Hong Kong University of Science and Technology

**44.3 *Invited Paper*: Ferroelectric Nematics as New Switchable Liquid Crystal Materials with High-Dielectricity and Low Electric-Field Driving (9:10-9:30)**

AYA SATOSHI, South China University of Technology

**44.4 *Multi-domain Vertically Aligned LCD by Azo-Dye Photo-alignment Method (9:30-9:50)***

Shu-Tuen Tang, The Hong Kong University of Science and Technology

**44.5 *Optimize the One Drop Filling (ODF) Operation Process for Ferroelectric Liquid Crystal (9:50-10:10)***

Yipeng Huo, The Hong Kong University of Science and Technology



**Session 45: Device Physics of OLEDs (OLEDs)**

**Wednesday, April 3/8:30-10:30/ Room 209**

**Chair: Ying Shen (申莹), Hefei Visionox Technology Co., Ltd.**

**45.1 *Invited Paper*: High-Performance Narrowband Emitters for Stable Organic Light-emitting Diodes with Reduced Efficiency Roll-Off (8:30-8:50)**

Shijian Su (苏仕健), South China University of Technology

**45.2 *Invited Paper*: Surface Plasmonic Coupled PHOLED Device Performance: Improving Efficiency, Stability and Angle Dependence (8:50-9:10)**

Zhaoqun Zhou, Universal Display Corporation

**45.3 High Performance and High Color Purity Green OLEDs with Narrow Spectrum Emission (9:10-9:30)**

Guomeng Li, Visionox Technology Inc.

**45.4 Comprehensive Exploration of Exciton Quenching in OLEDs through Combined Characterization and Computational Simulation (9:30-9:50)**

Sandra Jenatsch, Fluxim AG

**45.5 Boosting the Performance of Phosphor-assisted Fluorescence Devices by Fine-tuning the Peripheral Groups of Multi-resonance Fluorescent Dopants (9:50-10:10)**

Minghan Cai, Yungu (Gu'an) Technology Co., Ltd.

**45.6 Investigation of Triplet-induced Annihilation in Phosphorescent and Thermally Activated Delayed Fluorescent Organic Light-emitting Diodes (10:10-10:30)**

Jixin Jiang, Beijing Jiaotong University

**Session 46: Display Measurement (Display Measurement)**

**Wednesday, April 3/8:30-10:10/ Room 202**

**Chair: Pengle Dang (党鹏乐), Kunshan Govisionox Optoelectronics Co., Ltd.**

**46.1 *Invited Paper*: Pixel Level Optical Characterization of Modern Electronic Displays Using a Hyper Spectral Imaging Technique (8:30-8:50)**

William (Il-Ho) Kim, LMS Corp

**46.2 *Invited Paper*: The Optimized Method for Sparkle Contrast Measurement of Anti-Glare Covered Vehicle Display (8:50-9:10)**

Li Song (宋立), Everfine Corporation

**46.3 Automatic Tuning Methodology of Hysteresis Compensation for AMOLED Display Application (9:10-9:30)**

Hsueh-Yen Yang, GalaxyCore Microelectronics

**46.4 A Novel Method for Evaluating Short-Range Uniformity of Micro-LED Display (9:30-9:50)**

Yingteng Zhai, Tianma Advanced Display Technology Institute (Xiamen) Co., Ltd.

**46.5 Photon-to-Photon Latency Test Solution in Video See Through of Mixed Reality Headset (9:50-10:10)**

Longyun Xiao, Gravity XR (Ningbo) Electronic Technology Co., Ltd.

**Session 47: MicroLED Full Color Technology (EMQ-MicroLED)**

**Wednesday, April 3/8:30-10:10/ Room 206**

**Chair: Quanlin Liu (刘泉林), University of Science and Technology Beijing**

**47.1 *Invited Paper*: Small-sized and Efficient Red-emitting Phosphor for Mini-LED Display (8:30-8:50)**

Quanlin Liu (刘泉林), University of Science and Technology Beijing

**47.2 Invited Paper: Design of Band-pass Films to Improve Color Saturation for Micro LEDs Display (8:50-9:10)**

Zhi Ting Ye (叶志庭), National Chung Cheng University

**47.3 Invited Paper: Electrohydrodynamic Inkjet Specialized Perovskite non-polar Ink for Printing Color Conversion Layer of Micro-LED Display (9:10-9:30)**

Yue Lin (林岳), Xiamen University

**47.4 High-Resolution Patterning of Fluorescent Films by Femtosecond Laser-Induced Forward Transfer (9:30-9:50)**

Yue-Feng Liu, Jilin University

**47.5 Ultrafine-pitch AlGaIn Ultraviolet-C MicroLED Displays for Quantum Dots Color Conversion (9:50-10:10)**

Feng Feng, The Hong Kong University of Science and Technology

**Session 48: Quantum Dot Color Conversion (EMQ-Quantum Dots)**

**Wednesday, April 3/8:30-9:30/ Room 203**

**Chair: Chengzhao Luo (罗成招), Soochow University**

**48.1 Invited Paper: Enabling MicroLED Application with Quantum Dot Color Conversion (8:30-8:50)**

ZhongSheng Luo (罗忠升), Nanosys

**48.2 Invited Paper: Upconversion Luminescence from Sol-Gel-Derived Erbium- and Ytterbium-Doped BaTiO<sub>3</sub> Film Structures (8:50-9:10)**

Nikolai V. Gaponenko, Belarusian State University of Informatics and Radioelectronics

**48.3 Modeling the Impact of the Illumination Geometry on the Light Conversion Efficiency in Quantum Dot Down-Conversion Films (9:10-9:30)**

Moon K. Heo, Fluxim AG

**Session 49: 3D Display (Display Application)**

**Wednesday, April 3/10:20-12:00/ Room 212**

**Chair: Xi Mou (牟希), Hangzhou SanTest Technology Co., Ltd.**

**49.1 Invited Paper: "Optical Clone" Holographic Three-dimensional Video-rate Display (10:20-10:40)**

Hongyue Gao (高洪跃), Shanghai University

**49.2 Resolution-enhanced Integral Imaging 3D Display by Using Lateral Aberration Optimization (10:40-11:00)**

Xuerui Wen, Beihang University

**49.3 Large Glasses-free 3D Display Based on LED Screen and Parallax Barrier (11:00-11:20)**

Changxiong Zheng, Southern University of Science and Technology

**49.4 Optimized Sampling Rendering for Real-time and High-resolution Light Field 3D Display (11:20-11:40)**

Xing-Yu Lin, Beihang University

**49.5 3D Applications: OLED Smartphone Glasses-Free 3D Display Conversion System Based on 5G Communication Technology (11:40-12:00)**

Yue Xie, Southern University of Science and Technology

**Session 50: Novel Display System Technology (Display System)**

**Wednesday, April 3/10:20-11:40/ Room 210**

**Chair: Jia Jia (贾甲), Pengcheng Laboratory**

**50.1 Invited Paper: An Innovative Decoder-type GOA for Intelligent Split-Screen and External Compensation Technology (10:20-10:40)**

Zhidong Yuan (袁志东), Hefei BOE Joint Technology Co., Ltd.

