iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	01. Materials Design
Session Date:	August 24 (Wed.), 2022
Session Time:	09:00-10:15
Session Room:	Room A (211~213)

[A01-1] [Invited] 09:00-09:25

Quantum Machine Learning and Simulation for Modeling Organic Molecules

June-Koo Kevin Rhee (KAIST, Korea)

[A01-2] [Invited] 09:25-09:50

Quantum Computing Methods for OLED Materials Design

Scott N. Genin, Ilya G. Ryabinkin, Rami Gherib, and Michael G. Helander (OTI Lumionics Inc., Canada)

[A01-3] [Invited] 09:50-10:15

First, Faster, Further: Developing Next-Generation Display Materials Using Digital Chemistry

Mathew D. Halls, H. Shaun Kwak, Hadi Abroshan, Paul Winget, Yixiang Cao, Christopher T. Brown, and David J. Giesen (Schrödinger, Inc., USA)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	02. Stretchable Electronic Systems
Session Date:	August 24 (Wed.), 2022
Session Time:	09:00-10:15
Session Room:	Room B (214~216)

[B02-1] [Invited] 09:00-09:25

Electro-Active Soft Photonic Skins for the Synesthetic Perception of Colour and Sound

Jeong-Yun Sun (Seoul Nat'l Univ., Korea)

[B02-2] [Invited] 09:25-09:50

Wearable Electronics Using a Textile-Centric Design Approach

Yunyun Wu, Sara S. Mechael, and Tricia Breen Carmichael (Univ. of Windsor, Canada)

[B02-3] [Invited] 09:50-10:15

Stretchable Organic Optoelectronic Systems for Standalone Real-Time Health Monitoring Patch

Yeongjun Lee (Stanford Univ., USA), Hyunbum Kang, Jong Won Chung, Gae Hwang Lee (Samsung Electronics Co., Ltd., Korea), Zhenan Bao (Stanford Univ., USA), Yongtaek Hong (Seoul Nat'l Univ., Korea), and Youngjun Yun (Samsung Electronics Co., Ltd., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	03. OLED Materials 1
Session Date:	August 24 (Wed.), 2022
Session Time:	09:00-10:30
Session Room:	Room C (217)

[C03-1] [Invited] 09:00-09:25

Near InfraRed OLEDs Using Strong Spin-Orbit Coupling Induced TADF

Jean-Charles Ribierre (Kyushu Univ., Japan), Jean-Luc Brédas (Georgia Inst. of Tech., United States), Chihaya Adachi (Kyushu Univ., Japan), and Anthony D'Aléo (Strasbourg Univ., France)

[C03-2] [Invited] 09:25-09:50

Pure Delayed Fluorescence Organic Light-Emitting Diodes Featuring Low Driving Voltage and High Efficiency

Feng-Ming Xie, Xin-Yi Zeng, and Jianxin Tang (Soochow Univ., China)

[C03-3] [Invited] 09:50-10:15

Aggregation-Induced Delayed Fluorescence Materials for High-Performance OLEDs

Yan Fu, Hao Liu, and Zujin Zhao (South China Univ. of Tech., China)

[C03-4] 10:15-10:30

Insight into Design of Sterically Hindered Multi-Resonance Induced Charge Transfer Molecule for Highly Efficient Deep Blue OLEDs

Hyung Suk Kim (KAIST, Korea), Hyung Jin Cheon (Gyeongsang Nat'l Univ., Korea), Donggyun Lee, Woochan Lee, Junho Kim (KAIST, Korea), Yun-Hi Kim (Gyeongsang Nat'l Univ., Korea), and Seunghyup Yoo (KAIST, Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	04. Applied Vision / Human Factors 1
Session Date:	August 24 (Wed.), 2022
Session Time:	09:00-10:20
Session Room:	Room D (218)

[D04-1] [Invited] 09:00-09:25

Color Volume Calculations for HDR/Wide Gamut Displays

Charles Poynton (Independent Researcher, USA)

[D04-2] [Invited] 09:25-09:50

The Three Dimensions of Color Spaces and Display Color Gamuts

Peter Karp (Admesy, Netherlands)

[D04-3] 09:50-10:05

Unique Matrix Calibration of XYZ Tristimulus Colorimeter by User to Reduce Measurement Difference from Reference Instrument on OLED Display

Hyong Min Hahm (Incheon Nat'l Univ., Korea)

[D04-4] 10:05-10:20

Angular Brightness Comparison Using a White Patch and Complex Images

Hyeyoung Ha, Young-Keun Lee, Junga Choi, Eunjung Lee, and Jaejoong Kwon (Samsung Display Co., Ltd., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	05. Emerging Devices for Display Technology 1
Session Date:	August 24 (Wed.), 2022
Session Time:	09:00-10:25
Session Room:	Room E (311~312)

[E05-1] [Invited] 09:00-09:25

Metaphotonics for Advanced Display and Imaging Technology: Electrically Tunable Full-Color Reflective Displays and Varifocal Metalens

Inki Kim (Sungkyunkwan Univ., Korea)

[E05-2] [Featured Invited] 09:25-09:55

Metaform Optics For Ultra-Compact Augmented Reality Visor

Arka Majumdar (Univ. of Washington, USA)

[E05-3] 09:55-10:10

Mass-Production of Visible Metalenses for Virtual Reality via Wafer-Scale Printing

Joohoon Kim, Junhwa Seong (POSTECH, Korea), Wonjoong Kim (Korea Univ., Korea), Gun-Yeal Lee, Byoungho Lee (Seoul Nat'l Univ., Korea), Heon Lee (Korea Univ., Korea), and Junsuk Rho (POSTECH, Korea)

[E05-4] 10:10-10:25

Microlens Collimation Film with Near-Infrared Spectral Filter for Large-Area Fingerprint Sensor

Kristy Gillette, Tri Pham, Qunyi Chen, Ryan Fabick, Serena Mollenhauer, Amelia Koenig, and Sun Yong Park (3M Company, USA)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	06. Innovative Compensation Technologies
Session Date:	August 24 (Wed.), 2022
Session Time:	09:00-10:25
Session Room:	Room F (313)

[F06-1] [Invited] [Merck Young Scientist Award] 09:00-09:25

Deep Anti-Aliasing: Image Restoration for Enhancing Display Defects Detection

Sung-Jun Min (Sogang Univ., Korea), Kyeongbo Kong (Pukyong Nat'l Univ., Korea), and Suk-Ju Kang (Sogang Univ., Korea)

[F06-2] 09:25-09:40

LTPS TFT-Based Pixel Circuit Compensating Threshold Voltage Variations and IR Drops for AMOLED Displays

Sara Hong, Eun Kyo Jung, Ye-Rim Jeong, Eunho Kim, Hwarim Im, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

[F06-3] 09:40-09:55

Effect of Mobility Compensation on Active-Matrix OLED Pixel Circuit

Ji-Hwan Park, Kyeong-Soo Kang, and Soo-Yeon Lee (Seoul Nat'l Univ., Korea)

[F06-4] 09:55-10:10

Capacitive Sensor Circuit Using a-InGaZnO Thin-Film Transistors

Seo Jin Kang, Hyuck Su Lee, Eun Seong Yu, Seoung Gyun Kim, Chan Min Jeong, Min Seong Kim, Jong Mo Lee, and Byung Seong Bae (Hoseo Univ., Korea)

[F06-5] 10:10-10:25

Negative Shift Prevention Algorithm for Oxide TFT

Chun Byungki and Kim Hyeongmin (Samsung Display Co., Ltd, Korea)

Session Title:	07. Organic-Baced Light Emitting and Related Materials
Session Date:	August 24 (Wed.), 2022
Session Time:	09:00-10:25
Session Room:	Room G (314~315)

[G07-1] [Featured Invited] 09:00-09:30

Blue Hyperfluorescence OLED

Y-T. Lee, C.Y. Chan, M. Tanaka, Y. Tsuchiya, M. Mamada, K. Goushi, H. Nakanotani, and C. Adachi (Kyushu Univ., Japan)

[G07-2] [Invited] 09:30-09:55

Quantum-Dot-in Perovskite Near Infrared Light Emitting Diodes

Maria Vasilopoulou (Nat'l Centre for Scientific Research DEMOKRITOS, Greece)

[G07-3] 09:55-10:10

Nitrogen-Embedded Multi-Resonance Heteroaromatics with Prolonged Homogeneous Hexatomic Rings

Dongdong Zhang (Tsinghua Univ., China)

[G07-4] 10:10-10:25

Deep Blue Design of Multi-Resonance Boron-Based Thermally Activated Delayed Fluorescence Emitters

Seung Hyun Lee, Young Hun Jung, Ga Min Kim, Jun Woo Kang, Kenkera Rayappa Naveen, Mi Young Chae, and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

Session Title:	08. Bio-Integrated Optelectronic Devices 1
Session Date:	August 24 (Wed.), 2022
Session Time:	09:00-10:25
Session Room:	Room H (316~317)

[H08-1] [Featured Invited] 09:00-09:30

Designs for Upconversion and Photomultiplication in Organic Shortwave Infrared Detectors

Tse Nga Ng (Univ. of California San Diego, USA)

[H08-2] [Invited] 09:30-09:55

Imaging-Based Fluorescence Biosensing for on-Site Point-of-Care Testing

N.-E. Lee (Sungkyunkwan Univ., Korea)

[H08-3] 09:55-10:10

Transparent PEDOT:PSS-EG Neural Electrode Array for Electrocorticography with Artifact-Free Optical Modalities

Young Uk Cho, Ju Young Lee, Sang Hoon Park, and Ki Jun Yu (Yonsei Univ., Korea)

[H08-4] 10:10-10:25

Development of Self-Activated Hybrid Dressing for Accelerated Healing of Infected Wounds

Snigdha Roy Barman, Shuen-Wen Chan, and Zong-Hong Lin (Nat'l Tsing Hua Univ., Taiwan)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	09. Panel & Process
Session Date:	August 24 (Wed.), 2022
Session Time:	10:50-12:15
Session Room:	Room A (211~213)

[A09-1] [Invited] 10:50-11:15

Numerical Modeling of Inkjet Printing System with Proposed Multi-Step Image-to-Image Neural Network (I^2TI)

Heemin Lee, Soonwook Kwon, and Joonsang Lee (Yonsei Univ., Korea)

[A09-2] 11:15-11:30

Finely Tuned Asymmetric Technique to Improve Detection of Small Objects

Sang-Hoon Lim, Kyongtea Park, Dong So Kim, and Kyung-Jin Yoo (Samsung Display Co., Ltd., Korea)

[A09-3] 11:30-11:45

Burst Super Resolution Using Enhanced Residual Deformable Alignment and MAP Estimation for Display Resolution Enhancement

Yoon-Chan Nam, Young-Su Jo, and Suk-Ju Kang (Sogang Univ., Korea)

[A09-4] 11:45-12:00

Developing Data Integration Models that Improve Data Utilization to Predict the Quality of Display Panels

Hyojoong Kim, Kyungsup Kim, Heekyung Song, Youngju Lee, Gyungju Lee, Ilho Kim, Seokwoo Lee, Yongmin Ha, and Sooyoung Yoon (LG Display Co., Ltd., Korea)

[A09-5] 12:00-12:15

Self-Attention Based Bilinear Projection Network for Remaining Useful Life Estimation

Hankyeol Lee, Jungwon Ryu, Euiyeol Oh, Changgone Kim, and Yongmin Ha (LG Display Co., Ltd., Korea)

Session Title:	10. Freeform Display
Session Date:	August 24 (Wed.), 2022
Session Time:	10:50-12:10
Session Room:	Room B (214~216)

[B10-1] 10:50-11:05

Intrinsically Stretchable Two-Dimensional-Contact Electrodes for Highly-Efficient Organic Light-Emitting Diodes

Huanyu Zhou, Shin Jung Han (Seoul Nat'l Univ., Korea), Amit Kumar Harit, Dong Hyun Kim (Korea Univ., Korea), Dae Yoon Kim, Yong Seok Choi (Graphene Square Inc., Korea), Hyeokjun Kwon, Kwan-Nyeong Kim, Gyeong-Tak Go (Seoul Nat'l Univ., Korea), Hyung Joong Yun (KBSI, Korea), Byung Hee Hong (Graphene Square Inc., Korea), Min Chul Suh (Kyung Hee Univ., Korea), Seung Yoon Ryu, Han Young Woo (Korea Univ., Korea), and Tae-Woo Lee (Seoul Nat'l Univ., Korea)

[B10-2] 11:05-11:20

A Perforated Substrate Design for Reducing the Image Distortion of Stretchable OLED Displays under Uniaxial Tension

Jaehyeock Chang and Kyung Cheol Choi (KAIST, Korea)

[B10-3] [Invited] 11:20-11:45

TBA

Fabio Cicoira (Polytechnique Montreal , Canada)

[B10-4] [Invited] 11:45-12:10

Geometrically Engineered Rigid Island Array for Stretchable Displays and Electronics Capable of Withstanding Various Deformation Modes

Jun Chang Yang, Seungkyu Lee, and Steve Park (KAIST, Korea)

Session Title:	11. OLED Device 1
Session Date:	August 24 (Wed.), 2022
Session Time:	10:50-11:55
Session Room:	Room C (217)

[C11-1] [Invited] 10:50-11:15

A Comprehensive Analysis of Interfacial Mixing Impact on Degradation of Solution-Processed OLEDs

Thi Na Le and Min Chul Suh (Kyung Hee Univ., Korea)

[C11-2] [Invited] 11:15-11:40

The Polariton OLED: Towards Microcavity OLEDs with Large Color Gamut and No Angle Sensitivity

Andreas Mischok, Sabina Hillebrandt, Seonil Kwon, Malte C. Gather (Univ. of Cologne, Germany)

[C11-3] 11:40-11:55

Breaking the Efficiency Limit of Deep-Blue Fluorescent OLEDs based on Anthracene Derivatives

Hyoungcheol Lim, Seung-Je Woo (Seoul Nat'l Univ., Korea), Yeon Hee Ha, Yun-Hi Kim (Gyeongsang Nat'l Univ., Korea), and Jang-Joo Kim (Seoul Nat'l Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	12. Applied Vision / Human Factors 2
Session Date:	August 24 (Wed.), 2022
Session Time:	10:50-12:15
Session Room:	Room D (218)

[D12-1] [Featured Invited] 10:50-11:20

Phenomenal Awareness in the Periphery

Sang Chul Chong and Cheongil Kim (Yonsei Univ., Korea)

[D12-2] [Invited] 11:20-11:45

Visual Perception beyond the Critical Fusion Frequency

Seonggyue Choe, Changyeong Han (UNIST, Korea), Hyosun Kim (Samsung Display Co., Ltd., Korea), and Oh-Sang Kwon (UNIST, Korea)

[D12-3] 11:45-12:00

Clear Motion: A New Compliance Test Program for Display Clarity

Dale Stolitzka (Samsung Display America Lab., USA), Yongwoo Yi (Samsung Display Co., Ltd., Korea), Neo Yeom (Samsung Display Co., Ltd., Korea), and Frank Seto (Samsung Display America Lab., USA)

[D12-4] 12:00-12:15

Fast and Accurate Acquisition of Pixel-Level Luminance DeMURA-Data for Curved and Freeform Displays

Ingo Rotscholl (TechnoTeam Bildverarbeitung GmbH, Germany), Shin Myung Choi (IS-Soft Co., Ltd., Korea), and Udo Krüger (TechnoTeam Bildverarbeitung GmbH, Germany)

Session Title:	13. Emerging Devices for Display Technology 2
Session Date:	August 24 (Wed.), 2022
Session Time:	10:50-12:25
Session Room:	Room E (311~312)

[E13-1] [Invited] 10:50-11:15

Ligand Engineering in Halide Perovskite Materials

Soo Young Kim (Korea Univ., Korea)

[E13-2] [Invited] 11:15-11:40

Metasurface-Based Decoupling of Optical Properties and the Related Multifunctional Meta-Devices for Image Display

Guoxing Zheng (Wuhan Univ., China)

[E13-3] 11:40-11:55

High-κ Compatible 2D-Material Electronics for Display Devices

Mayuri Sritharan and Youngki Yoon (Univ. of Waterloo, Canada)

[E13-4] 11:55-12:10

Electrospinning of Metal Oxide Nanofibers for Flexible Electronics

Tan Tan Bui, Minh Nhut Le, Seungbeom Shin, and Myung-Gil Kim (Sungkyunkwan Univ., Korea)

[E13-5] 12:10-12:25

Impact of Self-Absorption and Photon Recycling in Metal-Halide Perovskite LEDs Assessed by Full Opto-Electronic Device Simulation

Urs Aeberhard, Simon Zeder, Sandra Jenatsch, Balthasar Blülle, and Beat Ruhstaller (Fluxim AG, Switzerland)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	14. Advanced Driving Circuits
Session Date:	August 24 (Wed.), 2022
Session Time:	10:50-12:25
Session Room:	Room F (313)

[F14-1] [Invited] 10:50-11:15

LTPO GIP Driving Technology for Low Power Consumption and VRR

Jung Chul Kim, Juhn Suk Yoo, Chung Wan Oh, Chung Sik Gong, Han Wook Hwang, and Hyun Jae Kim (LG Display Co., Ltd., Korea)

[F14-2] [Invited] 11:15-11:40

LTPO-Based CMOS TFT Circuit

Yi Kyoung You (Konkuk Univ., Korea), Sang Yong No, Kyung Ho Kim, Gi Chang Lee (Samsung Display Co., Ltd., Korea), and Kee Chan Park (Konkuk Univ., Korea)

[F14-3] 11:40-11:55

A Highly Stable Scan Driver Circuit based on LTPO TFTs for Mobile Displays

Ye-Rim Jeong, Eun Kyo Jung, Sara Hong, Hwarim Im, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

[F14-4] 11:55-12:10

Adaptive Frequency Driving Scan Driver Combined with Logic Circuit based on a-InGaZnO TFTs

Jinho Moon, Eseudeo Yun, Yongchan Kim, and Hojin Lee (Soongsil Univ., Korea)

[F14-5] 12:10-12:25

Digital Video's Limitations Are Impeding the Market Transition from 4K to 8K Displays. Modulated Analog Video Is the Way Forward!