**50.2 Invited Paper: Tunable Diffraction Phase Gratings and Their Applications (10:40-11:00)**

Yury Gushcho, NanoRelief Display Ltd.

**50.3 Research on Adaptive Voltage Regulation Algorithm on TFT-LCD (11:00-11:20)**

Shijie Deng, TCL China Star Optoelectronics Technology Co., Ltd.

**50.4 A New Driving Solution for the Problem of Abnormal Display During Panel Power On (11:20-11:40)**

Weifeng Chen, TCL China Star Optoelectronics Technology Co., Ltd.

**Session 51: Printed TFT Technology (Printed Display)**

**Wednesday, April 3/10:00-11:20/ Room 211**

**Chair: Shumeng Wang (王淑萌), Changchun Institute of Applied Chemistry, Chinese Academy of Sciences**

**51.1 Invited Paper: Reducing Hysteresis in Carbon Nanotube Thin-Film Transistors through ALD Laminated HfO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> (10:00-10:20)**

Jun-Biao Peng (彭俊彪), South China University of Technology

**51.2 Invited Paper: Optimizing Photonic Annealing Technique for Full-Solution-Processed Oxide Thin Film Transistor (10:20-10:40)**

Meng Xu (徐萌), Shanghai University

**51.3 Invited Paper: Printed Active-Matrix Electrochromic Displays (10:40-11:00)**

Aimin Song (宋爱民), University of Manchester, Chongqing Zhiwei Technologies LTD

**51.4 R2R Printed Flexible High-resolution Carbon Nanotube-based TFT Active Matrixes (11:00-11:20)**

Junfeng Sun, Huzhou University

**Session 52: Novel LCD Architecture (Liquid-Crystal Technology)**

**Wednesday, April 3/10:20-12:20/ Room 204**

**Chair: Chair: Tong Li (李同), Suzhou Institute of Nano-Tech and Nano-Bionics (SINANO), Chinese Academy of Sciences**

**52.1 Invited Paper: Fabrication and Applications of Electrically Tunable Liquid Crystal Microlens Arrays (10:20-10:40)**

Yanjun Liu (刘言军), South University of Science and Technology of China

**52.2 Invited Paper: Synergistic Effect of IGZO in UV2A for Next Generation of UV2A Mode (10:40-11:00)**

Yuanhui Guo (郭远辉), BOE Technology Group Co., Ltd.

**52.3 Invited Paper: Intelligent Display Design Integrated in the 55 4K LCD Cell (11:00-11:20)**

Dongchuan Chen (陈东川), Beijing BOE Display Technology Co., Ltd.

**52.4 Time-multiplexing Method Using Dual Ferroelectric Liquid Crystal Shutters for Light Field 3D Display (11:20-11:40)**

Zhi-Bo Sun, The Hong Kong University of Science and Technology

**52.5 Research on the Process of Single Polarizer Reflective LCD (11:40-12:00)**

Tao Liu, Institute of Jiangsu (IVO) Flat-Panel-Display Technologies

**52.6 A Novel Vertical Tri-gate Pixel Structure for Liquid Crystal Display (12:00-12:20)**

Shuaichen Si, Guangzhou China Star Optoelectronics Semiconductor Display Technology Co., Ltd.

**Session 53: High Performance OLED Display (OLEDs)**

**Wednesday, April 3/10:40-12:20/ Room 209**

**Chair: Shijian Su (苏仕健), South China University of Technology**

**53.1 Invited Paper: Research on Adhesion of Acrylic Photoresist on Different Substrates for OLED Display (10:40-11:00)**

Ying Shen (申莹), Hefei Visionox Technology Co., Ltd.

**53.2 Minimization of Color Shift Due to Diffracted Light in COE OLED Panel (11:00-11:20)**

Sangmin Shin, LinkGlobal21

**53.3 Technical Challenges of OLED Display Technology in High-Latitude Regions (11:20-11:40)**

Huan Yan, China Research and Development Academy of Machinery Equipment

**53.4 Research on Power Consumption Optimization Scheme for AMOLED DDIC (11:40-12:00)**

Jingjing Lu, Yungu (Gu'an) Technology Co., Ltd.

**53.5 Research on HDR True Black Performance of Foldable Active-matrix Organic Emitting Display in Notebook Application (12:00-12:20)**

Xing Huang, Chengdu BOE Optoelectronics Technology Co., Ltd.

**Session 54: Antenna-on-Display (AoD) and Stylus (Touch & Interactive Displays)**

**Wednesday, April 3/10:20-11:40/ Room 202**

**Chair: Huan-Chu Huang (黄奂衢), Visionox Technology Inc.**

**54.1 Invited Paper: Promising Conceptual Designs of 2-in-1 Antenna-on-Display (AoD) for Mobile Phones (10:20-10:40)**

Huan-Chu Huang (黄奂衢), Visionox Technology Inc.

**54.2 Process Window Variation of Moire Depending on Metal Wire Pitch (10:40-11:00)**

Sangmin Shin, LinkGlobal21

**54.3 Invited Paper: Novel Anti-interference Multi-solutions to Enhance Display Performance during Active Stylus-Screen Interaction (11:00-11:20)**

Meng He (何蒙), Shenzhen Qianfenyi Intelligent Technology Co., Ltd.

**54.4 Peratech's Under-Display Force Digitizer for Touch, Stylus and Calligraphy Input (11:20-11:40)**

Sarah Dempsey, Peratech Holdco Ltd.

**Session 55: MicroLED Evaluation (EMQ-MicroLED)**

**Wednesday, April 3/10:20-11:40/ Room 206**

**Chair: Xian Huang (黄显), Tianjin University**

**55.1 Invited Paper: Yield and Manufacturing Challenges for MicroLED Micro-displays (10:20-10:40)**

Soeren Steudel, MICLEDI microdisplay BV

**55.2 *Invited Paper*: Massive MicroLED Electroluminescence Detection Based on Flexible 3-dimensional Probe Arrays (10:40-11:00)**

Xian Huang (黄显), Tianjin University

**55.3 *Invited Paper*: Design Diversity: Emerging Trends in MicroLED Chip Architecture, Metrology, and Inspection (11:00-11:20)**

Wade Lee, InZiv

**55.4 Investigation of Light Leakage on the Thin-Film-Transistors Depending on the Micro-LED Backplane Structures (11:20-11:40)**

Peixuan Chen, Tianma Advanced Display Technology Institute (Xiamen) Co., Ltd.

**Session 56: Quantum Dot Patterning (EMQ-Quantum Dots)**

**Wednesday, April 3/9:40-11:40/ Room 203**

**Chair: ZhongSheng Luo (罗忠升), Nanosys**

**56.1 *Invited Paper*: High Resolution Quantum Dot Display Technology (9:40-10:00)**

Fushan Li (李福山), Fuzhou University

**56.2 *Invited Paper*: High-Resolution, Highly Transparent, and Efficient Quantum Dots Light-Emitting Diodes (10:00-10:20)**

Chengzhao Luo (罗成招), Soochow University

**56.3 *Invited Paper*: A Universal Inkjet Printing Strategy of Perovskite Towards Wide Color Gamut Displays (10:20-10:40)**

Guijun Li (李贵君), Shenzhen University

**56.4 *Invited Paper*: Quantum Dot Light-Emitting Diodes for Micro Display (10:40-11:00)**

Xiaowei Sun (孙小卫), Southern University of Science and Technology

**56.5 Direct in Situ Patterning of Perovskite Quantum Dots (11:00-11:20)**

Gaoling Yang, Beijing Institute of Technology

**56.6 Four-inch Wafer-scale and Spherical Light-emitting Diodes Based on Perovskite Quantum Wire Arrays (11:20-11:40)**

Beitao REN, The Hong Kong University of Science and Technology

**Session 57: Advanced Circuit & Algorithm (Display Electronics)**

**Wednesday, April 3/13:30-14:50/ Room 205**

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

**57.1 *Invited Paper*: Engineering Considerations for the Application of Threshold Voltage One-Time Detection Method (VthOTDM) in LTPO AMOLED Displays (13:30-13:50)**

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

**57.2 Micro Display Sub-Pixel Capacitor Design Balancing Performance, Yield, and Cost (13:50-14:10)**

Gang Chen, Meta Reality Labs

**57.3 Integrated Gate Driver Circuit with Self-compensation Function Using Oxide TFTs for AMOLED Displays (14:10-14:30)**

Xuehuan Feng, Hefei BOE Joint Technology Co. Ltd.

**57.4 High Performance LTPS TFT Backplane Using Blue Laser Diode Annealing for Mini/Micro LED Display (14:30-14:50)**

Jinming Shi, TCL China Star Optoelectronics Display Technology

**Session 58: Display Effecton (Display Application)**

**Wednesday, April 3/13:30-14:50/ Room 212**

**Chair: Bo Yuan, Kunshan New Flat Panel Display Technology Center Co., LTD,**

**58.1 Advanced Ambient Adaptive Display Solution Considering Chromatic Adaptation (13:30-13:50)**

Minchen Wei, The Hong Kong Polytechnic University

**58.2 Transflective ADS LCD with High Contrast Ratio and Wide Color Gamut for Better Productivity (13:50-14:10)**

Jing Wang, Beijing BOE Display Technology Co., LTD.

**58.3 Improvement of High Quality OLED Display Lifetime (14:10-14:30)**

Zhengfang Xie, Kunshan Govisionox Optoelectronics Co., Ltd.

**58.4 Microstructure-based High-gain, Large-viewing Angle Laser Projection Curtains and Its Application (14:30-14:50)**

Hao Cao, Wuhan University

**Session 59: 3D Display System (Display System)**

**Wednesday, April 3/13:30-14:50/ Room 210**

**Chair: Huan Deng (邓欢), Sichuan University**

**59.1 Invited Paper: Light Field 3D Displays with High Performance (13:30-13:50)**

Yan Xing (邢妍), Beihang University

**59.2 Invited Paper: High Realistic 3D Light-field Display System with Large Depth-of-field (13:50-14:10)**

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

**59.3 Invited Paper: Holographic Display with Optimized Diffraction Fields (14:10-14:30)**

Hao Zhang (张浩), Tsinghua University

**59.4 Metasurface-based Holographic Display Systems (14:30-14:50)**

Jin Li, Beihang University

**Session 60: Printed Display Materials and Devices 1 (Printed Display)**

**Wednesday, April 3/13:30-14:50/ Room 211**

**Chair: Minghung Hsu (许名宏), Hefei BOE Joint Technology Co., Ltd.**

**60.1 Invited Paper: A Novel Inkjet Printing Device for 8K2K OLED MNT (13:30-13:50)**

Minghung Hsu (许名宏), Hefei BOE Joint Technology Co., Ltd.

**60.2 Invited Paper: Construction and Application of TADF Polymers (13:50-14:10)**

Junqiao Ding (丁军桥), Yunnan University

**60.3 Observation of Subtle Interfacial Mixing in Solution-processed OLEDs (14:10-14:30)**

Kaixuan Zhang, Guangdong Juhua Printed Display Technology Co., Ltd.

**60.4 Functional Study of High-Transparency Encapsulation Films Based on Inkjet Printing Technology (14:30-14:50)**

Chufeng Yang, Hangzhou First Applied Material Co., Ltd.

**Session 61: LC Phase Modulator (Liquid-Crystal Technology)**

**Wednesday, April 3/13:30-15:10/ Room 204**

**Chair: Dan Luo (罗丹), South University of Science and Technology of China**

**61.1 *Invited Paper*: 3D Floating Holographic Display with 12K x 2K LCoS-SLM (13:30-13:50)**

Chun-Wei Tsai (蔡君伟), National United University

**61.2 *Invited Paper*: Multidimensional Manipulable Optical Fields with Geometric Phase LC Planar Optics (13:50-14:10)**

Wei Duan (段薇), University of Electronic Science and Technology of China

**61.3 The Influence of Fringing Field Effect of Liquid Crystal on Silicon Devices with Different Liquid Crystal Thickness for Telecommunication Applications (14:10-14:30)**

Quan Gao, Southeast University

**61.4 Implementation of Phased Array Antennas Based on Liquid Crystal Technology in Simulated Satellite Communication Systems (14:30-14:50)**

Jin Liu, University of Electronic Science and Technology of China

**61.5 Generation and Optimization of Flat-top Beams on Phase-only Liquid Crystal on Silicon (14:50-15:10)**

Yuntao Wang, Southeast University

**Session 62: Device Processing of OLED Display (OLEDs)**

**Wednesday, April 3/13:30-15:10/ Room 209**

**62.1 *Invited Paper*: TurboLED: Smart Display Design (13:30-13:50)**

Peter Levermore, Excyton

**62.2 Improvement of Low Gray Scale Black Spots by HTM Morphologies (13:50-14:10)**

Chuanzhi Xu, Kunshan Govisionox Optoelectronics Co., Ltd.

**62.3 Optimizing Under Display Infrared Technology: A Comprehensive Analysis of Diffraction Issues (14:10-14:30)**

Zhibin Wang, OTI Lumionics

**62.4 The Effect of OLED Device Capacitance on Low Gray Levels Motion Blur (14:30-14:50)**

Xuesen Zhao, Hefei Visionox Technology Co., Ltd.

**62.5 A Brightness Compensation Technology for OLED UDC Panel (14:50-15:10)**

Yuqing Wang, Kunshan Govisionox Optoelectronics Co., Ltd.