Alex Henzen and Simon Molloy (HYPHY USA Inc., USA)

Session Title:	15. Nanostructured Materials for Optelectronics
Session Date:	August 24 (Wed.), 2022
Session Time:	10:50-12:20
Session Room:	Room G (314~315)

[G15-1] [Invited] 10:50-11:15

Progress in Lighting Materials and Devices Using Quantum Dots

Armin Wedel, Yohan Kim, Jiyong Kim, and Hyung-Seok Choi (Fraunhofer Inst. for Applied Polymer Research, Germany)

[G15-2] [Invited] 11:15-11:40

Multidimensional Perovskite Nanocrystal for Color Conversion Applications

Won Bin Im (Hanyang Univ., Korea)

[G15-3] [Invited] 11:40-12:05

High-Performance Chiral Organic Optoelectronics Using Supramolecular Chirality

Joon Hak Oh (Seoul Nat'l Univ., Korea)

[G15-4] 12:05-12:20

Fabrication of Large Surface Nano-Structured ZnO Thin Film Phosphor for Lighting Application

Htet Su Wai, Iwasaki Daichi, and Chaoyang Li (Kochi Univ. of Tech., Japan)

Session Title:	16. Bio-Integrated Optelectronic Devices 2
Session Date:	August 24 (Wed.), 2022
Session Time:	10:50-12:15
Session Room:	Room H (316~317)

[H16-1] [Featured Invited] 10:50-11:20

Electroceuticals for Wound Healing and Brain Disease Treatment by Using Freeform OLEDs

Yongjin Park, Byeongju Noh, and Kyung Cheol Choi (KAIST, Korea)

[H16-2] [Invited] 11:20-11:45

Conformable Image Sensor for Biomedical Imaging and Sensing

Tomoyuki Yokota (Univ. of Tokyo, Japan)

[H16-3] 11:45-12:00

Mucous Glycoprotein-Based Neuromorphic Device for Skin-Attachable Electronics

Kunho Moon, Sung Min Rho, Sujin Jung, Jong Hyuk Ahn, Youjin Seo, and Hyun Jae Kim (Yonsei Univ., Korea)

[H16-4] 12:00-12:15

A Triboelectrification Driven Electrochromic Device as a Self-Powered Smart Glass and Its Application in Display Technology

Kee Chin Lim, Hsuan-Yu Yeh, Yung-Hsin Chen, and Zong-Hong Lin (Nat'l Tsing Hua Univ., Taiwan)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	17. Device Physics
Session Date:	August 25 (Thu.), 2022
Session Time:	09:00-10:45
Session Room:	Room A (211~213)

[A17-1] [Invited] 09:00-09:25

Scaling Quantum Circuit Simulation Using Storage Devices

Jaejin Lee (Seoul Nat'l Univ., Korea)

[A17-2] [Invited] 09:25-09:50

Improving OLED Performance via Microscopic Simulation of Exciton Dynamics

Tobias Neumann, Artem Fediai, Timo Strunk, and Franz Symalla (Nanomatch GmbH, Germany)

[A17-3] [Invited] 09:50-10:15

Device Physics of OLEDs and Perovskite LEDs: An Update about Model Parameter Determination and Photon Recycling

S. Jenatsch, S. Sem, C. Vael, S. Zeder, U. Aeberhard, S. Züfle, B. Blülle, M. Regnat, K. Pernstich, and B. Ruhstaller (Fluxim AG, Switzerland)

[A17-4] [Featured Invited] 10:15-10:45

Experimentally Validated Simulation Study of Exciton Stability in Organic Semiconductors Used in OLEDs

R. Coehoorn, E. de Jong, C.H.L. Weijtens (Eindhoven Univ. of Tech., The Netherlands), C. Hauenstein (Simbeyond B.V., The Netherlands), N. de Rooij, P.A. Bobbert (Eindhoven Univ. of Tech., The Netherlands),, S. Gottardi, and H. van Eersel (Simbeyond B.V., The Netherlands)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	18. Oxide TFT 1
Session Date:	August 25 (Thu.), 2022
Session Time:	09:00-10:20
Session Room:	Room B (214~216)

[B18-1] [Invited] 09:00-09:25

Degradation Mechanism in Oxide TFT

Shunsuke Omae, Takanori Takahashi, Mutsunori Uenuma, and Yukiharu Uraoka (NAIST, Japan)

[B18-2] [Invited] 09:25-09:50

Technical Challenge of OLED Displays for Premium TVs

Hong-Jae Shin, Soo-Hong Choi, Sung-Hwan Hong, Sung-Joon Bae, and Han-Seop Kim (LG Display Co., Ltd., Korea)

[B18-3] 09:50-10:05

Understanding of Cation Compositional Effect in Indium Gallium Oxide Thin-Film Transistors by Atomic Layer Deposition

Jae Seok Hur and Jae Kyeong Jeong (Hanyang Univ., Korea)

[B18-4] 10:05-10:20

Improvement Contact Resistivity of Amorphous IGZO Thin-Film Transistors with IGTO/TiN/ITO Stacked Source/Drain Electrodes

Seungwan Seo, Taikyu Kim, Seeun Kim, Joohee Jeong, Taegue Yang, and Jae Kyeong Jeong (Hanyang Univ., Korea)

Session Title:	19. OLED Materials 2
Session Date:	August 25 (Thu.), 2022
Session Time:	09:00-10:30
Session Room:	Room C (217)

[C19-1] [Invited] 09:00-09:25

V-Shaped Hosts Bearing a Cyclohexane Core for Solution-Processed Thermally Activated Delayed Fluorescence OLEDs

Na Yeon Kwon, Min Ju Cho, Dong Hoon Choi, and Chang Wook Han (Korea Univ., Korea)

[C19-2] [Invited] 09:25-09:50

Design Strategy towards TADF Emitters with High Kr and Krisc

Lian Duan (Tsinghua Univ., China)

[C19-3] [Invited] 09:50-10:15

Thermally Activated Delayed Fluorescence Emitters for High-Efficiency OLEDs

Shaolong Gong (Wuhan Univ., China)

[C19-4] [Kim Yong-Bae Award-Gold Prize] 10:15-10:30

Benzonitrile Modified N-Type Host to Achieve High Efficiency and Long Lifetime in Blue Phosphorescent Organic Light-Emitting Diodes

Yoon Sung Kim (Sungkyunkwan Univ., Korea)

Session Title:	20. QD Diplay 1
Session Date:	August 25 (Thu.), 2022
Session Time:	09:00-10:35
Session Room:	Room D (218)

[D20-1] [Invited] 09:00-09:25

Low-Dimensional Halide Perovskites for Light Emission

Lina Quan (Virginia Tech, USA)

[D20-2] [Invited] 09:25-09:50

Surface Engineering for Quantum-Dots-Based Optoelectronic Devices

Seungjin Lee (KENTECH, Korea)

[D20-3] 09:50-10:05

Advanced Mixed Halide Red Perovskite Quantum-Dot Synthesis via Iodine Source Management and LED Applications

Hyeon Woo Jeong, Seungmin Baek, Hyejin Na, Sungho Choi, Seon Joo Lee (KRICT, Korea), Myung-Gil Kim (Sungkyunkwan Univ., Korea), and Jaemin Lee (KRICT, Korea)

[D20-4] 10:05-10:20

The Study of Inverted Quantum Dot Light-Emitting Diodes with Post Treatment

Hansol Seo, Minhyung Lee, Yeseul Park, Jeonghun Kwak (Seoul Nat'l Univ., Korea)

[D20-5] 10:20-10:35

Transient Electroluminescence Analysis of Quantum Dot Light Emitting Diodes with Hybrid Emissive Layers

Seyoung Lee and Honyeon Lee (Soonchunhyang Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	21. AR / VR / MR
Session Date:	August 25 (Thu.), 2022
Session Time:	09:00-10:30
Session Room:	Room E (311~312)

[E21-1] [Invited] 09:00-09:25

Advanced Reality: Real-World Appearance Manipulation with Projector Camera Systems

Toshiyuki Amano (Wakayama Univ., Japan)

[E21-2] [Invited] 09:25-09:50

Using Virtual Reality to Study Human Cognition: Predicting Decision-Making in Accidents

Uijong Ju (Kyung Hee Univ., Korea)

[E21-3] [Invited] 09:50-10:15

Advanced Technologies for Large FOV Waveguide and Compact Projector

Satoshi Shiraga (Cellid, Inc., Japan)

[E21-4] 10:15-10:30

See-through Cylindrical Light Field Display

Moonseong Park, Seongju Lee, Hosung Jeon, Daerak Heo, and Joonku Hahn (Kyungpook Nat'l Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	22. Selected Oral Session
Session Date:	August 25 (Thu.), 2022
Session Time:	09:00-10:15
Session Room:	Room F (313)

[F22-1] 09:00-09:15

Predicting How Accelerated Lifetime Studies are Impacted by Charge and Excitonic Balance in OLED Devices

Arthur Vauzelle, Christoph Hauenstein, Engin Torun, Siebe van Mensfoort, Stefano Gottardi (Simbeyond B.V., The Netherlands), Reinder Coehoorn (Eindhoven Univ. of Tech., The Netherlands), and Harm van Eersel (Simbeyond B.V., The Netherlands)

[F22-2] 09:15-09:30

A Study on Developing AI Model for Optimal Design of Lamination Pad

Choongmin Jeong, Hyunseung Koh, Jungsik Nam, Hyoyul Yoon, Byongug Park, Hyunjun Kim, Yudeok Seo, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[F22-3] 09:30-09:45

Development of QD-OLED Technology with Fine Quantum Dot Pixel Array Using Inkjet Printing Process

Byoung-Hwa Kwon (ETRI, Korea), Chang Min Lee (DUKSAN Neolux, Co.,Ltd., Korea), Dong-Kyun Shin, Jaeryul Yu (Gosantech, Korea), Yeon Soo Lee (DUKSAN Neolux, Co.,Ltd., Korea), Hyunsu Cho, Chan-Mo Kang, Chul Woong Joo, Jin-Wook Shin, Sukyung Choi, Yoonsung Yoo, Hyungwoo Suh, Nam Sung Cho (ETRI, Korea), Hyun Sang Cho, and Jae Hyun Lim (DUKSAN Neolux, Co.,Ltd., Korea)

[F22-4] 09:45-10:00

A Flash-Based Cu Conductor on Display Glass Substrates for μLED Application

Jung Ho Shin, Seung Hyung Lee, Jae Hee Lee, Sang Hyun Park, and Keon Jae Lee (KAIST, Korea)

[F22-5] 10:00-10:15

Molecule Doping Enabling Mobility Boosting of 2D Sn(II)-Based Perovskites

Youjin Reo, Huihui Zhu, Ao Liu, and Yong-Young Noh (POSTECH, Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	23. LC Optics for AR / VR Displays
Session Date:	August 25 (Thu.), 2022
Session Time:	09:00-10:15
Session Room:	Room G (314~315)

[G23-1] [Invited] 09:00-09:25

High Speed Switchable Liquid Crystal Lens for AR/VR/MR

Ming Cheng, An-ran Li, Zheng-nan Yuan, Zhi-bo Sun, Souptik Mukherjee, and Abhishek Kumar Srivastava (Hong Kong Univ. of Science and Tech., Hong Kong)

[G23-2] [Invited] 09:25-09:50

Maturing Planar Optics for Augmented Reality and Other Display Applications

Nelson Tabiryan (BEAM Engineering for Advanced Measuremets Co., USA)

[G23-3] [Invited] 09:50-10:15

Tunable Colloidal Lens for AR and VR Systems

P. A. N. S. Priyadharshana, Seung-Ho Hong, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	24. Bio-Integrated Optelectronic Materials 1
Session Date:	August 25 (Thu.), 2022
Session Time:	09:00-10:35
Session Room:	Room H (316~317)

[H24-1] [Invited] 09:00-09:25

Soft Nanomembrane Bioelectronics for Advancing Human Healthcare

Woon-Hong Yeo (Georgia Tech., USA)

[H24-2] [Invited] 09:25-09:50

Sono-Optogenetics: Ultrasound-Triggered Light Source for Minimally Invasive Optogenetics

Huiliang (Evan) Wang (Univ. of Texas at Austin, USA)

[H24-3] 09:50-10:05

Biocompatible Silibinin Based Biodegradable Neuromorphic Device for Implantable Medical Electronics

Dong Hyun Choi, Hyung Tae Kim, Kyungho Park, Min Seong Kim, and Hyun Jae Kim (Yonsei Univ., Korea)

[H24-4] 10:05-10:20

Bio-inspired Organic Synapse based on Ferroelectric Ion Gel with Long Term Memory

Ritamay Bhunia, Joo Sung Kim, Hyukmin Kweon, Dong Jun Kim, and Do Hwan Kim (Hanyang Univ., Korea)

[H24-5] 10:20-10:35

Hydrogel-Based Strong and Fast Actuators by Electroosmotic Turgor Pressure

Hyeonuk Na, Yong-Woo Kang, Chang Seo Park, Sohyun Jung, Ho-Young Kim, and Jeong-Yun Sun (Seoul Nat'l Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	25. Smart Design
Session Date:	August 25 (Thu.), 2022
Session Time:	11:00-12:10
Session Room:	Room A (211~213)

[A25-1] [Invited] 11:00-11:25

Reinforcement Learning Based Digital Circuit Design

Hyoungsik Nam, Hyeonseong Cho, Yun Jang Pyun, Ji Hoon Kim, and Yeon Hak Pyo (Kyung Hee Univ., Korea)

[A25-2] 11:25-11:40

Unsupervised Learning and Clustering of Diffraction Spike Characteristics by under Display Camera

Dowon Yi (Samsung Display Co., Ltd., Korea)

[A25-3] 11:40-11:55

Development of Pixel Layout Augmentation Method for AI Based Parasitic Capacitance Extraction Model

In Huh, Jaekeon Bae, Sooyoung Lee, Byeongkeun Kang, Kiseok Chang, Ilho Kim, Seokwoo Lee, Yong Min Ha, and Sooyoung Yoon (LG Display Co., Ltd., Korea)

[A25-4] 11:55-12:10

Optimal GIP TFT Sizing with Deep Reinforcement Learning

Sooyoung Lee, Wonwoo Choi, Youn-Yeol Yu, Jaekeon Bae, In Huh, Kiseok Chang, Ilho Kim, Seokwoo Lee, Yong Min Ha, and Sooyoung Yoon (LG Display Co., Ltd., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	26. Oxide TFT 2
Session Date:	August 25 (Thu.), 2022
Session Time:	11:00-12:20
Session Room:	Room B (214~216)

[B26-1] [Invited] 11:00-11:25

High Mobility Hydrogen-Doped Polycrystalline Indium Oxide (InO_x:H) TFTs

Mamoru Furuta, Taiki Kataoka (Kochi Univ. of Tech., Japan), and Yusaku Magari (Shimane Univ., Japan)

[B26-2] [Invited] 11:25-11:50

Hydrogen Defects in Transparent Amorphous Oxide Semiconductors

Julia Medvedeva (Missouri Univ. of Science and Tech., USA)

[B26-3] 11:50-12:05

Remarkable Stability Improvement of High-Performance PEALD-IZO/IGZO Top-Gate Thin-Film Transistor via Nano Scale Thickness Control

Yoon-Seo Kim, Won-Bum Lee, Hye-Jin Oh, Tae Hyun Hong, and Jin-Seong Park (Hanyang Univ., Korea)

[B26-4] 12:05-12:20

Organic/Inorganic Hybrid Top-Gate Transistors with Ultra-High Electron Mobility via Enhanced Electron Pathways

Ji-Min Park, Cunoh Lee, Kyung Jin Lee, and Hyun-Suk Kim (Chungnam Nat'l Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	27. OLED Device 2
Session Date:	August 25 (Thu.), 2022
Session Time:	11:00-12:20
Session Room:	Room C (217)

[C27-1] [Invited] 11:00-11:25

Fast Understanding of Charge Dynamics in Organic Light-Emitting Diodes Using Novel Fingerprint and Convolutional Neural Network

Jae-Min Kim, Junseop Lim, Jun Yeob Lee (Sungkyunkwan Univ., Korea)

[C27-2] [Invited] 11:25-11:50

Bridging the Scales: Towards Parameter-Free Computer-Aided OLED Designfrom Molecule to Device

Siebe van Mensfoort, Arthur Vauzelle, Engin Torun, Stefano Gottardi, and Harm van Eersel (Simbeyond B.V, The Netherlands)

[C27-3] 11:50-12:05

Controlling Doping Efficiency in Organic Thin-Film

Paul Winget, Hadi Abroshan, H. Shaun Kwak, Christopher T. Brown, David J. Giesen, and Mathew D. Halls (Schrödinger, Inc, USA)

[C27-4] 12:05-12:20

Accelerated Lifetime Testing and Degradation Mechanisms of Three Organic Light-Emitting Diode Generations

Stefano Sem, Sandra Jenatsch, Simon Züfle, Arno Gadola (Fluxim AG, Switzerland), Dinara Samigullina (IAPP, Germany), Daniel Hudson (Merck KGaA, Germany), Sebastian Reineke (IAPP, Germany), Christoph Pflumm (Merck KGaA, Germany), and Beat Ruhstaller (Fluxim AG, Switzerland)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	28. QD EL 1
Session Date:	August 25 (Thu.), 2022
Session Time:	11:00-12:15
Session Room:	Room D (218)

[D28-1] [Featured Invited] 11:00-11:30

The Progress of TCL IJP-QLED Display

Cao Weiran (TCL, China)

[D28-2] 11:30-11:45

Synergistic Molecular Dipole Orientation for Efficient and Stable All-Inorganic Quantum Dot based Light-Emitting Diodes

Seunghyun Rhee (KRICT, Korea) and Wan Ki Bae (Sungkyunkwan Univ., Korea)

[D28-3] 11:45-12:00

Efficient Excess Electron Harvesting Using Thermal Activated Delayed Fluorescence for Improvement Device Performance of Quantum Dot Light Emitting Diodes

Jeong-Yeol Yoo, Yoon-Jeong Choi, Tae Hoon Ha, Chil Won Lee, Jang Sub Kim, and Byung Doo Chin (Dankook Univ., Korea)

[D28-4] 12:00-12:15

A Transient Electroluminescence Study on Cadmium-Free Quantum Dot Light-Emitting Diodes

Ahyoung Hong, Jaeyoul Kim, and Jeonghun Kwak (Seoul Nat'l Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	29. Holography and Metasurface
Session Date:	August 25 (Thu.), 2022
Session Time:	11:00-12:25
Session Room:	Room E (311~312)

[E29-1] [Invited] 11:00-11:25

Towards High-Quality Holographic Displays with Deep-Learning and Binary Optimization

Byounghyo Lee and Sunghee Hong (KETI, Korea)

[E29-2] 11:25-11:40

Metasurface-Based Structured Light Illumination Over Full-Space for Three-Dimensional Imaging

Gyeongtae Kim, Yeseul Kim, Jooyeong Yun, and Junsuk Rho (POSTECH, Korea)

[E29-3] 11:40-11:55

Holographic Concave Pin-Mirror for Augmented Reality Glasses

Hyunbeen Jang, Hosung Jeon, Seongju Lee, Munseong Park, and Joonku Hahn (Kyungpook Nat'l Univ., Korea)

[E29-4] 11:55-12:10

The Design Principles and the Experimental Characterization of Electrically Tunable Bifocal Metalens System

Yeseul Kim, Trevon Badloe, Inki Kim, Joohoon, and Junsuk Rho (POSTECH, Korea)

[E29-5] 12:10-12:25

Holographic Aberrations Compensation of Near-Eye Display with Holographic Optical Element

Seongju Lee, Hosung Jeon, Daerak Heo, Woonchan Moon, Minwoo Jung, and Joonku Hahn (Kyungpook Nat'l Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	30. Young Leaders Conference 1
Session Date:	August 25 (Thu.), 2022
Session Time:	11:00-12:45
Session Room:	Room F (313)

[F30-1] 11:00-11:15

Decoding and Predicting Eye Fatigue in a Visual Search Task

Uijong Ju (Kyung Hee Univ., Korea)

[F30-2] 11:15-11:30

Liquid Crystal Polymer Networks and Elastomers for Actuators, Electronics, and Beyond

Hyun Kim (KRICT, Korea)

[F30-3] 11:30-11:45

Pixelated Camouflage Platform from Inflating Chiral Liquid Crystalline Elastomers

Se-Um Kim, Young-Joo Lee, Jiaqi Liu, Dae Seok Kim, Haihuan Wang, and Shu Yang (Univ. of Pennsylvania, USA)

[F30-4] 11:45-12:00

Detection of Carrier Multiplication as Photoelectric Signal in Quantum Dot Solids via Transient Photocurrent

Whi Dong Kim (KITECH, Korea), Vladmir Sayevich, and Victor I. Klimov (Los Alamos Nat'l Lab., USA)

[F30-5] 12:00-12:15

Solid Immersion Microlens for InGaAs-Based Short-Wave Infrared Image Sensors

Chang-Mo Kang (KOPTI, Korea), Simone Bianconi, Travis Hamilton, Jacob Rabinowitz, Skyler Wheaton, Lining Liu, Melville Ulmer, and Hooman Mohseni (Northwestern Univ., USA)

[F30-6] 12:15-12:30

Encapsulation Technology for Wearable Displays

Eun Gyo Jeong (Incheon Nat'l Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

[F30-7] [Kim Yong-Bae Award-Grand Prize] 12:30-12:45

Highly Bright Quantum Dot Light-Emitting Diodes with Top-Emission Structure

Taesoo Lee (Seoul Nat'l Univ., Korea)

Session Title:	31. Diffractive LC Lens
Session Date:	August 25 (Thu.), 2022
Session Time:	11:00-12:15
Session Room:	Room G (314~315)

[G31-1] [Featured Invited] 11:00-11:30

Chiral Liquid Crystal Flat Optical Diffractive Components for Augmented Reality Displays

Inge Nys, Migle Stebryte, Brecht Berteloot, Jeroen Beeckman, and Kristiaan Neyts (Ghent Univ., Korea)

[G31-2] 11:30-11:45

Fast Switchable Ferroelectric Liquid Crystal Dammann Grating and Polarization Grating System for Depth-Ranging

Yuechu Cheng, Zhibo Sun, Zhengnan Yuan, and Abhishek Kumar Srivastava (the Hong Kong Univ. of Science and Tech., Hong Kong)

[G31-3] 11:45-12:00

Self-Interference Incoherent Digital Holography Imaging System with Quarter-Wave Plate Condition Polarization Directed Flat Lens

Jae-Won Lee, Jun-Kai Wang, Jung-Yeop Shin (Kyungpook Nat'l Univ., Korea), Kihong Choi, Joongki Park (ETRI, Korea), Youngrok Kim, Sung-Wook Min (Kyung Hee Univ., Korea), and Hak-Rin Kim (Kyungpook Nat'l Univ., Korea)

[G31-4] 12:00-12:15

The Beam Steering Device with Liquid Crystal Phase Grating

Yelin Lee, Sungeun Park (POSTECH, Korea), Seung-won Oh (Kangwon Nat'l Univ., Korea), and Wook-sung Kim (POSTECH, Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	32. Bio-Integrated Optelectronic Materials 2
Session Date:	August 25 (Thu.), 2022
Session Time:	11:00-12:35
Session Room:	Room H (316~317)

[H32-1] [Invited] 11:00-11:25

Materials Design for High-Performance Stretchable and Self-Healing Semiconducting Polymers

Yu-Cheng Chiu (Nat'l Taiwan Univ. of Science and Tech., Taiwan)

[H32-2] [Invited] 11:25-11:50

Bio-Integrated Fully Soft Organic Electronics Enabled by Elastomeric Composite Materials

Kyoseung Sim (UNIST, Korea)

[H32-3] 11:50-12:05

L-Tryptophan-Based Resistive Random Access Memory for Biodegradable and Bio-implantable Transient Electronics

Moon Ho Lee, Jong Bin An, Won Kyung Min, Dong Hyun Choi, Seok Gyu Hong, and Hyun Jae Kim (Yonsei Univ., Korea)

[H32-4] 12:05-12:20

Artificial Chemo-Neural Synapse Transistors Using Semiconducting Polymer Gel Networks

Dong Jun Kim, Hyukmin Kweon, Joon-Seok Lee, Seon-Jin Choi, Do Hwan Kim (Hanyang Univ., Korea)

[H32-5] 12:20-12:35

Triboresistive Touch Sensing: Grid-Free Touch Point Recognition based on Monolayered Ionic Power Generators

Younghoon Lee, Sungsoo Lim, Won Jun Song, Sudong Lee, Sohee John Yoon, Jae-Man Park, Min-Gyu Lee, Yong-Lae Park, and Jeong-Yun Sun (Seoul Nat'l Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	33. Metaverse
Session Date:	August 25 (Thu.), 2022
Session Time:	16:00-17:40
Session Room:	Room A (211~213)

[A33-1] [Invited] 16:00-16:25

Microdisplay for Metaverse: Human Perception Difference in LCoS, Micro-OLED, and Micro-LED

Minsu Jeong, Se-Jin Park, and Bo-Eun Kim (Raontech Inc., Korea)

[A33-2] [Invited] 16:25-16:50

Integrated Optics for Metaverse Displays

Paul Heremans, Bruno Figeys, Kristof Lodewijks, Rongchen Qin, Anabel De Proft, Bharathkumar Mareddi, Eleonora Storace, Roelof Jansen, and Xavier Rottenberg (imec, Belgium)

[A33-3] [Invited] 16:50-17:15

Light field augmented reality near-eye displays using waveguide

Jae-Hyeung Park (Inha Univ., Korea)

[A33-4] [Invited] 17:15-17:40

A Holographic Communication System for the Metaverse

Lidan He, Zehao He, and Liangcai Cao (Tsinghua Univ., China)

Session Title:	34. Application of TFTs
Session Date:	August 25 (Thu.), 2022
Session Time:	16:00-17:30
Session Room:	Room B (214~216)

[B34-1] [Invited] 16:00-16:25

Flexible Dynamic Sensor Arrays based on Solution-Processed Oxide Semiconductors Thin-Film Transistors

Bowen Zhu (Westlake Univ., China)

[B34-2] [Invited] 16:25-16:50

Ultra-High-Resolution Color filter Imbedding technology for 72K Large Area Active Matrix Digital Holographic Display Application

Joo Yeon Kim (ETRI, Korea)

[B34-3] [Invited] 16:50-17:15

Ferroelectric Thin-Film Transistors for Memory and Neuromorphic Device Applications

Jang-Sik Lee (POSTECH, Korea)

[B34-4] 17:15-17:30

IGZO-Based Neuromorphic Synapse Device for Neural Network Acceleration

Gilsu Jeon, Seongmin Park, Suwon Seong, and Yoonyoung Chung (POSTECH, Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	35. OLED Manufacturing 1
Session Date:	August 25 (Thu.), 2022
Session Time:	16:00-17:30
Session Room:	Room C (217)

[C35-1] [Invited] 16:00-16:25

Nanopositioning of Highly Ordered Nanosphere Pattern Arrays for Efficient Light Harvesting

Jung Kyu Kim (Sungkyunkwan Univ., korea)

[C35-2] [Invited] 16:25-16:50

Spectroscopy Analysis for Charge Transfer States in Organic Semiconductors

Somi Park, Eun-Jeong Jang, So-Young Boo, Hye-Ri Joe, Akpeko Gasonoo, Young-Ji Lim, Seung-Hoon Lee, Jonghee Lee, and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

[C35-3] [Invited] 16:50-17:15

Competitive Analysis of Low Power Consumption and High Color Gamut OLED Displays

Mike Hack, Michael S. Weaver, and Julie J. Brown (Universal Display Corp., USA), and Kunjal Parikh (Intel Corp., USA)

[C35-4] 17:15-17:30

Premium Black for Large Sized White OLED

Cheol Kyu Lee, Jung Hyun Ham, Chung Sun Lim, Su Dong Roh, Sang Min Lee, Tae Rim Lee, Han Seop Kim, Chang Ho Oh (LG Display Co., Ltd., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	36. Multisensory Technology for Display and Beyond 1
Session Date:	August 25 (Thu.), 2022
Session Time:	16:00-17:20
Session Room:	Room D (218)

[D36-1] [Invited] 16:00-16:25

Stimuli Responsive Modality for Display Interface

Pooi See Lee (Nanyang Tech. Univ., Singapore)

[D36-2] [Invited] 16:25-16:50

Dynamic Metaphotonics for Flat Optical Devices, Structural Colors and Holographic Displays

Junsuk Rho (POSTECH, Korea)

[D36-3] 16:50-17:05

3D-Stacked Thin-film Transistors for Signal Decoupling of Pressure and Temperature

Youngmin Jo and Sungjune Jung (POSTECH, Korea)

[D36-4] 17:05-17:20

Hybrid Phototransistor with Outstanding Photoresponsivity (>2×10^{8} A W^{-1}) Using Novel Organic Bulk Heterojunction Layer

Jinpyeo Jeung, Hyung Min Ko, Seok Joo Yang, Seung Mo Kim, Kilwon Cho, and Yoonyoung Chung (POSTECH, Korea)

Session Title:	37. 3D Display Optics
Session Date:	August 25 (Thu.), 2022
Session Time:	16:00-17:20
Session Room:	Room E (311~312)

[E37-1] [Invited] 16:00-16:25

Dynamic Displays based on High-Speed Optical Components

Hiromasa Oku (Gunma Univ., Japan)

[E37-2] [Invited] 16:25-16:50

Color Volumetric Display with Laser-Driven Aerial Voxels

Kota Kumagai and Yoshio Hayasaki (Utsunomiya Univ., Japan)

[E37-3] 16:50-17:05

Optical Design for Displaying 3D Contents in a Glass Ball with Multi-View Optical Modules

Jeonghyuk Park, Gunhee Lee, Jinwook Lee, Taeyoung Yoon, Jaejun Lee, Woonchan Moon, and Joonku Hahn (Kyungpook Nat'l Univ., Korea)

[E37-4] 17:05-17:20

Centimeter-Sized Volumetric Display with Femtosecond Laser Excitations to Various Gas

Tatsuki Mori, Kota Kumagai, and Yoshio Hayasaki (Utsunomiya University, Japan)

Session Title:	39. LC Elastomer
Session Date:	August 25 (Thu.), 2022
Session Time:	16:00-17:05
Session Room:	Room G (314~315)

[G39-1] [Invited] 16:00-16:25

Collective Action of Liquid Crystal Elastomer Actuators

Taylor Ware (Texas A&M Univ., USA)

[G39-2] [Invited] 16:25-16:50

Reprocessable and Reprogrammable Liquid Crystal Elastomers Incorporating Dynamic Thiourea Bonds

Suk-kyun Ahn (Pusan Nat'l Univ., Korea)

[G39-3] 16:50-17:05

Azimuthal and Radial Microstructures Using Reactive Mesogens

Kitae Kim, Moon-Young Choi, Mohsin Hassan Saeed, and Jun-Hee Na (Chungnam Nat'l Univ., Korea)

Session Title:	40. Bio-Integrated Optelectronic Materials 3
Session Date:	August 25 (Thu.), 2022
Session Time:	16:00-17:35
Session Room:	Room H (316~317)

[H40-1] [Invited] 16:00-16:25

Autonomously Self-Healing and Stretchable Materials for Skin-Inspired Electronics

Ho-Hsiu Chou (Nat'l Tsing-Hwa Unv., Taiwan)

[H40-2] [Invited] 16:25-16:50

Biodegradable Materials for Electronic Medicine and Biosensors

Lan Yin (Tsinghua Univ., China)

[H40-3] 16:50-17:05

Solar Powered Flexible Electronic System for Wireless Optogenetic Neuromodulations

Jaejin Park, Kyubeen Kim, Tae Soo Kim, Chanwoo Lee, and Ki Jun Yu (Yonsei Univ., Korea)

[H40-4] 17:05-17:20

Shape-Morphing Display based on Liquid Metal-Graphene Nanoparticles-Polymer Composite

Subin Oh and Jae-Woong Jeong (KAIST, Korea)

[H40-5] 17:20-17:35

Stretchable Nervetronics for Next-Generation Neuroprosthetics

Dae-Gyo Seo, Yeongjun Lee (Seoul Nat'l Univ., Korea), Yuxin Liu, Zhenan Bao (Stanford Univ., USA), and Tae-Woo Lee (Seoul Nat'l Univ., Korea)

Session Title:	41. QD Display 2
Session Date:	August 26 (Fri.), 2022
Session Time:	09:00-10:35
Session Room:	Room A (211~213)

[A41-1] [Invited] 09:00-09:25

How Perovskite Quantum Dots will Help the LCD Industry to Survive

Norman A. Luechinger (Avantama Ltd, Switzerland)

[A41-2] [Invited] 09:25-09:50

Strategies to Improve Electroluminescence Efficiency in Colloidal Metal-Halide Perovskite Nanocrystals

Young-Hoon Kim (Hanyang Univ., Korea), Sungjin Kim, Jinwoo Park, and Tae-Woo Lee (Seoul Nat'l Univ., Korea)

[A41-3] 09:50-10:05

A Study of Defect Control for High Performance Perovskite Light-Emitting Diodes

Bo Ram Lee (Pukyong Nat'l Univ., Korea)

[A41-4] 10:05-10:20

Efficient and Stable Siloxane Encapsulated QD Film and Pattern Printing for OLED Color Conversion Devices

Choi Yoon-Jeong (Dankook Univ., Korea)

[A41-5] 10:20-10:35

Shape-Tuned Multiphoton-Emitting InP Tetrapod Nanocrystal

Taehee Kim (Yonsei Univ., Korea), Youngsik Kim, Seongmin Park (Sungkyunkwan Univ., Korea), Kyoungwon Park (KETI, Korea), Zhen Wang, Sang Ho Oh, Sohee Jeong (Sungkyunkwan Univ., Korea), and Dongho Kim (Yonsei Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	42. Integrations of TFTs
Session Date:	August 26 (Fri.), 2022
Session Time:	09:00-10:20
Session Room:	Room B (214~216)

[B42-1] [Invited] 09:00-09:25

Recent Progress of Oxide-TFT-Based Inverter Technology

Kenji Nomura (Univ. of California San Diego, USA)

[B42-2] [Invited] 09:25-09:50

High Performance p-Type Metal Halide Semiconductor for Large Area Electronics

Myung-Gil Kim (Sungkyunkwan Univ., Korea)

[B42-3] 09:50-10:05

High-Performance Stacked LTPS Back-Plane Technologies for Extremely-High Definition AMOLED Displays