**Session 63: Metaoptics for AR/VR/MR (VR/AR/MR)**

**Wednesday, April 3/13:30-15:10/ Room 202**

**Chair: Xi Mou (牟希), Hangzhou SanTest Technology Co., Ltd.**

**63.1 *Invited Paper*: Extended-DOF Near-Eye 3D Display using a Polarization-Multiplexing Metalens Array for Interactive Augmented Reality (13:30-13:50)**

Jianwen Dong (董建文), Sun Yat-Sen University

**63.2 *Invited Paper*: Maxwellian Viewing AR Display Based on a Metalens Visor (13:50-14:10)**

Yan Li (李燕), Shanghai Jiao Tong University

**63.3 *Invited Paper*: Thin Film Neuromorphics: Fantasy or Reality? (14:10-14:30)**

Kai Wang (王凯), Sun Yat-sen University

**63.4 *Invited Paper*: Eye-tracking Super Multi-view 3D Display Enabled by the Metagrating (14:30-14:50)**

Jianyu Hua (华鉴瑜), Soochow University

**63.5 Full Degree-of-freedom Liquid Crystal Holographic Optics for AR/VR Displays (14:50-15:10)**

Jianghao Xiong, Beijing Institute of Technology

**Session 64: Improving Perovskite QD Light-Emitting Diode (EMQ-Quantum Dots)**

**Wednesday, April 3/13:30-14:50/ Room 203**

**Chair: Zugang Liu (刘祖刚), CHINA JILIANG UNIVERSITY**

**64.1 Invited Paper: The Interface Engineering in PeLEDs and QLEDs (13:30-13:50)**

Zugang Liu (刘祖刚), CHINA JILIANG UNIVERSITY

**64.2 Invited Paper: Suppression of Ion Migration for Stable Perovskite LEDs (13:50-14:10)**

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

**64.3 Low-Dimensional Metal Halide Perovskites for Efficient Light-Emitting Diodes (14:10-14:30)**

Tongtong Xuan, Xiamen University

**64.4 Novel Highly Stable Organic Phosphors and Their Application to Cd-free Color Conversion Sheets for Wide Color Gamut LCDs (14:30-14:50)**

Fangrong Xu, Toray Advanced Materials Research Laboratories

**Session 65: Driving Architecture (Display Electronics)**

**Wednesday, April 3/15:00-16:40/ Room 205**

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

**65.1 Invited Paper: The Advantages of "Clocked-Analog" Video Transport in Source Driver ICs (15:00-15:20)**

Alex Henzen, Hyphy USA Inc.

**65.2 Invited Paper: Advanced Modelling of Field Emission (15:20-15:40)**

Ian Underwood, University of Edinburgh

**65.3 Invited Paper: Investigation of Flexible Synaptic Transistors with Inorganic/Polymer Composite Gate Dielectrics (15:40-16:00)**

Rihui Yao (姚日晖), South China University of Technology

**65.4 A Novel GOA Circuit for Large-size TFT-LCD Display (16:00-16:20)**

Yanling Chen, Peking University Shenzhen Graduate School

**65.5 Face Tracking and Recognition Based on Projection Technology (16:20-16:40)**

Jiaqi Zhou, Southeast University

**Session 66: Display Application (Display Application)**

**Wednesday, April 3/15:00-16:20/ Room 212**

**Chair: Hongyue Gao (高洪跃), Shanghai University**

**66.1 Invited Paper: Recent Progress of GaN Based Technology for Metaverse and EV (15:00-15:20)**

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

**66.2 Process and Technical Challenges of Trifold Display (15:20-15:40)**

Bo Yuan, Kunshan New Flat Panel Display Technology Center Co., Ltd.

**66.3 Research on Laser Display Technology and Standards (15:40-16:00)**

Chensi Wu, China Electronics Standardization Institute

**66.4 Research on Wearable Brain-Computer Interface Based on SSVEP (16:00-16:20)**

Jing-Ye Huang, Southeast University



**Session 67: 3D Display Imaging (Display System)**

**Wednesday, April 3/15:00-16:40/ Room 210**

**Chair: Yan Xing (邢妍), Beihang University**

**67.1 Invited Paper: Depth of Field Enhancement in Integral Imaging Using Diffractive Optical Elements and CNN (15:00-15:20)**

Juan Liu (刘娟), Beijing Institute of Technology

**67.2 Invited Paper: Design and Fabrication of Freeform Holographic Optical Elements (15:20-15:40)**

Rengmao Wu (吴仍茂), Zhejiang University

**67.3 Invited Paper: Elemental Image Array Generation Method Based on the Voxel Space of the InIm-based LFD (15:40-16:00)**

Huan Deng (邓欢), Sichuan University

**67.4 Quality, Uniformity Computation Improvement Of Compressive Light Field Displays With U-Net (16:00-16:20)**

Chen Gao, Fujian Normal University

**67.5 Freeform Liquid-Crystal Polarization Imaging Optics with Aberration Correction and Efficiency Control (16:20-16:40)**

Chunyang Pei, Zhejiang University

**Session 68: Printed Display Materials and Devices 2 (Printed Display)**

**Wednesday, April 3/15:00-16:20/ Room 211**

**Chair: Minghung Hsu (许名宏), Hefei BOE Joint Technology Co., Ltd.**

**68.1 Invited Paper: Realization of High PPI Notebook using inkjet Printing Technology and IGZO Backplate (15:00-15:20)**

Ting Shi (史婷), TCL China Star Optoelectronics Technology Co., Ltd.

**68.2 Invited Paper: Development of Solution-processed Organic Light-emitting/Functional Materials and Devices (15:20-15:40)**

Shumeng Wang (王淑萌), Changchun Institute of Applied Chemistry, Chinese Academy of Sciences

**68.3 Invited Paper: High-Performance Organic Materials and Electronic Inks for Inkjet Printing OLEDs (15:40-16:00)**

Hai Bi (毕海), Jihua Laboratory

**68.4 Invited Paper: Efficiency Enhancement of Solution-Processed OLED by Adopting a Sensitized Fluorescence Strategy (16:00-16:20)**

Le Zhang (张乐), Zhejiang HongWu Technology Company

**Session 69: LC Optics (Liquid-Crystal Technology)**

**Wednesday, April 3/15:20-16:20/ Room 204**

**Chair: Dan Luo (罗丹), South University of Science and Technology of China**

**69.1 Invited Paper: Liquid Crystal Polarization Grating/Lens for AR Displays (15:20-15:40)**

Dan Luo (罗丹), South University of Science and Technology of China

**69.2 Invited Paper: Cholesteric Liquid Crystals with Dynamic Structure (15:40-16:00)**

Hongbo Lu (陆红波), Hefei Polytechnic University

**69.3 Invited Paper: Lyotropic Liquid Crystal in Optical Devices (16:00-16:20)**

Tianzi Shen (沈田子), Beihang University

**Session 70: Device Physics and Processing Techniques of OLEDs (OLEDs)**

**Wednesday, April 3/15:20-17:00/ Room 209**

**Chair: Ying Shen (申莹), Hefei Visionox Technology Co., Ltd.**

**70.1 Invited Paper: Capacitance Reduction of Red OLED through Device Optimization (15:20-15:40)**

Huiqing Pang (庞惠卿), Beijing Summer Sprout Technology Co., Ltd.

**70.2 Invited Paper: Analysis of TADF-OLED Intrinsic Degradation by GCIB-TOF-SIMS and Study of Water Impact with In Situ Exposure Methodology (15:40-16:00)**

Kentaro Harada, OPERA Solutions

**70.3 Photoresist Simulation About the Sidewall Angle of Micro-lens for OLED Light Extraction (16:00-16:20)**

Liang Hu, Xiamen Tianma Display Technology Co., Ltd.

**70.4 The Effect of Curing Agent on the Reliability of Carbon Fiber Foldable Bracket (16:20-16:40)**

Xiaodong Ai, Visionox Technology Inc.