Keunwoo Kim, Jaehwan Chu, Doona Kim, Dokyeong Lee, Sangsub Kim, Jiyoung Shin, Hyena Kwak, Hanbit Kim, Sanggun Choi, Junhyung Lim, Taewook Kang, and Changhee Lee (Samsung Display Co., Ltd., Korea)

[B42-4] 10:05-10:20

Flexible Light-To-Frequency Conversion Circuits by Using Complementary Photosensitive Ring Oscillators with p-Type SWNT and n-Type a-IGZO Thin Film Transistors

Seung Gi Seo, Hyunbin Jo, Jinheon Jeong, Seo-young Jo, Soohyun Kim, and Sung Hun Jin (Incheon Nat'l Univ., Korea)

Session Title:	43. OLED Materials 3
Session Date:	August 26 (Fri.), 2022
Session Time:	09:00-10:30
Session Room:	Room C (217)

[C43-1] [Invited] 09:00-09:25

Solution-Processed Thermally Activated Delayed Fluorescence Emitters for Organic Light-Emitting Devices

Guohua Xie (Wuhan Univ., China)

[C43-2] [Invited] 09:25-09:50

TBA

Dongge Ma (South China Univ. of Tech., China)

[C43-3] [Invited] 09:50-10:15

TBA

Remi Anemian (Merck, Germany)

[C43-4] 10:15-10:30

Pure Organic Based Extended Multiple-Resonance Fluorophores with High Efficiency over 30% and Narrowband Emission with 23 nm FWHM for Blue Organic Light-Emitting Diodes

Ha Lim Lee (Sungkyunkwan Univ., Korea), Soon Ok Jeon, Inkoo Kim (Samsung Electronics co., ltd., Korea), Seung Chan Kim, Junseop Lim (Sungkyunkwan Univ., Korea), Joonghyuk Kim, Sangho Park , Jun Chwae, Won-Joon Son, Hyeonho Choi (Samsung Electronics co., ltd., Korea), and Jun Yeob Lee (Sungkyunkwan Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	44. Multisensory Technology for Display and Beyond 2
Session Date:	August 26 (Fri.), 2022
Session Time:	09:00-10:25
Session Room:	Room D (218)

[D44-1] [Invited] 09:00-09:25

Liquid Crystal Speckle Reducers for Immersive and Projector Displays

Stephen Morris (Univ. of Oxford, UK)

[D44-2] 09:25-09:40

2T Voltage-Mode Active Pixel Circuit for Optical Fingerprint in Dual Gate Indium Gallium Zinc Oxide Technology

Aris Siskos (KU Leuven, Belgium), Florian De Roose, Marc Ameys (IMEC, Belgium), Auke J. Kronemeijer, Albert van Breemen, Hylke B. Akkerman (TNO/Holst Centre, The Netherlands), Wim Dehaene, and Kris Myny (KU Leuven, Belgium)

[D44-3] 09:40-09:55

Self-Powered, Ambient Light Self-Rejection Fire Monitoring Via Solution Processed Perovskite $CaTiO_3$/NiO Heterostructure UVC Photodetector

Subin Lee, Taehyun Park, Jaehyun Hur, and Hocheon Yoo (Gachon University, Korea)

[D44-4] 09:55-10:10

A New Conjugated Donor Polymer for Organic Photodetectors Applicable to the Organic Semiconductor-Based Biometric Sensor

Jong Baek Park, Ezgi Darici (CLAP Co., Ltd., Korea), WonJo Jeong, In Hwan Jung (Hanyang Univ., Korea), and Kangil Seo (CLAP Co., Ltd., Korea)

[D44-5] 10:10-10:25

Room Temperature Sub-ppm Sensitivity of Silicon Microwires Based Gas Sensor

Quang Trung Le and Jaekyun Kim (Hanyang Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	45. Pixel Processes for OLED / Micro-LED
Session Date:	August 26 (Fri.), 2022
Session Time:	09:00-10:35
Session Room:	Room E (311~312)

[E45-1] [Invited] 09:00-09:25

New Directions in OLED Evaporation Technology; Parallel Beam Plane Source Evaporation for 10,000ppi Micro-OLED & Vertical Type FMM Evaporation for 8G AMOLED

Changhun Hwang, Sung Su Kim (OLEDON, Dankook Univ., Korea), In Ho Jeong, and Byung Doo Chin (Dankook Univ., Korea)

[E45-2] 09:25-09:40

Development of RGB Direct Patterning Technology for OLED Micro-Display

Jae Hoon Jung, Chiwoo Kim, Dong Young Sung, Myung Hwan Choi, and Kiro Jung (APS Research, Korea)

[E45-3] 09:40-09:55

Micro/Mini LED Array Transferred onto a Flexible Substrate Using Simultaneous Transfer and Bonding (SITRAB) Process and Anisotropic Solder Film (ASF)

Jiho Joo, Gwang-Mun Choi, Chanmi Lee, In-Seok Kye, Yong-Sung Eom, Ki-Seok Jang, Kwang Hoon Jung, Yoon-Hwan Moon, Ho-Gyeong Yun, Seok Hwan Moon, and Kwang-Seong Choi (ETRI, Korea)

[E45-4] 09:55-10:10

Collimating and Recycling Linear Evaporation Source for AMOLED Mass Production

Sungmoon Kim, Daejoon Chi, Taekgi Lee, and Gyoung O Ko (R&D center of Depolab Inc., Korea)

[E45-5] [Invited] 10:10-10:35

Recent Advances in Ultrashort Pulse Lasers for Next Generation Displays

Chandra Nathala, Jim Bovatsek, Jay Ahn, and Herman Chui (Spectra-Physics MKS Instrument, USA)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	46. Ultra-High Resolution
Session Date:	August 26 (Fri.), 2022
Session Time:	09:00-10:10
Session Room:	Room F (313)

[F46-1] [Invited] 09:00-09:25

5291-ppi Micro OLED Display for Metaverse Enabled by Monolithic Stack of CAAC IGZO FET and Si CMOS

Kiyoshi Kato, Hidetomo Kobayashi, Munehiro Kozuma, Tomoya Aoyama, Shingo Eguchi, Ryota Hodo, Koji Kusunoki, Hitoshi Kunitake, and Shunpei Yamazaki (Semiconductor Energy Laboratory Co., Ltd., Japan)

[F46-2] 09:25-09:40

Stacked Vertical Oxide TFTs for Ultra High Resolution Display

Yong-Hae Kim, Jong-Heon Yang, Jae-Eun Pi, and Chi-Sun Hwang (ETRI, Korea)

[F46-3] 09:40-09:55

Improvement in Device Performance of Mesa-Shaped Vertical-Channel Thin-Film Transistors Using In-Ga-Zn-O Bilayer Channels Prepared by ALD Process

Hyun-Min Ahn (Kyung Hee Univ., Korea), Young-Ha Kwon, Nak-Jin Seong, Kyu-Jeong Choi (NCD Co., Ltd., Korea), Chi-Sun Hwang (ETRI, Korea), and Sung-Min Yoon (Kyung Hee Univ., Korea)

[F46-4] 09:55-10:10

Analysis on Short-Channel Effects of Thin Film Transistors Using Composition-Modified In-Ga-Sn-O Channels Prepared by Atomic-Layer Deposition

Shin-Ho Noh, Hyo-Eun Kim (Kyung Hee Univ., Korea), Jong-Heon Yang, Yong-Hae Kim (ETRI, Korea), Young-Ha Kwon, Nak-Jin Seong (NCD Co., Ltd., Korea), Chi-Sun Hwang (ETRI, Korea), Kyu-Jeong Choi (NCD Co., Ltd., Korea), and Sung-Min Yoon (Kyung Hee Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	47. LC Alignment & Defect
Session Date:	August 26 (Fri.), 2022
Session Time:	09:00-10:25
Session Room:	Room G (314~315)

[G47-1] [Featured Invited] 09:00-09:30

Novel Photoalignment Technology of Liquid Crystals

Atsushi Shishido (Tokyo Inst. of Tech., Japan)

[G47-2] [Invited] 09:30-09:55

Control of Topological Defect Arrays and Pattern Formation in Nematic Liquid Crystals

MinSu Kim and Francesca Serra (Johns Hopkins Univ., USA)

[G47-3] 09:55-10:10

Self-Regulating Surface Encapsulation of Liquid Crystals

Daeseop Choi, Jun-Hyung Im, Eunsu Cho (POSTECH, Korea), Jin Seog Gwag (Yeungnam Univ., Korea), and Young-Ki Kim (POSTECH, Korea)

[G47-4] 10:10-10:25

2-Axis Control of LC Director with Pulse-Train Electric Field Waveforms

Vitaly Petrovich Panov, Jiseon Yang, Karunarathne L. Migara, Hyun-JinYoon, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	48. Micro LED Display Driving Technology
Session Date:	August 26 (Fri.), 2022
Session Time:	09:00-10:20
Session Room:	Room H (316~317)

[H48-1] [Invited] 09:00-09:25

Will Micro-LED Be the Right Answer for Metaverse Display?

Bo-Eun Kim, Jeong-Hwan Lee, Eun-Su Kim, Joon Goo Lee, Min-Su Jeong, and Min-Seok Kim (RAONTECH Inc., Korea)

[H48-2] [Invited] 09:25-09:50

Monolithically Integrated TFTs for MicroLED – from Microdisplays to Smart Chiplets

Ioannis Kymissis (Columbia Univ., USA), Vincent Lee, and Gen Lauer (Lumiode, Inc., USA)

[H48-3] 09:50-10:05

Monolithic Integration of P-MOSFET on LED Epi Wafer

Boseong Son, Seung Hyeok Lee, Ji Hoon Kim, and Si-Hyun Park (Yeungnam Univ., Korea)

[H48-4] 10:05-10:20

A μLED Pixel Circuit based on Metal Oxide Thin-Film Transistor Using Pulse Width Modulation

Eun Kyo Jung, Sara Hong, Ye-Rim Jeong, Hwarim Im, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	49. QD EL 2
Session Date:	August 26 (Fri.), 2022
Session Time:	11:00-12:35
Session Room:	Room A (211~213)

[A49-1] [Invited] 11:00-11:25

Recent Developments of Quantum Dot Light Emitting Diodes

Seunguk Noh, Sehun Kim, Jaekook Ha, Yeo-geon Yoon, and Changhee Lee (Samsung Display Co., Ltd., Korea)

[A49-2] [Invited] 11:25-11:50

The Latest Progress in Heavy Metal Free NanoLED Technology

Christian Ippen, Jeffrey DaRos, Igor Coropceanu, Jeff Yurek (Nanosys, Inc., USA), Yohei Nakanishi, Takeshi Ishida (Sharp Display Tech. Corp., Japan), and Homer Antoniadis (Nanosys, Inc., USA)

[A49-3] 11:50-12:05

Enhanced Charge Balance with Antibiotics in Both Electron and Hole Transport Layers ofInP/ZnSexS1−x/ZnS-Based Quantum Dot Light-Emitting Diodes

Awais Ali, Yonghyeok Choi, Boram Kim, and Heeyeop Chae (Sungkyunkwan Univ., Korea)

[A49-4] 12:05-12:20

Carrier Injection and the Transport Mechanism of Quantum Dot Light Emitting Diodes through Adjusting the Transport Properties and Using Interlayer

Hee Jung Kwak, Woo Jin Jeong, Jin Ho Park, Ri Gyeong Kwon, and Jun Young Kim (Gyeongsang Nat'l Univ., Korea)

[A49-5] 12:20-12:35

Enhancing Light Out-Coupling Efficiency of Top-Emitting ZnSeTe Quantum Dot Light-Emitting Diodes by Employing Capping Layer

Minhyung Lee, Taesoo Lee, and Jeonghun Kwak (Seoul Nat'l Univ., Korea)

Session Title:	50. Oxide TFT 3
Session Date:	August 26 (Fri.), 2022
Session Time:	11:00-12:30
Session Room:	Room B (214~216)

[B50-1] [Invited] 11:00-11:25

Development of High Mobility Oxide TFTs for AMOLEDs

Joon Seok Park, Jun Hyung Lim, Taewook Kang, and Changhee Lee (Samsung Display Co., Ltd., Korea)

[B50-2] [Invited] 11:25-11:50

Progressive Manufacturing Technology in LTPO

Tae-Hyoung Moon, Ki-Tae Kim, Sung-Jin Lee, Kwon-Shik Park, Jeom-Jae Kim, and Soo-Young Yoon (LG Display Co., Ltd., Korea)

[B50-3] [Invited] 11:50-12:15

High-Performance Oxide TFTs based on Semiconductors and Semimetals

Jiawei Zhang (Shandong Univ., China), Josh Wilson (Univ. of Manchester, UK), and Aimin Song (Shandong Univ., China)

[B50-4] 12:15-12:30

Impact of Precursor Aging and Relative Humidity on the Electric Performance of Solution-Deposited Amorphous Gallium Oxide Thin Film Transistors

Diki Purnawati, Juan Paolo Bermundo, and Yukiharu Uraoka (NAIST, Japan)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	51. OLED Device 3
Session Date:	August 26 (Fri.), 2022
Session Time:	11:00-12:15
Session Room:	Room C (217)

[C51-1] [Invited] 11:00-11:25

Impact of Ag Adhesion Layer on Plasmon Outcoupling Efficiency

Nicholas Thompson (UDC, USA)

[C51-2] [Invited] 11:25-11:50

Turning Green Light into Blue with No Up-Conversion Tricks, How far can Hyperfluorescence be pushed?

Andrew Monkman (Univ. of Durham, UK)

[C51-3] [Invited] 11:50-12:15

One Last Step towards Commercialization of Hyperfluorescence™

Junji Adachi (Kyulux Inc., Japan)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	53. New Processes for Display Devices
Session Date:	August 26 (Fri.), 2022
Session Time:	11:00-12:25
Session Room:	Room E (311~312)

[E53-1] [Invited] 11:00-11:25

How Can We Come Up with a Solution to Enhance Flexible OLED's Thin Film Encapsulation?

Myoung-Soo Huh, Choel-Min Jang, Dong-Kyun Ko, and Cheol-Lae Roh (Samsung Display Co., Ltd., Korea)

[E53-2] 11:25-11:40

Printing of Micrometer-Size Conductive and Insulating Structures for Display Prototyping and Manufacturing

Aneta Wiatrowska, Piotr Kowalczewski, Karolina Fiączyk, Łukasz Witczak, Jolanta Gadzalińska, Mateusz Łysień, Ludovic Schneider, and Filip Granek (XTPL SA, Poland)

[E53-3] 11:40-11:55

Ternary Inverters based on CVD Grown MoS_2 and Inkjet Printed SWCNTs

Hye Young Lee (Sookmyung Women's Univ., Korea), Sangyeon Pak (Hongik Univ., Korea), Jungmoon Lim (Sungkyunkwan Univ., Korea), SeungNam Cha (Sungkyunkwan Univ., Korea), and Bongjun Kim (Sookmyung Women's Univ., Korea)

[E53-4] 11:55-12:10

Precise Laser Cutting of Multi-Stacked Thin Glasses for Foldable Display

Sunggyu Park, Hyungsik Kim, Woohyun Jung, Seunghoon Jang, Junghwa You, Kyunghan Yoo, Jekil Ryu, Seongho Jeong, and Cheollae Roh (Samsung Display Co., Ltd., Korea)

[E53-5] 12:10-12:25

Laser Technologies for MicroLED Display Manufacturing

René Liebers and Mandy Gebhardt (3D-Micromac AG, Germany)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	54. OLEDoS
Session Date:	August 26 (Fri.), 2022
Session Time:	11:00-12:05
Session Room:	Room F (313)

[F54-1] [Invited] 11:00-11:25

OLED Microdisplays for AR/VR Applications

Amal Ghosh, Ilyas Khayrullin, Fangchao Zhao, Howard Lin, Fridrich Vazan, and Laurie Sziklas (eMagin Corp., USA)

[F54-2] [Invited] 11:25-11:50

RGB Direct Patterning of 3,000ppi OLEDoS for AR/VR Display

Chiwoo Kim, Jae Hoon Jung, and Kiro Jung (APS Research Corporation, Korea)

[F54-3] 11:50-12:05

Efficiency Enhanced CMOS Based OLED Microdisplay with Aluminum Anode

Chan Young Park (Samsung Display Co., Ltd., Korea) and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

Session Title:	55. Grating & Photonic Crystal Using LC
Session Date:	August 26 (Fri.), 2022
Session Time:	11:00-12:20
Session Room:	Room G (314~315)

[G55-1] [Invited] 11:00-11:25

Electro-Optical Response of Polymer Stabilized Blue Phase Liquid Crystals

Kyung Min Lee, Michael E. Mc Conney, Timothy J. Bunning, and Nicholas P. Godman (Wright-Patterson AFB, USA)

[G55-2] [Invited] 11:25-11:50

Geometrical Analysis of Selective Reflection of Cholesteric Liquid Crystal Polarization Gratings

Ryotaro Ozaki, Kohdai Saiki, and Kazunori Kadowaki (Ehime Univ., Japan)

[G55-3] 11:50-12:05

Enhanced Security Platform via Active Multi-Band Metasurface with Tunable Heliconical Liquid Crystal Modulators

Jun-Hyung Im, Yeongseon Choi, Daeseop Choi, Joohoon Kim, Junsuk Rho, and Young-Ki Kim (POSTECH, Korea)

[G55-4] 12:05-12:20

Electrically Stretchable Color Change Using Chiral Photonic Gels

Seungmin Nam, Dahee Wang, and Su Seok Choi (POSTECH, Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	56. Red Micro LED & Applications
Session Date:	August 26 (Fri.), 2022
Session Time:	11:00-12:35
Session Room:	Room H (316~317)

[H56-1] [Invited] 11:00-11:25

High Efficiency Submicron Scale Green and Red LEDs

Zetian Mi (Univ. of Michigan, USA)

[H56-2] [Invited] 11:25-11:50

Tuning III-N Emission for Red Light Emitting Devices

N. Ben Sedrine (i3N & Univ. de Aveiro & Castros S.A., Portugal), J. Rodrigues (Univ. de Aveiro, Portugal), D. Nd. Faye (Inst. Superior Técnico, Portugal), M. Bockowski (Polish Academy of Sciences, Poland), V. Hoffmann, M. Weyers (Leibniz-Inst. für Höchstfrequenztechnik, Germany), A. J. Neves (Univ. de Aveiro, Portugal), E. Alves, K. Lorenz (Inst. Superior Técnico, Portugal), M. R. Correia, T. Monteiro, and N. Ben Sedrine (i3N & Univ. de Aveiro & Castros S.A., Portugal)

[H56-3] 11:50-12:05

Thermally Stable Vertical μLED Patch for Facilitating Hair Growth

Jae Hee Lee and Keon Jae Lee (KAIST, Korea)

[H56-4] 12:05-12:20

First-Principles Analysis of Vacancies on GaN m Plane

Purun-hanul Kim (Seoul Nat'l Univ., Korea), Sang Ho Jeon (Samsung Display Co., Ltd., Korea), Seungwu Han (Seoul Nat'l Univ., Korea), and Youngho Kang (Incheon Nat'l Univ., Korea)

[H56-5] 12:20-12:35

Investigation of Size-Dependent Leakage Current and Efficiency of GaN-Based Micro Light-Emitting Diodes and Its Display Application

Jinwoo Park, Youngwook Shin, Byeongwoo Bak, and Jaekyun Kim (Hanyang Univ., Korea)

Session Title:	57. Recent QD Applications
Session Date:	August 26 (Fri.), 2022
Session Time:	16:00-17:20
Session Room:	Room A (211~213)

[A57-1] [Invited] 16:00-16:25

Colloidal Quantum Dot Image Sensor Technology

J. S. Steckel, J. Arnaud (STMicroelectronics, Grenoble, France), A. G. Pattantyus-Abraham (STMicroelectronics, Fremont, USA), E. Josse, M. Bidaud (STMicroelectronics, Grenoble, France), M. Sarmiento (STMicroelectronics, Fremont, USA), H. Wehbe-Alause, K. Rochereau (STMicroelectronics, Grenoble, France)

[A57-2] [Invited] 16:25-16:50

Cu Doped InP/ZnS Quantum Dots: Synthesis, Characterization, and Application in Photocatalysts

Jiwon Bang (Wonkwang Univ., Korea)

[A57-3] 16:50-17:05

Quantum Dot Light-Emitting Diode Display with Inkjet-Printed Emitting Layers Composed of Cd-free Quantum Dots and Organic Electron-transporting Materials

Yukiko Iwasaki, Genichi Motomura, Tatsuya Takei, Takenobu Usui, and Toshimitsu Tsuzuki (NHK STRL, Japan)

[A57-4] 17:05-17:20

A Study Of Defect Control For High Performance Perovskite Light-Emitting Diodes

Suhyeon Lee (Seoul Nat'l Univ., Korea), Kookjin Lee, Gyu-Tae Kim (Korea Univ., Korea), and Jeonghun Kwak (Seoul Nat'l Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	58. Emerging Materials & Transistors
Session Date:	August 26 (Fri.), 2022
Session Time:	15:50-17:05
Session Room:	Room B (214~216)

[B58-1] [Invited] 15:50-16:15

Highly Uniform and Printable Thin-Film Transistors Enabled by Carbon Nanotube Nanohybrid Composites

Kevin Schnittker, Zahra Bahrami, and Joseph Andrews (Univ. of Wisconsin-Madison, USA)

[B58-2] [Invited] 16:15-16:40

Interface Engineering of Two-Dimensional Materials for Display Applications

Woonggi Hong, Gi Woong Shim, Hamin Park, Seo Hak Park, Mingu Kang, and Sung-Yool Choi (KAIST, Korea)

[B58-3] [Invited] 16:40-17:05

Surface Charge Transfer Doping for Improved Performance of Transistor based on Emerging Semiconducting Materials

Jiyoul Lee (Pukyong Nat'l Univ., Korea)

Session Title:	59. OLED Manufacturing 2
Session Date:	August 26 (Fri.), 2022
Session Time:	15:50-17:20
Session Room:	Room C (217)

[C59-1] [Invited] 15:50-16:15

3D Pixel Structures for Enhancing Optical Out-coupling of OLED Displays

Chung-Chih Wu, Yi-Ting Chen, Sheng-Wen Wen, Po-Hsiang Liao, Chang-Cheng Lee, Wei-Kai Lee, Chun Wei Huang, Yu-Hung Yang, Kai-Chen Lin, Chi-Jui Chang, Guo-Dong Su, Hoang Yan Lin (Nat'l Taiwan Univ., Tiwan), Chung-Chia Chen, Wan-Yu Lin, B. Leo Kwak, and Robert Jan Visse (Inc., Santa Clara, USA)

[C59-2] [Invited] 16:15-16:40

Organic Light-Emitting Diode Device Technology for High Color Gamut Microdisplay

Dae Hyun Ahn, Jin-Wook Shin, Kukjoo Kim, Chul Woong Joo, Hyunsu Cho, Sukyung Choi, Byoung-Hwa Kwon, Gi Heon Kim, Chun-Won Byun, Nam Sung Cho, Jeong-Ik Lee (ETRI, Korea), Soobin Sim, Jinha Ryu, Hyunkoo Lee (Sookmyung Women's Univ., Korea), Hyoc Min Youn, Young Jae An, Jin Sun Kim (Dongjin Semichem Co., Ltd., Korea), Jeong Hwan Lee, Hokwon Kim, Minseok Kim (Raontech Co.,Ltd., Korea), and Chan-mo Kang (ETRI, Korea)

[C59-3] [Invited] 16:40-17:05

Improved Color Purity and Efficiency in Multi-Resonance Emitter-Based Pure Blue Emitting TADF OLEDs at a High Doping Concentration

Jeong-Hwan Lee (Inha Univ., Korea)

[C59-4] 17:05-17:20

Uniform Printing of High Efficiency Inkjet OLED with Low-Surface Tension Pixel Confinement Layers

Min Young Kim, Chil Won Lee, Jang Sub Kim, and Byung Doo Chin (Dankook Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	60. Young Leaders Conference 2
Session Date:	August 26 (Fri.), 2022
Session Time:	15:50-17:05
Session Room:	Room D (218)

[D60-1] 15:50-16:05

Advanced Two-Level Optical Encryption System based-on Hydrogel Metasurface

Byoungsu Ko, Trevon Badloe, Younghwan Yang, and Junsuk Rho (POSTECH, Korea)

[D60-2] 16:05-16:20

Electrohydrodynamic-Jet-Printed Strain-Sensor-In-Pixel for Resolution-Sustainable Active-Matrix Stretchable Displays

Won Kyung Min, Jong Bin An, Jusung Chung, Dong Hyun Choi, Gwan In Kim, Moon Ho Lee, and Hyun Jae Kim (Yonsei Univ., Korea)

[D60-3] 16:20-16:35

Ultrapure Deep Blue Multi-Resonance Organic Emitters with External Quantum Efficiency of 24.9% and CIEy 0.04 in Organic Light-Emitting Diodes

Jihoon Kang (Sungkyunkwan Univ., Korea), Soon Ok Jeon, Inkoo Kim (Samsung Electronics Co., ltd., Korea), Ha Lim Lee, Junseop Lim (Sungkyunkwan Univ., Korea), Joonghyuk Kim, Eun Kyung Lee, Jun Chwae, Yongsik Jung, Won Joon Son, Hyeonho Choi (Samsung Electronics Co., ltd., Korea), and Jun Yeob Lee (Sungkyunkwan Univ., Korea)

[D60-4] 16:35-16:50

The Renaissance of Metal-Halide Perovskite Transistors

Ao Liu, Huihui Zhu, Youjin Reo, and Yong-Young Noh (POSTECH, Korea)

[D60-5] 16:50-17:05

Synergistic Control of Hot Exciton Relaxation and Exciton–Polaron Dispersion Using a Polaron Retarder for Long Lifetime in Thermally Activated Delayed Fluorescent Organic Light-Emitting Diodes

Junseop Lim, Kyung Hyung Lee, Jae-Min Kim, and Jun Yeob Lee (Sungkyunkwan Univ., Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	61. TFT Processes & Manufacturing
Session Date:	August 26 (Fri.), 2022
Session Time:	15:50-17:05
Session Room:	Room E (311~312)

[E61-1] [Featured Invited] 15:50-16:20

Oxide TFTs with S/D-Contacts Patterned by High-Resolution Reverse-Offset Printed Resist Layers

Asko Sneck, Fei Liu, Henri Ailas, Kim Eiroma, Ari Alastalo, and Jaakko Leppäniemi (VTT Technical Research Centre of Finland Ltd., Finland)

[E61-2] 16:20-16:35

Grain-Ordered Polycrystalline Si Films Obtained via Spot-Beam Annealing

Jayoung Park, Ruobing Song, Nikita Lisenko, Bonan Shen, Alexander Killips, Adithya P. Nair, and James S. Im (Columbia Univ., USA)

[E61-3] 16:35-16:50

Identifying the Melting Mechanism Involved in ELA of Si Films

Nikita Lisenko, Bonan Shen, Jayoung Park, Ruobing Song, and James S. Im (Columbia Univ., USA)

[E61-4] 16:50-17:05

Ultra-High Refractive Index of Optically Transparent Hydrogenated Amorphous Silicon for a Low-Cost Functional Photonic Device at The Visible Frequencies

Younghwan Yang (POSTECH, Korea), Gwanho Yoon (Seoul Nat'l Univ. of Science and Tech., Korea), and Junsuk Rho (POSTECH, Korea)

iMiD 2022
The 22nd International Meeting on Information Display
August 23-26, 2022 / BEXCO, BUSAN, KOREA

Session Title:	62. Featured Late News
Session Date:	August 26 (Fri.), 2022
Session Time:	15:50-16:35
Session Room:	Room F (313)

[F62-1] 15:50-16:05

Ambipolar Thin-Film Transistors and Floating-Gate Memory Devices Enabled by Small-Molecules and Metal Oxide Heterostructure

Yunchae Jeon, Juhyung Seo, and Hocheon Yoo (Gachon Univ., Korea)

[F62-2] 16:05-16:20

High-Performance, Stretchable Thermoelectric Generators with Reduced Internal Resistance for Practical Wearable Applications

Dongju Jang, Hyeon Cho (Seoul Nat'l Univ., Korea), Byeongmoon Lee, Seungjun Chung (KIST, Korea), and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[F62-3] 16:20-16:35

Interfacial Passivation Engineering of Hole Transporting Layer for Highly Efficient CsPbBr3 Perovskite Quantum Dot Light-Emitting Diodes

Sinyoung Cho, Bowon Moon, Jae-Hyun Ahn, and Jong-Soo Lee (DGIST, Korea)

Session Title:	63. LC Applications
Session Date:	August 26 (Fri.), 2022
Session Time:	15:50-17:00
Session Room:	Room G (314~315)

[G63-1] [Invited] 15:50-16:15

Total-Internal-Reflection Freeform Light Guide Plate of Mini-LED Backlight for Liquid Crystal Display

Daochun Ye, Zibin Lin, Liwen Deng, Wenyan Zhang, Yun Ye, Sheng Xu, Enguo Chen, and Tailiang Guo (Fuzhou Univ., China)

[G63-2] 16:15-16:30

Fast Reconfigurable Antenna with Twisted Liquid Crystal Configuration

Dowon Kim, Kitae Kim, and Jun-Hee Na (Chungnam Nat'l Univ., Korea)

[G63-3] 16:30-16:45

Analytical Design of Double Layered Chiral Liquid Crystal Color Filter

Dahee Wang, Seungmin Nam, and Su Seok Choi (POSTECH, Korea)

[G63-4] 16:45-17:00

Polymer Dispersed Liquid Crystal with Functionalized-Carbon Nanotubes for NO_2 Gas Detection

Srinivas Pagidi, Soyeon Ahn, Youngseo Kim, Min Yong Jeon (Chungnam Nat'l Univ., Korea)

Session Title:	64. Beyond Micro LED Display
Session Date:	August 26 (Fri.), 2022
Session Time:	15:50-17:10
Session Room:	Room H (316~317)

[H64-1] [Invited] 15:50-16:15

MicroLED Technology and Applications by PixeLED Solutions

Yun-Li (Charles) Li and Ying-Tsang Liu (PlayNitride Inc., Taiwan)

[H64-2] [Invited] 16:15-16:40

InGaN Nanowire Vertical-Cavity Surface-Emitter for Nano-Pixel Applications

Yong-Ho Ra (Jeonbuk Nat'l Univ., Korea)

[H64-3] 16:40-16:55

High-Yield Bottom-Up Assembly of Nano LEDs for ＞2000 ppi Micro LED Display Application

Byeong-U Bak, Youngwook Shin, Jinwoo Park, and Jaekyun Kim (Hanyang Univ., Korea)

[H64-4] 16:55-17:10

Optogenetic Stimulation of Cortical Areas through Flexible Vertical Micro Light-Emitting Diodes for Behavioral Control of Mouse

Seung Hyung Lee, Jung Ho Shin, and Keon Jae Lee (KAIST, Korea)

Session Title:	P1. Poster Session 1
Session Date:	August 24 (Wed.), 2022
Session Time:	13:20-14:50
Session Room:	Room 2A Hall

[P1-001] 13:20-14:50

Automatic Particle Inspection on Display Panel and Flexible Printed Circuit Bonding Pad Using Object Detection

Seung Hwan Cheong and Nam Ik Cho (Seoul Nat'l Univ., Korea)

[P1-002] 13:20-14:50

Automated Equipment Control System Using Natural Language Processing

Dongchan Seo, Jae Hyeon Cha, Heegwan Ryu, EunJi Lim, Younghoon oh, and Jueun Park (Samsung Display Co., Ltd., Korea)

[P1-003] 13:20-14:50

Energy Combining System Using Double Q-Learning

Dongchan Seo, Heegwan Ryu, Deok Jae Kim, Eun Ji Lim, Younghoon oh, and Jueun Park (Samsung Display Co., Ltd., Korea)

[P1-004] 13:20-14:50

Knowledge Distillation between Representation and Texture Features for Cover Glass Defect Classification

Gyuhyun Lee, Hye Jun Kim, Dong Woo Lim, Jong Myong Choi, and Keun Seob Choi (Samsung Display Co., Ltd., Korea)

[P1-005] 13:20-14:50

Gamma Correction AI Algorithm Using Process Parameters of Fab

Min-Weun Kim (Samsung Display Co., Ltd., Korea)

[P1-006] 13:20-14:50

A Decomposition-Based Ensemble Network for Estimation of Critical Dimension in Lithographic Process of OLED Panel

Sujin Park, Younggil Jin, Jaewon Kim (Samsung Display Co., Ltd., Korea)

[P1-007] 13:20-14:50

Bayesian Optimization Method with Genetic Algorithm for Display Manufacturing Process Optimization

Daein Kang, Daeyong Kim, Jinsung Hwang, Jangwoo Kim, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-008] 13:20-14:50

HOP TFT IV Decoding with Asymmetric AE with Partial De-Noising

Kyongtae Park, Taeyoung Khim, Dongso Kim, Sanghoon Lim, Jungsuk Bae, Jongchan Lim, and Kyungjin Yoo (Samsung Display Co., Ltd., Korea)

[P1-009] 13:20-14:50

Display Sub-Pixel Shape Optimization Method for Maximizing Optical Properties

Bongjoon Park, Sangyun Lim, Hyunyoung Choi, Jongmin Ok, Daeyong Kim, Jangwoo Kim, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-010] 13:20-14:50

AI-Based Ensemble Architecture for Anomaly Detection of a Video Footage in an Evaporation Process of Manufacturing OLED Panels

Euiyoung Jeong, Eunwoo Kim, Changwook Seo, and Jaewon Kim (Samsung Display Co., Ltd., Korea)

[P1-011] 13:20-14:50

Automatic Failure Analysis of Touch Panel Displays Using XAI

Taekyung Yim, Sujin Park, Jin Jeon, and Sungho Cho (Samsung Display Co., Ltd., Korea)

[P1-012] 13:20-14:50

High Speed Transmission Line Design Using AI Technologies in Display

Hyo-Chul Lee, In-Soo Wang, Ji-Won Kim, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-013] 13:20-14:50

Layer Optimization of PCB for Display Using Simulation

Younyee Kang, Jiwon Kim, Insoo Wang, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-014] 13:20-14:50

Simulation-Based Optimization of Polarizer-Free OLED Structure

Jongbeom Hong, Gunshik Kim, Youngjun Yoo, Younho Han, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-015] 13:20-14:50

Optimal Classification Process for Defective Images

Young Woo Choi and Hee june Yang (Samsung Display Co., Ltd., Korea)

[P1-016] 13:20-14:50

Efficient Generation of Training Data with Time Series Prediction Values

Wonjun Lee, Cholho Kim, Jiyoung Lee, Haeryeong Park, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-017] 13:20-14:50

Improvement of Fine Metal Mask Defect Classification Model Using Contrastive Supervised Learning

Sang Sik Yang and Yonghee Han (Samsung Display Co., Ltd., Korea)