**70.5 Research on Reliability Bulging of Carbon Fiber Bracket Based on Folding Products (16:40-17:00)**

Miao Luo, Chengdu BOE Optoelectronics Group Co., Ltd.

**Session 71: Microprojector for AR/VR/MR (VR/AR/MR)**

**Wednesday, April 3/15:20-16:40/ Room 202**

**Chair: Jianyu Hua (华鉴瑜), Soochow University**

**71.1 Invited Paper: A New AMOLED Pixel Circuit for AR/VR Application Based on LTPS TFT (15:20-15:40)**

Kook Chul Moon, Sungkyunkwan University

**71.2 Invited Paper: High-Quality Image Transmission with Reduced Bandwidth: A Strategy for Selective Downsampling and Precise Reconstruction (15:40-16:00)**

Tzung-Yuan Lee, Viewtrix Technology

**71.3 Enhanced Optical Efficiency by Applying Dual Micro-Lens Structure in AR/VR Application (16:00-16:20)**

Sangmin Shin, LinkGlobal21

**71.4 Investigating Driving Current and Environmental Conditions on Micro-LED Performance Metrics (16:20-16:40)**

Liang Zhang, Yongjiang Laboratory

**Session 72: Perovskite QD Light-Emitting Diode Display (EMQ-Quantum Dots)**

**Wednesday, April 3/15:00-16:00/ Room 203**

**Chair: Zugang Liu (刘祖刚), CHINA JILIANG UNIVERSITY**

**72.1 Invited Paper: Why Perovskite Quantum Dots Will Be Key for LCD-, uLED- and OLED Displays (15:00-15:20)**

Fangjian Lin, Avantama Ltd.

**72.2 Invited Paper: Efficient and Stable Perovskite Light Emitting Diodes (15:20-15:40)**

Chaoyu Xiang (向超宇), Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences

**72.3 Enhancing the Efficiency of Perovskite Quantum Dot Light-Emitting Diodes through Surface Engineer with Organic Small Molecule Ligands (15:40-16:00)**

Hanming Li, TCL China Star Optoelectronics Technology Co., Ltd.

## Poster Session

### P 1. Active-Matrix Devices

#### P 1.1 The Back-Channel Effect in Low Temperature Poly-Si Thin Film Transistors

Ying Shen, Hefei Visionox Technology Co., Ltd.

#### P 1.2 Hot Carrier Effect in Self-Aligned In-Ga-Zn-Sn-O High Mobility Thin Film Transistors

Tongshang Su, BOE Technology Group Co., Ltd.

#### P 1.3 High Performance of Amorphous IGZO TFTs with Different Chemical Composition Deposited by PEALD

Shuaiying Zheng, Shandong University

#### P 1.4 Synergistic Enhancement of Stability and Mobility in ZrO<sub>2</sub>-Doped ITZO TFTs with MLO Passivation

Delang Lin, South China University of Technology

#### P 1.5 Mechanism of Hysteresis in InGaZnO Thin-Film Transistors

Songna Chen, Guangzhou China Star Optoelectronics Technology Co., Ltd.

#### P 1.6 Influence of Bandgap of SiN<sub>x</sub> Gate Insulator on the Degradation Behavior of Amorphous Silicon Thin-Film Transistors under Reliability Test

Xiaoliang Zhou, TCL China Star Optoelectronics Technology Co., Ltd.

#### P 1.7 Junction Resistance and Junction Diffusion Depth in InGaZnO-Based Thin Film Transistors with Thermally Induced Source/Drain Region

Zhichao Zhou, China Star Optoelectronics Technology Co., Ltd.

#### P 1.8 High Performance 12.7 Inch 3K\*2K DEMUX TDDI TPC LCD Fabricated by TGSA Bilayer Oxide TFT Technology

Haixiong Zhang, BOE HEFEI XINSHENG Optoelectronics Tec. Co., Ltd.

#### P 1.9 High Performance Amorphous IZO/IGZO Bilayer Thin Film Transistors for Ink-jet Printed AMOLED Displays

Chenning Liu, TCL China Star Optoelectronic Technology Co., Ltd.

#### P 1.10 Enhanced Stability under Positive Bias Temperature Stress of Ln-Doped InZnO Thin Film Transistors Fabricated with Back-Channel-Etch Structure

Juncheng Xiao, Peking University Shenzhen Graduate School

#### P 1.11 A VCO-Based ADC Design Using N-Type Oxide TFTs

Zhaoyu Deng, South China University of Technology

#### P 1.12 Back-End-of-Line Compatible Al-doped Indium Zinc Oxide Transistors with Excellent Thermal Stability

Jingye Xie, Peking University

#### P 1.13 Sub-200nm Nano-scale Indium-Zinc-Oxide Ultra-thin Channel Transistors

Minghe Zhang, Peking University

#### P 1.14 Electrical Performance of Side Wrapped Thin Film Transistor

Zhuang Li, Wuhan China Star Optoelectronic Technology Co. Ltd.

#### P 1.15 Research Progress in the Preparation Process of 2D MoS<sub>2</sub> for Thin Film Transistors

Qianqian Bu, BOE Technology Group Co., Ltd.

#### P 1.16 Effects of Active Layer Thickness on Performance of InZnO Transistors

Jianbing Shi, Peking University

#### P 1.17 Improving the Performance of IZO Transistor by Adding Buffer Layer

Longhai Xiong, Peking University

**P 1.18 Study on Influencing Factors of Low Frequency Display**

Haiyao Liang, Beijing BOE Display Technology Co., Ltd.

**P 1.19 High Performance Dual-Gate a-Si:H TFTs for High-Refresh-Rate LCDs**

Shuren Zhang, Suzhou China Star Optoelectronics Technology Co., Ltd.

**P 1.20 Research on the Mechanism of Moving Head Pattern Aggravation after Reducing Refresh Rate of Column Architecture with High Refresh Rate**

Gongda Chen, Beijing BOE Display Technology Co., Ltd.

**P 1.21 Excessive Oxygen Induced Threshold Voltage Shifts in High Mobility Top-Gate PrIZO TFTs**

Yu-Hua Dong, Guangzhou China Star Optoelectronics Semiconductor Display Technology Co., Ltd.

**P 1.22 Temperature-Controlled Dip-Coating Flexible Carbon Nanotube Thin-Film Transistors**

Lin Xu, South China University of Technology

**P 1.23 The Effect of Poly Silicon Grain Boundary Reduction on LTPS Devices and Display Effects Applied to Flexible AMOLED**

Bing Meng, YunGu (Gu'an) Technology Co., Ltd.

**P 1.24 Stability of Hydrogenated Amorphous Silicon Thin-Film Transistors in High-Brightness Liquid Crystal Displays**

ZhiXin Sun, Peking University Shenzhen Graduate School

**P 1.25 High-Resolution, High-Refresh-Rate VA Product VCOM Compensation Research**

Hengsu He, Chengdu BOE Display SCI-Tech Co., Ltd.