[P1-018] 13:20-14:50

Development and Application of an AI Prediction Model for TADF Device Lifetime Using Intermolecular Analysis

Seran Kim, Dongsun Yoo, Gyubong Kim, Hoilim Kim, Hyosup Shin, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-019] 13:20-14:50

Implementation of Inverse Design for Optical Multi-Layer Thin Films

Inho Lee, Changdae Kim, Kyoungjae Ju, Gunhee Jun, and Gwanho Yoon (Seoul Nat'l Univ. of Science and Tech., Korea)

[P1-020] 13:20-14:50

Numerical Approach for Sound Quality Prediction of the Large-Sized OLED Panel Speaker

Hyundo Shin, Hyun Sung Park, Yudeok Seo, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-021] 13:20-14:50

Display Uniformity Risk Region Detection based on M.L

Kim yongbin, Choi hyunyoung, Yang gunwoo, Park haeryeong, and Kim yongjo (Samsung Display Co., Ltd., Korea)

[P1-022] 13:20-14:50

Triboelectric Discharging Problems in QD-OLED Manufacturing and Solutions Using Electromagnetic Analysis

Hyun Sung Park, Hyeseok Na, Hyeondo Park, Sooyoung Park, Hyundo Shin, Yudeok Seo, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-023] 13:20-14:50

The Solution for Imbalanced Image Data Using Synthetic and Composite Images

Jung Sukbin (Samsung Display Co., Ltd., Korea)

[P1-024] 13:20-14:50

Degradation Analysis for Organic Light Emitting Diodes by TCAD Simulation and by Equivalent Circuit based on Impedance Spectroscopy

Kyungbok Choi, Sunyung Oh, Bowoon Kim, Richard James, Hyung Uk Cho, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-025] 13:20-14:50

Smart Design of Display Materials through Automated Machine Learning and Optimization with Genetic Algorithms

H. Shaun Kwak, Anand Chandrasekaran, Hadi Abroshan, Christopher T. Brown, and Mathew D. Halls (Schrödinger Inc., USA)

[P1-026] 13:20-14:50

Organic Radical Emitters: Impact of Morphology on the Nature of Excitons and Luminescence Efficiencies

Hadi Abroshan, Paul Winget, H. Shaun Kwak, Christopher T. Brown, and Mathew D. Halls (Schrödinger Inc., USA)

[P1-027] 13:20-14:50

Machine Sound Source Separation via Deep Convolutional Recurrent U-Net

Jungwon Ryu, Hankyeol Lee, Euiyeol Oh, Changgone Kim, and Yongmin Ha (LG Display Co., Ltd., Korea)

[P1-028] 13:20-14:50

Real-Time UDC Image Restoration Technology based on Synthetic Dataset

Jewon Yoo, Jaebum Cho, Daewook Kim, Hyunjoo Hwang, Sujin Choi, Dhohun Lee, Hyung Uk Cho, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-029] 13:20-14:50

Machine Learning-Based Layout Design Automation System in the Outside Circuit of the Panel

Joo-Sung Choi, Kwang Cheon Kim, Ilho Kim, Seok Woo Lee, Yong Min Ha, Soo Young Yoon, and Kiseok Chang (LG Display Co., Ltd., Korea)

[P1-030] 13:20-14:50

Angle Insensitive Metasurface Color Filters Designed by Deep Neural Network and Genetic Algorithm

Ki Won Jeong (Kyungpook Nat'l Univ., Korea), Donghwa Lee (Daegu Univ., Korea), and Yun Seon Do (Kyungpook Nat'l Univ., Korea)

[P1-031] 13:20-14:50

Backplane Design Generation Using Variational Transformer Networks

Keuk Jin Jeong, Jihoon Yang, Wongyun Kim, Min Kang, Yongwoo Lee, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-032] 13:20-14:50

Prediction Methodology for High-Performance OLED Devices based on Simulation-Assisted AI

Hyung Uk Cho, Ja Hoon Koo, Richard James, Bowoon Kim, Sun-Gyu Jung, Kyungbok Choi, Jintaek Cho, Junyoung Lee, Syunyoung Oh, Seungin Baek, Yongjo Kim, and Changhee Lee (Samsung Display Co., Ltd., Korea)

[P1-033] 13:20-14:50

Characterizing Optical Properties of Color Filters based on Reflectance and Transmittance Spectrum

Yunha Ryu, Jungmin Choi, Reayoung Kim, Younho Han, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-034] 13:20-14:50

Prediction of Optical Properties of QD-OLED Display Using Simplified Simulation Method

Sangyun Lim, Reayoung Kim, Younho Han, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-035] 13:20-14:50

Management System of Equipment Using Abnormal Detection AI Model

Gwon Gimin and Ham Youngmo (Samsung Display Co., Ltd., Korea)

[P1-036] 13:20-14:50

A Computational Analysis of Black Luminance by Internal Multi-Reflection in Display

Yong Sub Shim, Jong Beom Hong, Younho Han, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-038] 13:20-14:50

Numerical Calculation of the Ground-State Absorption Wavelength Shifts of CdSe/ZnSe/ZnS Quantum Dots under the Applied External Electric Field

Deokho Jang and Jungho Kim (Kyung Hee Univ., Korea)

[P1-039] 13:20-14:50

Low Grayscale Luminance Uniformity Prediction Using Transfer Learning

Seokhyun Yoon, Misuk Kim, Nayeon Hwang, Soyeong Park, Myeonghwa Kim, Jung-Suk Bae, Jeehun Seo, Dooyoul Lee, Jung-Tae Kang, and Jeong-il Yoo (Samsung Display Co., Ltd., Korea)

[P1-040] 13:20-14:50

Fire and Smoke Detection on Real Time CCTV Using Object Detection

Young Seoung Kim, Mun Jin Kim, and Jae Won Kim (Samsung Display Co., Ltd., Korea)

[P1-041] 13:20-14:50

Brain Inspired Optoelectronic Synaptic Transistor Using Polyimide and Indium-Gallium-Zinc Oxide Co-Sputtered Layer

Jong Hyuk Ahn, Min Seong Kim, Jong Bin An, Kunho Moon, Sujin Jung, and Hyun Jae Kim (Yonsei Univ., Korea)

[P1-042] 13:20-14:50

Simulation & AI Based Material Design System for OLED Applications: From OLED Devices to Materials

Hoilim Kim, Dongsun Yoo, Seran Kim, Eunkyung Koh, Hyunguk Cho, Sohae Kim, Youngmi Cho, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-043] 13:20-14:50

Unsupervised Domain Adaptation Method Using Simulation Data Set for OLED Manufacturing

Hyemin Lee, Yunyoung Kyung, Youngtae Kim, and Jaewon Kim (Samsung Display Co., Ltd., Korea)

[P1-044] 13:20-14:50

Highly Conductive Liquid Metal Thin-Film Using Evaporation

Seungseok Han and Jung-Yong Lee (KAIST, Korea)

[P1-045] 13:20-14:50

The Impact of Stretchable a-IGZO TFT Performance under Uni-Axial and Bi-Axial Mechanical Stress

Won-Bum Lee and Jin-Seong Park (Hanyang Univ., Korea)

[P1-046] 13:20-14:50

Scalable Fabrication of Stretchable and Transparent AgNWs-PDMS Touch Sensor

Soojeong Song, Jeong Dae Ha, Hyoju Shin, Nayoon Kim, and Kyung-In Jang (DGIST, Korea)

[P1-047] 13:20-14:50

Highly Stable, Deformable and Addressable Full Color MXene OLED Display: Toward Free-Form Transparent Electronic Systems

So Yeong Jeong (KAIST, Korea), Yonghee Lee (NNFC, Korea), and Kyung Cheol Choi (KAIST, Korea)

[P1-048] 13:20-14:50

Stretch-Aware Luminance Compensation for Stretchable Displays

Sung-Hoon Jung, Jung-Hyun Kim, and Suk-Ju Kang (Sogang Univ., Korea)

[P1-049] 13:20-14:50

Stretchable Organic Light-Emitting Diode Utilizing an Empty Area

Hagseon Kim and Kyung Cheol Choi (KAIST, Korea)

[P1-050] 13:20-14:50

Studies on Hump Phenomena Induced by Long-Term Mechanical Stress of Stretchable Top Gate InGaZnO Thin-Film Transistors on Wavy-Form Elastomer Substrates

Min Young Kim, Hyeong Wook Kim, and Bo Sung Kim (Korea Univ., Korea)

[P1-051] 13:20-14:50

Direct Writing of Elastic Conductors for Stretchable Displays

Byeongmoon Lee, Hyunjoo Cho, Youngpyo Ko, Heesuk Kim, and Seungjun Chung (KIST, Korea)

[P1-052] 13:20-14:50

Effect of Silane Acrylate on the Surface Properties, Adhesive Performance, and Rheological Behavior of Acrylic Pressure Sensitive Adhesives for Flexible Displays

Jun Hyeong Park, Sangkug Lee, and Ho Jun Song (KITECH, Korea)

[P1-053] 13:20-14:50

Glass-Fabric Reinforced Auxetic Substrate Platform for Omni-Directionally Stretchable Devices

Yung Lee, Junho Jang, Hyunhwan Lee, Seungwan Kim, Byung Jo Um, and Byeong-Soo Bae (KAIST, Korea)

[P1-054] 13:20-14:50

Optical Crosstalk Effect depending on Pixel Structures in High-Resolution Full-Color Organic Light-Emitting Diode Displays

Soobin Sim, Jinha Ryu (Sookmyung Women's Univ., Korea), Dae Hyun Ahn, Hyunsu Cho, Chan-mo Kang, Jin-Wook Shin, Chul Woong Joo, Gi Heon Kim, Chun-Won Byun, Nam Sung Cho (ETRI, Korea), Hyoc Min Youn, Young Jae An, Jin Sun Kim (Dongjin Semichem Co., Ltd., Korea), and Hyunkoo Lee (Sookmyung Women's Univ., Korea)

[P1-055] 13:20-14:50

Modulation of Vacancy-Ordered Double Perovskite Cs_2SnI_6 for Air-Stable Thin-Film Transistors

Ao Liu, Huihui Zhu, Youjin Reo (POSTECH, Korea), Hye Yong Chu, Jun Hyung Lim, Hyung-Jun Kim (Samsung Display Co., Ltd., Korea), and Yong-Young Noh (POSTECH, Korea)

[P1-056] 13:20-14:50

High-Performance Hysteresis-Free Perovskite Transistors through Anion Engineering

Huihui Zhu, Ao Liu, Youjin Reo (POSTECH, Korea), Hye Yong Chu, Jun Hyung Lim, Hyung-Jun Kim (Samsung Display Co., Ltd., Korea), and Yong-Young Noh (POSTECH, Korea)

[P1-057] 13:20-14:50

Impact of HfO_2 Reactant Gas on Electrical Characteristics of TFT

Kang-Min Lee (KITECH, Korea), Byeong-Kwon Ju (Korea Univ., Korea), and Sung-Hwan Choi (KITECH, Korea)

[P1-058] 13:20-14:50

Broadband Phototransistor based on n(IGTO)/p(SnSe) Heterojunction

Heesung Han, Minjae Kim, Seonwoong Bang, Taewoong Moon, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P1-059] 13:20-14:50

New Organic Salt p-Dopant for Sn-Based Halide Perovskite Thin Film Transistors

Ji-Young Go (POSTECH, Korea), Wenwu Li (Fudan Univ., China), and Yong-Young Noh (POSTECH, Korea)

[P1-060] 13:20-14:50

Interpretation of Channel Width-Dependent Shift in Device Characteristics of Oxide Semiconductor Thin-Film Transistors

Kihwan Kim, Su Hyun Kim, Mingoo Kim (Hanyang Univ., Korea), Joon Seok Park, Jun Hyung Lim (Samsung Display Co., Ltd., Korea), and Saeroonter Oh (Hanyang Univ., Korea)

[P1-061] 13:20-14:50

High-Performance Indium Gallium Oxide Thin-Film Transistor with Co-Sputtering

Sang Won Chung, Bang Ju Park, Gwang Bok Kim, Jeong A Lee, and Jae Kyeong Jeong (Hangyang Univ., Korea)

[P1-062] 13:20-14:50

Enhancement in Electron Mobility through Band-Gap Engineering in Atomic-Layer-Deposited In-Ga-Zn-O Stacks

Jae Hoon Cho, Heung Jo Lee, Jeong Eun Oh, Ye Byeol An, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P1-063] 13:20-14:50

Control Oxygen and Hydrogen to Improve Defects and Reliability in a-IGZO Thin-Film Transistor

Kanghyun Kim (Samsung Display Co., Ltd., Korea), Min Jung Kim, Sea In Ban, Ki Seok Heo, Sang Hyeok Kim (Korea Univ., Korea), Dong Yeon Cho, Ran Kim, Soo Im Jeong, Young-Gil Park, Na Ri Ahn (Samsung Display Co., Ltd., Korea), and Jae Woo Lee (Korea Univ., Korea)

[P1-064] 13:20-14:50

Flexible Active-Matrix Devices based on Sol-Gel-Based Metal-Oxide Dielectrics and Semiconductors by O_2 Annealing

Sang-Joon Park and Tae-Jun Ha (Kwangwoon Univ., Korea)

[P1-065] 13:20-14:50

Wafer-Scale Optical Memory Array with Light Intensity-Dependent Multi-Memory States

Seongjae Kim, Juhyung Seo, Taehyun Park, and Hocheon Yoo (Gachon Univ., Korea)

[P1-066] 13:20-14:50

Pre-State-Dependent Ternary/Binary Logic Operation Obtained by Ink-Jet Printed SWCNT/InO Heterojunction Transistors

Somi Kim (Gachon Univ., Korea), Seoyeon Jung, Bongjun Kim (Sookmyung Women's Univ., Korea), and Hocheon Yoo (Gachon Univ., Korea)

[P1-067] 13:20-14:50

Gate/Light Co-Tunable Negative Differential Resistance Behaviors from Small-Molecules Heterostructure

Yunchae Jeon, Seongjae Kim, and Hocheon Yoo (Gachon Univ., Korea)

[P1-068] 13:20-14:50

Visible Light Stimulated, Ferroelectric, and Solution-Processed Hybrid IGZO/Perovskite Thin Film Transistors for Artificial Synapses

Farjana Haque and Mallory Mativenga (Kyung Hee Univ., Korea)

[P1-069] 13:20-14:50

Effects of Thermal Recovery of Off-Bias Stressed LTPS TFTs

Youngrok Kim and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P1-070] 13:20-14:50

Analysis of LTPS TFT Defect Reduction via High Pressure Steam Annealing

Jongmin Yoo and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P1-071] 13:20-14:50

Effects of Active Layer Thickness on the Electrical Characteristics of IGTO TFTs

Hayoung Kim, Jidong Jin, and Jaekyun Kim (Hanyang Univ., Korea)

[P1-072] 13:20-14:50

Subthreshold Swing Engineering in a-IGZO TFT by Manipulating Oxygen Partial Pressure during RF-Magnetron Sputtering

Minsik Kong, Jimin Kang, and Soo-Yeon Lee (Seoul Nat'l Univ., Korea)

[P1-073] 13:20-14:50

Stability Test of ITZO TFTs by RGB Illumination

Zhenyuan Xiao, Jidong Jin, Jeongho Lee, and Jaekyun Kim (Hanyang Univ., Korea)

[P1-074] 13:20-14:50

Design of Thermally Induced Wrinkle Structure for Stretchable Display

Jeongeun Oh, Do Hyun Kim, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P1-075] 13:20-14:50

Enhancement of Electrical Performance and Bias Stability for ITZO TFTs

Jidong Jin and Jaekyun Kim (Hanyang Univ., Korea)

[P1-076] 13:20-14:50

PMOS Inverters based on Inkjet Printed Carbon Nanotubes

Juhee Park, Hyung Woo Choi (Sookmyung Women's Univ., Korea), Chen Jiang (Tsinghua Univ., China), and Bongjun Kim (Sookmyung Women's Univ., Korea)

[P1-077] 13:20-14:50

Shift of Middle Logic Voltages in Ternary Inverter Circuits

Seoyeon Jung, Hyung Woo Choi (Sookmyung Women's Univ., Korea), Chen Jiang (Tsinghua Univ., China), and Bongjun Kim (Sookmyung Women's Univ., Korea)

[P1-078] 13:20-14:50

A New Approach to Compensate Threshold Voltage Variation in the Current-Driving Display Using a Ferroelectric TFT

Taewon Jin, Cheol Jun Kim, Tae Hyeon Noh, Sun Xinkai (Hanyang Univ., Korea), Jae-Hoon Han (KIST, Korea), Sanghyeon Kim (KAIST, Korea), and Younghyun Kim (Hanyang Univ., Korea)

[P1-079] 13:20-14:50

Device Simulation Reflecting Hydrogen/Oxygen Diffusion for Oxide Semiconductor Thin Film Transistor

Kihwan Kim, Myungbo Sim, Byung Taek Son, Seunghyun Jang, Tae Young Choi, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-080] 13:20-14:50

Light Illumination Effect on a-IGZO Thin-Film Transistor with SU-8 Gate Insulator

Chan Min Jeong, Jong Mo Lee, Eun Seong Yu, Seo Jin Kang, Hyuck Su Lee, Seoung Gyun Kim, Min Seong Kim, and Byung Seong Bae (Hoseo Univ., Korea)

[P1-081] 13:20-14:50

Bias Stability of a-IGZO Thin-Film Transistor Using SU-8 Gate Insulator

Min Seong Kim, Eun Seong Yu, Chan Min Jeong, Seo Jin Kang, Hyuck Soo Lee, Seoung Gyun Kim, Jong Mo Lee, and Byung Seong Bae (Hoseo Univ., Korea)

[P1-082] 13:20-14:50

High-Performance Solution-Processed WSe_2 Transistors by Molecular Doping

Taoyu Zou and Yong-Young Noh (POSTECH, Korea)

[P1-083] 13:20-14:50

Analysis on Contact Resistance in n-Type Organic Field-Effect Transistors

Hyeona Jo and Jeongkyun Roh (Pusan Nat'l Univ., Korea)

[P1-084] 13:20-14:50

Ultralow Contact Resistance (~10^{-6} $\Omega \cdot cm^2$) between a-IGZO and Metal for Sub-μm Thin-Film Transistors

Hyuk Park, Juyoung Yun, Seongmin Park, Taewon Seo, and Yoonyoung Chung (POSTECH, Korea)

[P1-085] 13:20-14:50

Development of High-Performance 2D/3D Hybrid Tin Perovskite Transistors with Fluorinated Bulky Organic Cation

Wonryeol Yang and Yong-Young Noh (POSTECH, Korea)

[P1-086] 13:20-14:50

Enhancement on Three-Dimensional Formamidinium(FA) Based Tin Perovskite Transistors by Cation Substitution

Geonwoong Park and Yong-Young Noh (POSTECH, Korea)

[P1-087] 13:20-14:50

Low-Temperature Processable and Photo-Crosslinkable Polyimide Gate Dielectrics for Flexible Thin Film Transistors

Taek Ahn (Kyungsung Univ., Korea)

[P1-088] 13:20-14:50

Perfluorocyclobutane Containing Crosslinked Polyimide Gate Dielectric for Hysteresis Free Thin Film Transistor

Taek Ahn (Kyungsung Univ., Korea)

[P1-089] 13:20-14:50

Photoresponse Characteristics of Thin-Film Transistors based on 6,13-Bis(Triisopropylsilylethynyl)Pentacene: Polystyrene Blend

Hyunji Shin (Inha Univ., Korea), Jaehoon Park (Hallym Univ., Korea), and Dae Yu Kim (Inha Univ., Korea)

[P1-090] 13:20-14:50

Abnormal Increase of Aged Off-State Current in P-Type LTPS TFT by Excessive Bias Stress

Seunghyun Jang, Kihwan Kim, Yongsoo Lee, Tae Young Choi, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P1-091] 13:20-14:50

Effects of Hydrogen Incorporation on Electrical Performance in Top Gate Coplanar InGaZnO Thin-Film Transistors by Thermal Annealing

Hyeong Wook Kim (Korea Univ., Korea), Hyunjae Jung (ASML Korea, Korea), and Bo Sung Kim (Korea Univ., Korea)

[P1-092] 13:20-14:50

High-K Polysilsesquioxane and Dielectric Nature in Organic Field-Effect Transistors and Logic Devices

Tae Kyu An and Yong Jin Jeong (Korea Nat'l Univ. of Transportation, Korea)

[P1-093] 13:20-14:50

High Performance Oxide Thin-Film Transistors on the Polyethylene Naphthalate Substrate with Catalytic Layer

Yoonji Choi (KETI, Korea), Gwangbok Kim (Hanyang Univ., Korea), Yeji Kim (KETI, Korea), Jae Kyeong Jeong (Hanyang Univ., Korea), and Byungwook Yoo (KETI, Korea)

[P1-094] 13:20-14:50

Enhanced Electrical Performance and Stability of In–Ga–Sn–O Thin-Film Transistors with Al_2O_3 Grown by Dual-Atomic Layer Deposition

Changyong Oh, Hyunjae Jang, and Bo Sung Kim (Korea Univ., Korea)

[P1-095] 13:20-14:50

Increase in On-State Current of Polymer Electrolyte-Gated Transistors by Blending a PEDOT:Tos Composite with an Insulating Polymer

Jaehee So, Donguk Kim, Taemin Kim, Jaehwan Shin, Dongyeol Seo, Songhee Oh, and Felix Sunjoo Kim (Chung-Ang Univ., Korea)

[P1-096] 13:20-14:50

355 nm Nanosecond UV Laser Annealing of Amorphous In-Ga-ZnO Thin Film Transistor

Sang Yeon Park, Dong Hyun Lee, Younggon Choi, Dong Woon Lee, Hojun Kim, Sang Jik Kwon, Hocheon Yoo, Daeho Lee, Yongmin Jeon, and Eou-Sik Cho (Gachon Univ., Korea)

[P1-097] 13:20-14:50

Photomultiplication Type Organic Phototransistors for Reduction of the Dark Current

Sanghoon Park, Dongho Choi, Haechang Lee (KAIST, Korea), Hanul Moon (Dong-A Univ., Korea), and Seunghyup Yoo (KAIST, Korea)

[P1-098] 13:20-14:50

Electrical Stability for Positive Gate Bias Stress of a-InGaZnO TFFs with Al_2O_3 Grown by O_3-Thermal Atomic Layer Deposition as a Protection Layer

So Hee Park, Hyeong Wook Kim, and Bo Sung Kim (Korea Univ., Korea)

[P1-099] 13:20-14:50

Asymmetric Source/Drain Organic Phototransistors with Contact-Limited Operation

Dongho Choi, Haechang Lee, Sanghoon Park (KAIST, Korea), Hanul Moon (Dong-A Univ., Korea), and Seunghyup Yoo (KAIST, Korea)

[P1-100] 13:20-14:50

Ultrathin Dielectric Interlayer to Enhance the Contact between Oxide Semiconductor and Metal for High-Resolution Display

Juyoung Yun, Hyuk Park, and Yoonyoung Chung (POSTECH, Korea)

[P1-101] 13:20-14:50

Photo-Patternable High-K Polymer Gate Dielectrics for High Performance Oxide Transistors

Seong Cheol Jang, Hyun-Suk Kim, Gunoh Lee, and Kyung Jin Lee (Chungnam Nat'l Univ., Korea)

[P1-102] 13:20-14:50

Improvement of Electrical Performance of Te/TeO Thin Film Transistors Using Sputtering at Room Temperature

Seung Min Lee, Seong Cheol Jang, and Hyun-Suk Kim (Chungnam Nat'l Univ., Korea)

[P1-103] 13:20-14:50

The Omnidirectional Sound Characteristics of OLED Panel Speaker

Jang-Un Kwon and Jeong Man Lee (LG Display Co., Ltd., Korea)

[P1-104] 13:20-14:50

An AMOLED Flicker Measurement Method

Dajeong Lee, Sunyoung Park, Sanghyun Choi, Kyeongyeol Heo, Chelsoon Heo, Beomzi Kim, Kyuseok Kim, and Youngnam Youn (Samsung Display Co., Ltd., Korea)

[P1-105] 13:20-14:50

Luminance and Chromaticity Difference as a Function of f1' of XYZ Tristimulus Colorimeters on OLED Display

Hyong Min Hahm (Incheon Nat'l Univ., Korea)

[P1-106] 13:20-14:50

Study on Micro Image Quality by Designing Dimming Zones

Hyunah Suh, Han Byul Lim, Young-Jun Seo, Yongwoo Yi, and Jaejoong Kwon (Samsung Display Co., Ltd., Korea)

[P1-107] 13:20-14:50

Image Quality Enhancement based on Multi Light Source Estimation

Ji Heon Lee and Young Kyu Hong (KETI, Korea)

[P1-108] 13:20-14:50

Wide Luminance Range Measurement Imaging Colorimeter

Hyun Seock Oh, Chang Hun Lim, Seung Jin Lee, Mu Ju Kim, Ho Chul Lee, Kwon Moo Ryu, and Hee Dong Sung (ANI Co., Ltd., Korea)

[P1-109] 13:20-14:50

Effect of Brightness on Display Flicker at a Low Frequency: Experimental Methods Comparison for Flicker Perception

Minkyung Kim, Youra Kim, Hyungsuk Hwang, Eunjung Lee, Jaejoong Kwon, and Hyosun Kim (Samsung Display Co., Ltd., Korea)

[P1-110] 13:20-14:50

Effect of Age and Brightness on Display Flicker at a Low Frequency

Youra Kim, Hyungsuk Hwang, Eunjung Lee, Dong-Yeol Yeom, Jaejoong Kwon, and Hyosun Kim (Samsung Display Co., Ltd., Korea)

[P1-111] 13:20-14:50

Viewing Angle Enhancement of Holographic Display using Multi-Illumination and Binary Mask

Youngjin Jo, Dongheon Yoo, Minkwan Kim, and Byoungho Lee (Seoul Nat'l Univ., Korea)

[P1-112] 13:20-14:50

Three-Dimensional Display System for an Integral Imaging Microscope Using a Deep Neural Network and Augmented Reality

Shariar Md Imtiaz, Anar Khuderchuluun, Munkh-Uchral Erdenebat, Ki-Chul Kwon, Md. Biddut Hossain (Chungbuk Nat'l Univ., Korea), Hoonjong Kang (Wonkwang Univ., Korea), Jong-Rae Jeong (Suwon Science College, Korea), and Nam Kim (Chungbuk Nat'l Univ., Korea)

[P1-113] 13:20-14:50

Response Time Evaluation of Large Aerial Image Interface by 3D Motion Capture and AIRR

Mayu Adachi, Kosuke Inoue, Masaki Yasugi, Nao Ninomiya, Shiro Suyama, and Hirotsugu Yamamoto (Utsunomiya Univ., Japan)

[P1-114] 13:20-14:50

Android Application for Remote Patient Monitoring based on AR and IoT Sensors

Rupali Shinde, Nyamsuren Darkhanbaatar, Erkhembaatar Dashdavaa, Hui-Ying Wu, Chang-Won Shin (Chungbuk Nat'l Univ., Korea), Sang-Keun Gil (Suwon Univ., Korea), and Seok-Hee Jeon (Incheon Nat'l Univ., Korea), and Nam Kim (Chungbuk Nat'l Univ., Korea)

[P1-115] 13:20-14:50

Blur Width in Pop-Up Arc 3D Image Is Reduced With Observation Distance

Hiroto Oishi, Yuki Sato, Masaki Yasugi, Shiro Suyama, and Hirotsugu Yamamoto (Utsunomiya Univ., Japan)

[P1-116] 13:20-14:50

Aerial Display That Can Be Observed From 360 Degrees Around By AIRR Using a Conical Beam Splitter

Kenta Watanabe, Daiki Kudo, Masaki Yasugi, Shiro Suyama, and Hirotsugu Yamamoto (Utsunomiya Univ., Japan)

[P1-118] 13:20-14:50

Fast Computer-Generated Hologram Synthesis Using a Frequency Domain Information

Siwoo Lee, Dongheon Yoo, Juhyun Lee, Seung-Woo Nam, and Byoungho Lee (Seoul Nat'l Univ., Korea)

[P1-119] 13:20-14:50

Evaluation of Depth Perception Characteristics in Plane Fog Screen

Masaki Umemoto, Haruki Mizushina, Shiro Suyama, and Kenji Yamamoto (Tokushima Univ., Japan)

[P1-120] 13:20-14:50

Appropriate Position of Sensing Device for Detecting the User Movement in Manipulating Aerial Display

Takahiro Omoto, Kengo Fujii, Masaki Yasugi, Shiro Suyama, and Hirotsugu Yamamoto (Utsunomiya Univ., Japan)

[P1-121] 13:20-14:50

Floating Spatial-Blending Faces for Gazing Communication by Using Aerial Display

Keigo Sato, Masaki Yasugi, Shiro Suyama, and Hirotsugu Yamamoto (Utsunomiya Univ., Japan)

[P1-122] 13:20-14:50

Relationship between Cone Shape and Perceived Image in Cone-Shaped arc 3D Display

Akua Kawakami, Haruki Mizushina (Tokushima Univ., Japan), Shiro Suyama (Utsunomiya Univ., Japan), and Kenji Yamamoto (Tokushima Univ., Japan)

[P1-123] 13:20-14:50

Effects of Motion Parallax and Shooting Distance for Reducing Cardboard Effect in Stereo Images

Kosuke Takahashi, Haruki Mizushina (Tokushima Univ., Japan), Shiro Suyama, and Kenji Yamamoto (Tokushima Univ., Japan)

[P1-124] 13:20-14:50

Optical Light Control Patterns for the Immersive and Seamless VR Application

Bokwang Song, Kwang Soo Bae, Minjong Oh, Gun Hee Kim, Sang Hwan Cho, and Sung-Chang Jo (Samsung Display Co., Ltd., Korea)

[P1-125] 13:20-14:50

A Study on the Relation between Camera Aperture and Measured Optical Characteristics in the Near Eye Display System

Jin Seo, Hayoung Lee, Aree Song, Ojun Kwon, Eunjung Lee, and Jaejoong Kwon (Samsung Display Co., Ltd., Korea)

[P1-126] 13:20-14:50

Interpupillary Distance Measurement Method with an Eye Tracker in a VR Headset

Yu-Seong Joung, Jeong-Sik Kim, and Seung-Woo Lee (Kyung Hee Univ., Korea)

[P1-127] 13:20-14:50

Spatial or Angular Resolution Enhancement Scheme by Virtual Moving Operation of Switchable Lens Array in Autostereoscopic Super-Multi-View Three-Dimensional Display

Jung-Yeop Shin, Tae-Hyun Lee, Jae-Won Lee, Jun-Kai Wang (Kyungpook Nat'l Univ., Korea), Min-Kyu Park, Kyung-Il Joo (KOPTI, Korea), Yang-Su Kim, Gwang-Soon Lee (ETRI, Korea), Hyeon-Taek Lee, Hee-Jin Choi (Sejong Univ., Korea), and Hak-Rin Kim (Kyungpook Nat'l Univ., Korea)

[P1-128] 13:20-14:50

Dual-Depth Augmented Reality Head-Up Display based on Scheimpflug Principle

Beomsoo Kim, Daerak Heo, Seongju Lee, and Joonku Hahn (Kyungpook Nat'l Univ., Korea)

[P1-129] 13:20-14:50

Size Compensation of Aerial Images Using Head Tracking in Aerial Display with a Uniaxial Retroreflective Mirror Array

Shoma Yada, Kakeru Miyazaki (Hosei Univ., Japan), Yasushi Onishi (OPTCERAMICS, Japan), and Takafumi Koike (Hosei Univ., Japan)

[P1-130] 13:20-14:50

Waveguide-Based Binocular Maxwellian Near-Eye Display Using a Single Microdisplay and Polarization Grating

Myeong-Ho Choi and Jae-Hyeung Park (Inha Univ., Korea)

[P1-131] 13:20-14:50

Hinge Development Trend of Foldable Device, Product Review

Insun Hwang (AUFLEX, Korea) and Yeoung Jin Chang (Gachon Univ., Korea)

[P1-132] 13:20-14:50

Novel Pixel Design for Low Reflectance of Polarizer-Free OLED

Min Oh Choi, Kwang Soo Bae, Minjong Oh, Dae Young Lee, Gun Hee Kim, Sang Hwan Cho, and Sung-Chang Jo (Samsung Display Co., Ltd., Korea)

[P1-133] 13:20-14:50

Novel AMOLED Pixel Circuit Compensating for Variations in Sub-Threshold Swing and Threshold Voltage of a-IGZO Thin-Film Transistors

Hyunwoo Kim, Yongchan Kim, and Hojin Lee (Soongsil Univ., Korea)

[P1-134] 13:20-14:50

Phase Shift Enhancement of Substrate Integrated Waveguide Phase Shifter Using Liquid Crystal

Hyunji Shin, Jinyoung Choi, Junseok Ma, and Wooksung Kim (POSTECH, Korea)

[P1-135] 13:20-14:50

Improved Optical Transmittance Control of Dye-Doped Liquid Crystals Using Polarization-Independent Molecular Rotation

Jaewook Lee, Seungmin Nam, and Su Seok Choi (POSTECH, Korea)

[P1-136] 13:20-14:50

Study of Circular Polarization Change in Chiral Liquid Crystal Elastomer Under Uniaxial Stretching

Chaehyun Kwon, Seungmin Nam, and Su Seok Choi (POSTECH, Korea)

[P1-137] 13:20-14:50

Fast Switching of Vertically-Aligned Liquid Crystal Smart Window for Privacy Application

Chan-Hee Han and Seung-Won Oh (Kangwon Nat'l Univ., Korea)

[P1-138] 13:20-14:50

Visual Indicator for Toxic Chemicals Using Refractive Index Responsive Chiral Photonic Liquid Crystal Films

Avinash Kumar Rella, Subhangi Subedi, Suhyun Kim, Vineet Kumar, and Shin-Woong Kang (Jeonbuk Nat'l Univ., Korea)

[P1-139] 13:20-14:50

A Smart Window based on Uniform Lying Helix Liquid Crystal for Energy Saving

Chan-Heon An and Seung-Won Oh (Kangwon Nat'l Univ., Korea)

[P1-140] 13:20-14:50

Flexible OLED Light Extraction Using MLA Patterned PDLC Substrate

Seong-Min Lim (Hanbat Nat'l Univ., Korea), Akpeko Gasonoo (Univ. of Calgary., Canada), Hyeon-Sik Ahn, Min-Sang Kim, Na-Kyung Lee, Ji-Hyeon Kwon, and Yoon-Seuk Choi (Hanbat Nat'l Univ., Korea)

[P1-141] 13:20-14:50

Molecular Engineering of Liquid Crystal Elastomers Comprising Dynamic Covalent Thiourea Bonds for Muscle-Like Actuators

Jin-Hyeong Lee (Pusan Nat'l Univ., Korea), Dong-Gyun Kim (KRICT, Korea), and Suk-kyun Ahn (Pusan Nat'l Univ., Korea)