**P 1.26 Influence of Electrode Materials on the Electrical Properties of IGZO TFTs**

Hongyu Wu, Chongqing University

**P 1.27 High-Performance Dual-Gate a-IGZO/a-IZO Thin-Film Transistors**

Huan Yang, Peking University

**P 1.28 Research on Stability of Operational Amplifier with Optimized Performance Based On a-IGZO TFTs**

Fanzhao Meng, Shanghai University

**P 1.29 Investigation of Abnormal Degradation Behaviors under Negative Bias Stress in a-Si:H TFTs**

Zhixiong Jiang, South China University of Technology

**P 2. AI for Imaging and Display**

**P 2.1 Development Prospects and Current Status of Deep Learning Neural Network-based Facial Capture in the Metaverse Field**

Hongyu Qin, North China University of Technology

**P 2.2 Few-Shot Image Classification Based on Ensemble Metric Learning**

Kaixi Chen, Big Data Research Center, University of Electronic Science and Technology of China

**P 2.3 A Based Machine Learning Model for the Prediction of Initial Gamma Value for OLED Panels**

Hao Shen, Guangzhou Govisionox Optoelectronics Technology Co., Ltd.

**P 2.4 Determination of Optimal Illumination Angle for Blood Velocity Estimation with Laser Speckle Contrast Imaging**

Li Han, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences

**P 2.5 Multi-Scale Feature Fusion Generative Adversarial Network for Image Inpainting**

Lunze Hu, Fuzhou University

**P 2.6 Research on a Method for Optimizing Flicker of AMOLED Display Screen**

Yongbin Yang, Kunshan Govisionox Optoelectronics Co., Ltd.

**P 3. Applied Vision**

**P 3.1 Display Quality and Visual Fatigue Effect of LTPO and LTPS**

Jiaxin Ye, Guangzhou Govisionox Technology Co., Ltd.

**P 3.2 A Study on Perceptual Brightness Model Related to Pupil Size**

Nailong He, Southeast University

**P 3.3 Investigation into the Relationship between Depth and Quality of Naked-Eye 3D Images**

Yuan Gao, Yongjiang Laboratory

**P 3.4 Plenoxels-based Parallax Map Generation for Flexible Scale Ultra-High Resolution in 3D Imaging**

Changwei Yang, Zhengzhou University

**P 3.5 Research on Reducing Moiré Patterns in Naked-eye 3D Displays through Optimizing Lenticular Lens Tilt Angle**

Yuan Gao, Yongjiang Laboratory

**P 3.6 The International (recommended) Standard of Next-Generation Colour Display Technology**

Halpin Tseng, TCL Corp. MOKA Branch

**P 3.7 Study on the Distribution of Perceived Brightness Level Based on HK Effect in Three-Dimensional CIELAB Color Space of Laser Display**

Dabo Guo, Ocean University of China

**P 3.8 A Review: Anti-Bacteria and Anti-Virus Healthy Displays**

Xianqin Meng, BOE Technology Group Co., LTD

**P 3.9 Differences in Visual Comfort of Smartphones between Comfortable and Uncomfortable Luminance**

Chenyu Wu, Southeast University

**P 3.10 The Influence of Parallax and Shape Type Factors on the Perception of AR Equipment in Dark Environment**

Huiqiang Xia, Southeast University

**P 3.11 A Model-based Study on Perceived Brightness under Various Ambient Illuminance Levels**

Xinhang Ling, Southeast University

**P 4. AR/VR/MR & Metaverse**

**P 4.1 Research on Fusion Calibration Algorithm of Camera and IMU Improved by Maximum Likelihood Method**

Jingliang Wang, North China University of Technology

**P 4.2 High-Precision Human Eye Simulation Device**

Guanghang Mei, Yongjiang Laboratory

**P 4.3 Brief Introduction of VR Industry Development Trends**

Sha Liu, BOE Technology Group Co., Ltd.

**P 4.4 Research on Key Technologies for Psychological Relief Based on Virtual Reality Exposure Therapy**

Yanfei Wang, North China University of Technology

**P 4.5 Double-layer Waveguide System for Improving the Optical Efficiency**

Yusong Guo, Hefei University of Technology

**P 4.6 Curved Augmented Reality Display Using Printed Freeform Holographic Optical Element**

Tian Shu, Zhejiang University

**P 4.7 Development Status and Application of the Integration of VR and EEG**

Yan Zhang, North China University of Technology

**P 4.8 The Diffraction Simulation of FFS VR LCD Panel**

Cheng Wei, Wuhan China Star Optoelectronics Technology Co., Ltd.

**P 4.9 Effect of Metal BM as Inducer Electrode in Liquid Crystal Display**

Cheng Wei, Wuhan China Star Optoelectronics Technology Co., Ltd.

**P 4.10 The Research Status and Prospect of Virtual Reality in Rescue Field**

Yang Hu, North China University of Technology

**P 4.11 A Comprehensive Study of VR Exposure Therapy Combined with EEG Signals in the Treatment of Psychiatric Disorders**

Hanwen Li, North China University of Technology

**P 4.12 A Review of Metaverse Technology and Application Research**

Chen Wang, North China University of Technology

**P 4.13 Research on VR/AR Technology and Its Application under New Technology Environment**

Luran Xing, North China University of Technology

**P 4.14 Narrow Channel a-IGZO TFTs for 1500PPI VR LTPO LCD Display**

Huihui Zhao, Wuhan China Star Optoelectronics Technology Co., Ltd.

**P 4.15 Flexible Multi-view Synthesis from a Single Image**

Yusi Chen, BOE Technology Group Co., Ltd.

**P 4.16 D-Vcom Adjustment Algorithm for VR Display Products Research and Experimental Validation**

Jingyong Li, BOE Technology Group Co., Ltd.

**P 4.17 Multi-Viewpoint Glasses-Free 3D Display Technology Based on Representation Fusion NeRF**

Wenhao Huang, Southern University of Science and Technology

**P 4.18 Extending Eyebox with Big FOV for Holographic Retinal Projection Display**

Yumeng Su, Hefei University of Technology

**P 4.19 High Linearity Low-power Digital Scanning Algorithm for Driving OLED-on-silicon Microdisplays**

Xingyan Liu, Shanghai University

**P 4.20 Improvement Plan for High Brightness MiniLED BLU VR Crosstalk**

Can Huang, Wuhan China Star Optoelectronics Technology Co., Ltd.

**P 4.21 Research on Polarization Stress Relief in VR/AR Resin Lenses**

Chenxi Yang, Dega Smart Photoelectric Technology (Zhenjiang)Co., Ltd.

**P 4.22 Tuning the Diffraction Efficiency of Polarization Volume Grating by UV Erosion**

Nan Lin, Southeast University

**P 4.23 Unique Simulation Design for Crossed-type Exit Pupil based on Polarization Volume Grating**

Ran Wei, Southeast University

**P 4.24 Design and Fabrication of Short-Focus Lenses Based on Pancharatnam-Berry Optical Elements**

Xusheng Pan, Southeast University

**P 4.25 Design of Diffractive Waveguide Display with High Angular Uniformity**

Ziyin Li, Zhejiang University

**P 4.26 Multi-Channel Field of View Transmission Based on Polarization Volume Grating**

Yuchen Gu, Southeast University

**P 4.27 Design of High-Angular Uniformity Two-Dimensional Gratings for AR Head-Mounted Devices**

Hui Yang, Zhejiang University

**P 4.28 Optical System Design for AR Smart Contact Lens**

Qi Liu, Kyushu University

**P 4.29 AR Waveguide Display with Enlarged Eyebox Based on Polarization Volume Gratings**

Zijian Lin, Fuzhou University

**P 4.30 Virtual Reality Headsets with Ultra-Compact Pancake Optics Utilizing Free-Form Optical Lenslet Array Simulation Models**

Tianwen Hou, YONGJIANG Laboratory

**P 4.31 Analysis of the Eye-protection Principle of 3D Display**

Fengming Li, BOE Technology Group Co., LTD

**P 4.32 Dynamic Distortion Analysis Methods in Virtual Reality**

Yining li, YONGJIANG Laboratory

**P 4.33 Large-Size Continuous Ultra-Large Viewing Angle Stereoscopic Display**

Lin Li, BOE Technology Group Co., Ltd.

**P 4.34 Modeling Eye Movement and Reflection in Virtual Environments for Eye Tracking**

Alex Zhou, Gravityxr

**P 4.35 Influence of Grating Microstructural Parameters on Mitigating Screen Door Effect**

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

**P 4.36 The Research on Virtual Reality Field Based on Gesture Recognition**

Junshuai Zhang, North China University of Technology

**P 4.37 Integral Compressive Light Field Display based on Multi Layers and Micro Lens Array**

Qiyang Chen, Hefei University of Technology

**P 4.38 2D/3D Fusion Display Method Based on Integral Photography**

Yutong Wu, Tsinghua University

**P 4.39 A Light Field Glasses-Free Rendering Method Based on Ray Tracing**

Ningtong Chen, Southern University of Science and Technology

**P 4.40 Research on Natural Background Text Recognition Technology Based on AR Glasses**

Kang Zhang, Southeast University

**P 4.41 Computational Super-Resolution for Integral Imaging Light Field Displays**

Yifan Ding, Sun Yat-Sen University

**P 4.42 Trustworthy Metaverse: A Comprehensive Investigation into Security Risks and Privacy Issues in Artificial Intelligence-Extended Reality Systems**

Tianhao Li, North China University of Technology

**P 4.43 Virtual Reality Content Generation for Anxiety and Stress Management: Current Status, Challenges, and Future Developments**



Yujia Zheng, North China University of Technology

**P 4.44 Application of Virtual Reality Technology in the Diagnosis and Treatment of Psychological Disorders: An Electroencephalography (EEG)-Based Approach**

Weizhi Ma, North China University of Technology

**P 5. Display Application**

**P 5.1 The Multi-View Tabletop Three-Dimensional Light-field Display Based on the Depth Offset Mapping Algorithm**

Peiren Wang, Tianjin Research Institute for Water Transport Engineering, Ministry of Transport

**P 5.2 The Efficient Depth Offset Mapping Encoding Algorithm for Glasses-free Three-Dimensional Display**

Peiren Wang, Tianjin Research Institute for Water Transport Engineering, Ministry of Transport

**P 5.3 A Novel Driving Scheme to Achieve Low Frame Rate and Low Power Consumption with Narrow Border**

Huilin Lu, Kunshan Govisionox Optoelectronics Co., Ltd.

**P 5.4 Enhancing Volumetric Display Systems with an Effective Axis-Shift Slicing Algorithm for Various Plane Pose Transformations**

Hongzhan Song, Sun Yat-Sen University

**P 5.5 Three-Dimensional Continuous Expression Synthesis Method Based on Facial Expression Feature Map**

Ruilin Yang, Shanghai University

**P 5.6 Ghost Removal HDR Fusion Algorithm Based on Enhanced Reference Image**

Wenxuan Nie, Shanghai University

**P 5.7 An Optimized Robust Watermarking Algorithm for Video Based on Spatio-temporal Feature Fusion**

Yisheng Fan, Shanghai University

**P 5.8 Synergistic Low-Light Image Enhancement: A Fusion of Dark Channel Dehazing and K-means Clustering**

Nan Xue, Shanghai University

**P 5.9 Examining Pressure-Sensitive Damping Silicone Adhesive with Excellent Cushioning Capabilities for AMOLED Display**

Xuelin Fan, Hefei Visionox Technology Co., Ltd.

**P 5.10 Investigation of Acrylic Inkjet Printed OCR for Mid-Size Flexible OLED**

Yu Gu, Visionox Technology Inc.

**P 5.11 Spherical Forming-a Design and Production of Spherical Display from 2D Plane to 3D Surface**

Siyu Li, Guangzhou Govisionox Technology Co., Ltd.

**P 5.12 A Method of Reducing the Warpage of Medium Size AMOLED Modules in High Temperature and Humidity Environment**

Jianbing Ou, Guangzhou Govisionox Technology Co., Ltd.

**P 5.13 The Effect of the Anti-Glaring Layer on an Autostereoscopic Display**

Min Lu, Shenzhen Yinglun Tech. Ltd.

**P 5.14 Research on Simulation Method for Pixel Arrangement Effect on Display Quality**

Lan Lan, Yungu (Gu'an) Technology Co., Ltd.

**P 5.15 Research and Application of New Display Technology with Multiple Maximum Brightness Viewing Angles**

Chengyi Xu, BOE Technology Group Co., Ltd.

**P 5.16 Wrinkle-Free Stack-up Design of Watch Display with 3D Spherical Glass by FEM Simulation**

Shuangbing Zhang, Hefei Visionox Technology Co., Ltd.

**P 5.17 Application of Smart GOA Model to Panel with Lower Power**

Zhou Peng, Beijing BOE Display Technology Co., Ltd.

**P 5.18 Spatial Multi-Directional Local Compensation in 3D Display**

Yiyi Pu, Shenzhen Yinglun Technology Co., Ltd.

**P 5.19 Research on Enhancing the Lifetime of a-Si TFT-LCD Outdoor Displays**

Tao Wang, Hefei BOE Display Technology Co., Ltd.

**P 5.20 Research on a Novel Low Reflectivity Composite Film for Borderless LCD Display Applications**

Lixing Zhao, Hefei BOE Display Technology Co., Ltd.

**P 5.21 Research on the New Type of Full Attachment Double-Sided LCD Screen**

Chaoyue Wang, Hefei BOE Display Technology CO., Ltd.

**P 5.22 Improving the Key Specifications Performance of A-Si LCD Research**

Hongri Wang, Tianma Microelectronics Co., Ltd.

**P 5.23 Application and Optimization of 2D-to-3D Conversion Algorithm in 3D Display**

Yiyi Pu, Shenzhen Yinglun Tech Co., Ltd

**P 5.24 Brightness Gain Study of High Refractive Index Brightness Enhancement Film**

Qianqian Hao, BOE Technology Group Co., Ltd.

**P 5.25 Study on the Reflection Diffraction of COE**

Hongyan Xue, Hefei Visionox Technology Co., Ltd.

**P 5.26 An Array of Microstructure for Anti-Reflective Film**

Ziyan Zhang, Beijing BOE Opto-electronics Technology Co. Ltd.

**P 5.27 The Ambient Contrast Ratio of Liquid Crystal Display with Anti-Reflection and Anti-Glare Film**

Wei-heng Yang, TCL China Star Optoelectronics Technology

**P 5.28 Improvement of a-Si TFT Performance on Adjustable Frequency G-sync Function Monitor Display**

Zhixiao Yao, Beijing BOE Display Technology Co., Ltd.

**P 5.29 Research on Infrared Sensor Anti-Low Saturation Technology in High Latitude Environment**

Qianyu Hu, China Research and Development Academy of Machinery Equipment

**P 5.30 A Content-Adaptive Filtering Algorithm Based on Local-Dimming LCDs**

Xiangjun Peng, BOE Technology Group Co., LTD.

**P 5.31 Mechanical Design and Simulation Design of Support Layer of the Crossed Foldable Display Module**

Yapeng Cheng, Wuhan China Star Optoelectronics Semiconductor Display Technology Co., Ltd.

**P 5.32 Application of Multi-function Device based on Perovskite-CdSe Bilayer Device Structure on Pulse Oximetry**

Zeyue Xie, Shenzhen University

**P 5.33 Outdoor 55-Inch 4K-resolution and High-Brightness Liquid Crystal Display**

ZhiXin Sun, Peking University Shenzhen Graduate School

**P 6. Display Electronics**

**P 6.1 Improvement of Electrical Consistency between TEG and AA Devices**

Manman Li, Kunshan Govisionox Optoelectronics Co., Ltd.

**P 6.2 Research on Screen Splitting of 8T1C Pixel Circuit**

Wenquan Chu, Hefei Visionox Technology Co., Ltd.

**P 6.3 The Research of New Umbrella Structure based on High Light Efficiency of OLED**

Guijiao Xia, Visionox Technology Inc.

**P 6.4 A Novel Mode of Device Failure Due to the Photosensitive Properties of Silicon Oxide Defects**

Fei Ai, Wuhan China Star Optoelectronics Technology Co., Ltd.

**P 6.5 The Influence of OLED ELVDD 2.8V on Electricity & Optics**

Qing Yang, Guangzhou Govisionox Technology Co., Ltd.

**P 6.6 An Innovation for Detecting Mini-LED Dead Zone or Dead Dot in Non-PWM**

Jian Hu, BOE MLED Technology Co., Ltd.

**P 6.7 IGZO- Based TFT Design for Imaging Sensor in X-Ray Detector**

Zhe Dong, Hefei University of Technology

**P 6.8 A Study on Evaluation Methods of Gray Pattern Flicker Based on Mobile Low-Frequency Display**

Xiaojuan Gao, Beijing BOE Display Technology Co., Ltd.

**P 6.9 Research on Compensation Algorithm for the Uniformity of AMOLED Brightness**

Ke Liu, Hefei Visionox Technology Co., Ltd.

**P 6.10 Exploring the Application of Vertical Synchronization Technology in OLED Display**

Fayong Wang, Visionox Technology Inc.

**P 6.11 Research on Fine-HD Display System Drive in a-Si LCD**

Litao Fan, Beijing BOE Optoelectronics Technology Co., Ltd.

**P 6.12 Research on the Technologies of Dual Side Mix GOA to Realize the Narrow Border on the Panel**

Peirong Huo, Ordos Yuansheng Optoelectronics Co., Ltd.

**P 6.13 Color Demura Compensation on Technology for Small and Medium-Sized AMOLED Modules**

Feng Chen, Kunshan Govisionox Optoelectronics Co., Ltd.

**P 6.14 Optimizing AMOLED Product Data Programming via eDP Interface**

Hufeng Zhang, Hefei Visionox Technology Co., Ltd.

**P 6.15 Research on Current Simulation of Relevant Signal Nodes in GOA Circuits**

Gongda Chen, Beijing BOE Display Technology

**P 6.16 3D Stacked Hybrid TFT Integrated Circuits for 1100 PPI AMOLED Display**

Yunfei Liu, Peking University

**P 6.17 Improvement of Image Sticking Performance in AMOLED Display by Extending Scan Pulse Width via a Novel Driving Circuit**

Genmao Huang, Visionox Co., Ltd.

**P 6.18 Improving High Speed Signal Transmission Attenuation in Driving System of Large Size Display**

Xiuqin Zhang, BOE Technology Group Co., LTD.

**P 6.19 Design of Hardware Accelerator for Real-Time Edge Detection System Based on FPGA**

LiuJun Yuan, Fuzhou University

**P 6.20 Design of Compact A-PWM Gate Driver Based on LTPS TFTs for Progressive-Mode  $\mu$ LED Displays**

Yuxuan Zhu, Peking University

**P 6.21 Research on Lifetime Compensation Method for OLED Brightness Decay Caused by Temperature Changes**

Pengkun Zheng, Hefei Visionox Technology Co., Ltd.

**P 7. Display Manufacturing**

**P 7.1 Research on VA Type LCD Wide Viewing Angle Display Technology**

Lesheng Yu, Shenzhen China Star Optoelectronics Semiconductor Display Technology Co., Ltd.

**P 7.2 Chromodot III: Non-Electrical Color Changeable Pixel Dots for Board/Window Signage Display Using Birefringence Colors with Brightness Control**

Kunio Sakamoto, Konan University

**P 7.3 Research and Development of Lithography Technology for Panel Display**

Shuming Ren, Shanghai Micro Electronics Equipment (Group) Co., Ltd.

**P 7.4 Study on the Spraying Mechanism of Cone-Jet Mode Electrohydrodynamic Atomization Printing for OLED Organic Thin-film Encapsulation**

Chao Hu, Huazhong University of Science and Technology

**P 7.5 Numerical Modeling of GaN Growth by MOCVD on Metal Substrate**

Xiubo Fang, Fuzhou University

**P 7.6 Failure Analysis of AMOLED Rigid Display Screens Based on Finite Element Simulation**

Qiu Yue, Kunshan Govisionox Optoelectronics Co., Ltd.

**P 7.7 Research on the Application of Liquid Optically Clear Adhesive for Foldable OLED**

Chuang Chen, Hefei Visionox Technology Co., Ltd.

**P 7.8 The Study on Ultimate Bending Performance of UTG**

Shen Chong, Hefei Visionox Technology Co., Ltd.

**P 7.9 Systematic Study on Inkjet Printing Features of Polyimide Solution Used in Liquid Crystal Displays**

Duokai Zhao, TCL China Star Optoelectronics Technology Co., Ltd.

**P 7.10 Study on Improvement of Aberrant TFT Pattern by Mask Design**

Hejing Zhang, Chongqing HKC Optoelectronics Technology Co., Ltd.

**P 7.11 Resistance Reduction in Molybdenum Gate Electrode by W Seed Layer**

Zecui Gao, Plansee (Shanghai)

**P 7.12 Investigation on Driving Backboard of Electronic Paper Based on Low-Temperature Polycrystalline Silicon**

Yu Jin, Visionox Technology Inc.

**P 7.13 Analyzing the Influence of Diffuser on the Polarization of Side-emitting Backlight Unit**

Changjing Zeng, Fuzhou BOE Display Technology Co., Ltd.

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