[P1-142] 13:20-14:50

Efficiency Enhancement of Organic Light Emitting Diode by Blending Quantum Dots to Mesogenic Luminophores

Kyeong-Kyu Min, Min-Young Park, Jae-Hoon Kim, and Chang-Jae Yu (Hanyang Univ., Korea)

[P1-143] 13:20-14:50

Fabrication of Color Glass with High Light Transmittance by Pearlescent Pigments and Optical Adhesive

Hyeon-Sik Ahn (Hanbat Nat'l Univ., Korea), Akpeko Gasonoo (Univ. of Calgary., Canada), Seong-Min Lim, Jae-Hyun Lee, and Yoonseuk Choi (Hanbat Nat'l Univ., Korea)

[P1-144] 13:20-14:50

A Study on Circularly Polarized Emission from Mesogenic Luminophore via Thermal Annealing Process

So-Young Sim, Chan-Woo Jung, Jae-Hoon Kim, and Chang-Jae Yu (Hanyang Univ., Korea)

[P1-145] 13:20-14:50

Reprogrammable and Reprocessable Liquid Crystal Elastomers with Photocontrolled Motions

Jaehee Bae, Jin-Hyeong Lee (Pusan Nat'l Univ., Korea), Dong-Gyun Kim (KRICT, Korea), and Suk-kyun Ahn (Pusan Nat'l Univ., Korea)

[P1-146] 13:20-14:50

Liquid Crystal Elastomers with Slidable Crosslinks for Mechanical Damping

Subi Choi (Pusan Nat'l Univ., Korea), Ji-hun Seo (Korea Univ., Korea), Suk-kyun Ahn (Pusan Nat'l Univ., Korea)

[P1-147] 13:20-14:50

Determination of Liquid Crystal Topological Charge in Various Patterned Electrodes

Jae Sun Kim, Jae Hoon Lee, Jun-Yong Lee, Jeong-Seon Yu, and Jong-Hyun Kim (Chungnam Nat'l Univ., Korea)

[P1-148] 13:20-14:50

Optically Isotropic Liquid Crystal-Polymer Composite with Poly (Hexyl Methacrylate) for Slippery Interface

Eun Ji Kim, Minu Ju, Tae Hyung Kim, Min Su Kim, and Seung Hee Lee (Jeonbuk Nat'l Univ., Korea)

[P1-149] 13:20-14:50

Carbon Nanotube-Doped Normally Transparent Polymer Networked Liquid Crystal Light Shutter for Enhanced Electro-Optic Performance

Minji Kang, Hyun Soo Jeon, Da Yeon Lee, Han Byeol Park, Young Jin Lim, Min Su Kim, and Seung Hee Lee (Jeonbuk Nat'l Univ., Korea)

[P1-150] 13:20-14:50

Direct-Ink-Writing of Dual-Responsive Liquid Crystal Elastomers

Keumbee Kim and Suk-kyun Ahn (Pusan Nat'l Univ., Korea)

[P1-151] 13:20-14:50

A Viewing Angle Controllable Liquid Crystal Cell for Automotive Display

Jae-Hwan Lee, Chan-Heon An, Gi-Ho Lee, and Seung-Won Oh (Kangwon Nat'l Univ., Korea)

[P1-152] 13:20-14:50

A Highly Transparent Optical Window Film with Improved Mechanical Properties and Folding Reliability by Intensification of Mismatched Charge Transfer Complex

Pyong Hwa Hong, Lee Yea-Jin. and Sung Woo Hong (KITECH, Korea)

[P1-153] 13:20-14:50

Trench Structured Aluminium-Doped Indium–Tin–Zinc Oxide Thin-Film Transistor with High Mobility

Do Hyung Kim, Kwang-Heum Lee, and Sang-Hee Ko Park (KAIST, Korea)

[P1-154] 13:20-14:50

Light Stress Test of Flexible and Transparent Carbon Nanotube Thin-Film Transistors for Daylight Application

Hyunjun Yoo, Jewook Ha, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[P1-155] 13:20-14:50

Optimizing Inkjet-Printed Organic Electrochemical Transistors

Eun-Hye Ko and Chang-Hyun Kim (Gachon Univ., Korea)

[P1-156] 13:20-14:50

High Bias Stability and High-Performance a-ITZO TFTs Enabled by Patternable Passivation Process

Yuhao Shi, Yu-Shien Shiah, Kihyung Sim, Junghwan Kim, and Hideo Hosono (Tokyo Inst. of Tech., Japan)

[P1-157] 13:20-14:50

Low Voltage Operating Organic Nanowire Field-Effect Transistors with High-k Oxide Gate Dielectrics Layers

Keon Joo Park, Chae Won Kim, Seongbeom Kim, Sam Nyung Yi, Hyung Soo Ahn, Kyoung Hwa Kim, and Young Tea Chun (Korea Maritime and Ocean Univ., Korea)

[P1-158] 13:20-14:50

Polymer Nanowire Parallel Arrays for Controling Current of Field Effect Transistors

Chae Won Kim, Keon Joo Park, Seongbeom Kim, Sam Nyung Yi, Hyung Soo Ahn, Kyoung Hwa Kim, and Young Tea Chun (Korea Maritime and Ocean Univ., Korea)

[P1-159] 13:20-14:50

Luminance Characteristics and Visual Assessment of RGBW OLED Displays

Woojae Jung, Youngshin Kwak (UNIST, Korea), Kyung Jin Kang, and Myong Young Lee (LG Electronics Inc., Korea)

[P1-160] 13:20-14:50

Effect of Surround Condition on Display Contrast Sensitivity

Soonhyeng An and Youngshin Kwak (UNIST, Korea)

[P1-161] 13:20-14:50

Brightness Compensation of Outpainted Image for Stretchable Display

Ji-Hyun Kim and Suk-Ju Kang (Sogang Univ., Korea)

[P1-162] 13:20-14:50

Electrically Tunable Liquid Crystal Lens based on Phosphate Colloid

Pans. Priyadharshana, Ju-Young Park, Seung-Ho Hong, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

Session Title:	P2. Poster Session 2
Session Date:	August 25 (Thu.), 2022
Session Time:	14:00-15:30
Session Room:	Room 2A Hall

[P2-001] 14:00-15:30

Unidirectional Active Window Signage Display Using Dye-doped Water Droplets Which Enable to Make Transparent View from Back Side

Kunio Sakamoto, Hikaru Ikeda, and Takumi Tsukiji (Konan Univ., Japan)

[P2-002] 14:00-15:30

Unidirectional Window Signage Display Using Superabsorbent Polymer Which Enables to Make Invisible in Water and Images Transparent from Back Side

Kunio Sakamoto and Sousuke Takashima (Konan Univ., Japan)

[P2-003] 14:00-15:30

Unidirectional Aero Signage with Vivid Colors Using Optical Prisms Doped with Dye and Pigments Which Enable to Make Transparent View from Back Side

Kunio Sakamoto and Akihiro Iwai (Konan Univ., Japan)

[P2-004] 14:00-15:30

Multi Path Control System for AGV based on Reinforcement Learning in Display Module Process

Yonggu Kim (Samsung Display Co., Ltd., Korea)

[P2-005] 14:00-15:30

Ejection Optimization Simulation of OLED Inkjet Printing for Flexible Display

Byung-Chul Lee and Kwan-Young Han (Dankook Univ., Korea)

[P2-006] 14:00-15:30

A Study on Reliability Equipment Possible of Automatic Evaluation of Micro Crack in Rollable Display

Young-Gyun Kim, Byung-Chan Choi, and Kwan-Young Han (Dankook Univ., Korea)

[P2-007] 14:00-15:30

Self-Powered Flexible Full-Color Display via Dielectric Constant Tuned Hybrimer Triboelectric Nanogenerators

Seung-Mo Kang, Han Eol Lee, Keon Jae Lee, and Byeong-Soo Bae (KAIST, Korea)

[P2-008] 14:00-15:30

Study of High-K Material Atomic Layer Deposition Characteristic for Large Area Display

Seongryong Hwang, Seonuk Park, Myung Soo Huh, Woo Jin Kim, and Kong Kyun Ko (Samsung Display Co., Ltd., Korea)

[P2-009] 14:00-15:30

Optimization of Bank Components to Improve Color Uniformity of OLED Displays

Ji-Hoon Park and Kwan-Young Han (Dankook Univ., Korea)

[P2-010] 14:00-15:30

Towards Ultraviolet Solution Processed ZrOx/IZO Transistors with Top-Gate and Dual-Gate Operation: Selection of Solvents, Precursors, Stabilizers, and Additive Elements

Ji Sook Yang, Sung Hyeon Jung, and Hyung Koun Cho (Sungkyunkwan Univ., Korea)

[P2-011] 14:00-15:30

The Effect of In-Ga-Zn-O Sub-Layer Thickness Variation by Deposited Plasma-Enhanced Atomic Layer Deposition

Seong Hun Yoon, Jae Seok Hur, Cheol Hee Choi, Ho Young Lee Seung Hee Cha, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P2-012] 14:00-15:30

Multiscale Modeling for Pattern Manufacturing in Photolithography

Hyungwoo Lee (Samsung Display Co., Ltd., Korea), Sungwoo Park, Muyoung Kim, Taegyeom Kim (Seoul Nat'l Univ., Korea), Byunghun Lee (Samsung Electronics Co., Ltd., Korea), and Maenghyo Cho (Seoul Nat'l Univ., Korea)

[P2-013] 14:00-15:30

High-Reliable GOA TFT-LCDs Development under High Intensity Illumination for Outdoor Display Applications

An-Thung Cho, Feng-Yun Yang, Hao Dong, Zhen Liu, He-Jing Zhang, James Hsu, and Wade Chen (ChuZhou HKC Optoelectronics Tech. Co., Ltd., China)

[P2-014] 14:00-15:30

Determining the Collision Model for Different Materials in Thermal Evaporation Process using Direct Simulation Monte Carlo

Dong Shin Choi, Seulhui Choi, Changrok Choi, Seokwoo Lee, Yong Min Ha, and Sooyoung Yoon (LG Display Co., Ltd., Korea)

[P2-015] 14:00-15:30

A Study on Hydraulic Silicone Pad for Window Glass Lamination with Four Curved Sides

Dong-Hoon Jang, Young-Gyun Kim, Tae-Wan Kim, and Kwan-Young Han (Dankook Univ., Korea)

[P2-016] 14:00-15:30

Analysis of Surface Leakage Current in Pixel Define Layer

Chanhee Han and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P2-017] 14:00-15:30

Correction of Screen Distortion during Mini-LED Panel Luminance Inspection

Hyeon-Song Bang, Byung-Chul Lee, Byung-Chan Choi, and Kwan-Young Han (Dankook Univ., Korea)

[P2-018] 14:00-15:30

Uniformity and Morphological Characterization of ZnO Droplets by the Drying Condition Using Inkjet Printing Process

Jin Ho Park, Woo Jin Jeong, Hee Jung Kwak, Ri Gyeong Kwon, and Jun Young Kim (Gyeongsang Nat'l Univ., Korea)

[P2-019] 14:00-15:30

Uniformity Control of Organic Emittion-Layer by the Drying Process Using Inkjet Printing Technology

Woo Jin Jeong, Jin Ho Park, Hee Jung Kwak, Ri Gyeong Kwon, and Jun Young Kim (Gyeongsang Nat'l Univ., Korea)

[P2-020] 14:00-15:30

Analysis of Thermal Induced Delamination for Adhesive Layer in Display Modules

Seongwon Yoo, Keonhee Beak, Byoungjin Jeon, Hanhee Kim, Seokwoo Lee, Yongmin Ha, and Sooyoung Yoon (LG Display Co., Ltd., Korea)

[P2-021] 14:00-15:30

The Inorganic-Organic Hybrid Thin-Film-Encapsulation Layer for Next Generation Form-Factor Display

Sukjin Jang, Choel min Jang, Heeyong Lee, Dongkyun Ko, and Myung soo Huh (Samsung Display Co., Ltd., Korea)

[P2-022] 14:00-15:30

Effect of Driving Waveform on Velocity and Volume of Nanoparticle Ink Droplets

Lae Ho Kim, Konta Yu, Hyunsun Jeong, Minwoo Lee, Jaihyuk Choi, and Myung Soo Huh (Samsung Display Co., Ltd., Korea)

[P2-023] 14:00-15:30

Overlay Improvement with Dynamic Sampling Techniques

Youngjin Song and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P2-024] 14:00-15:30

Curved Gamming Display Development with Dual PI and Vertical-Alignment Liquid Crystal Technology

An-Thung Cho, Gui-Qing Du, Chen-I Huang, He-Zhi Peng, James Hsu, and Wade Chen (ChuZhou HKC Optoelectronics Tech. Co., Ltd., China)

[P2-025] 14:00-15:30

A Study on Flexible Transparent Conductive Electrode for Flexible OLED

Seok Je Lee (Hoseo University, Korea), Myungchan An (GERI, Korea) , Jae Yun Kim (GERI, Korea), Hyeong Woo Bae (GERI, Korea), and Chul Gyu Jhun (Hoseo Univ., Korea)

[P2-026] 14:00-15:30

Dependence on PECVD Gas Flow Rate on The Interface Trap Density of Metal- Oxide-Semiconductor Capacitors

Ayeon Jang and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P2-027] 14:00-15:30

Glass Self-Cleaving Effect by Elliptical Beam for Bezel-Less Display

Jeongho Kim, Hyungsik Kim, Konstantin Mishchik, Kyunghan You, Junghwa You, Jekil Ryu, Seongho Jeong, and Cheollae Roh (Samsung Display Co., Ltd., Korea)

[P2-028] 14:00-15:30

The Effect of AlN Reactive Sputtering on the Microstructure of Parylene-C

Akeem Raji, Ye-Seul Lee, Seung-Yo Baek, Ji-Hyeon Yoon, Akpeko Gasonoo, Jonghee Lee, and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

[P2-029] 14:00-15:30

Optimization of Waveform Design in Inkjet Printing by Machine Learning

Seongju Kim and Sungjune Jung (POSTECH, Korea)

[P2-030] 14:00-15:30

High-Reliable Micro-Crystalline Silicon Four-Mask TFTs Integrated GOA Circuit on G8.6 Large Size UHD LCD TVs

An-Thung Cho, Feng-Yun Yang, Hao Dong, Yu-Ming Xia, Zhen Liu, He-Jing Zhang, James Hsu, and Wade Chen (HKC Co., Ltd., Korea)

[P2-031] 14:00-15:30

Fabrication of Microlens Using Needle Coating for Light Extraction of OLEDs

Juan Kim, Youngkyun Shin, Jeongpil Na, and Jongwoon Park (KOREATECH, Korea)

[P2-032] 14:00-15:30

Fabrication of Anti-Moiré Filters Using Slot-Die Coating

Songeun Hong, Gieun Kim, Mose Jung, and Jongwoon Park (KOREATECH, Korea)

[P2-033] 14:00-15:30

2822 PPI Line-Patterning of Organic Light Emitting Layer via Inkjet Printing and Sublimation Transfer Technology

Jun Yeub Lee (KITECH, Korea), Byeong-Kwon Ju (Korea Univ., Korea), and Kwan Hyun Cho (KITECH, Korea)

[P2-034] 14:00-15:30

Effect of Annealing Temperature of NiO Nanoparticle under Vacuum Condition for Quantum-Dot Light-Emitting Diodes

Jun Ho Yu and Kwan Hyun Cho (KITECH, Korea)

[P2-035] 14:00-15:30

Sensing Refractive Index by Processing Optical Information from Metasurface Using Deep Learning

Seokho Lee, Trevon Badloe, and Junsuk Rho (POSTECH, Korea)

[P2-036] 14:00-15:30

Changes in Spectral Transmittance According to the Shape of Inkjet Printed Color-Filter Through the Micro-Spot Transmittance Measurement

Kwon-Yong Shin, Kyung-Tae Kang, and Kwan Hyun Cho (KITECH, Korea)

[P2-037] 14:00-15:30

Determination of Isomers on the Surface by Fine Focused Laser Desorption Ionization Time of Flight Mass Spectrometry

Byunggwun Jin, Jooyeon Oh (ASTA Inc., Korea), Chanjae Lee (KETI, Korea), Dongjin Shin, and Yangsun Kim (ASTA Inc., Korea)

[P2-038] 14:00-15:30

Nanostructure-Based Flexible Anti-Reflective Film with Superior Optical Properties for Optoelectronic Device Application

Se-Phin Cho, Mac Kim, and Sang-Jin Lee (KRICT, Korea)

[P2-039] 14:00-15:30

Optical, Physical Chemistry, and Surface Properties of Hybrid ZnO-Plasma Polymer Fluorocarbon Nanocomposite Thin Films Fabricated Using a One Target via Mid-Range Frequency Sputtering

Aeran Song (KRICT, Korea), Eunmi Cho (KRICT, Korea), Min Jung Kim (Dongguk Univ., Korea), Kwun-Bum Chung (Dongguk Univ., Korea), Hyun-Suk Kim (Chungnam Nat'l Univ., Korea), and Sang-Jin Lee (KRICT, Korea)

[P2-040] 14:00-15:30

Highly Flexible and Durable Electrodes under Cyclic Bending Fatigue for Wearable and Transparent Heaters via CuAg Nanoporous Micromesh Structure

Suhyeon Han (KITECH, Korea), Byeong-Kwon Ju (Korea Univ., Korea), and Chanwoo Yang (KITECH, Korea)

[P2-041] 14:00-15:30

Highly Efficient and Durable Antireflection Coatings for Optoelectronic Devices

Eunmi Cho (KRICT, Korea), Jin-Seong Park (Hanyang Univ., Korea), and Sang-Jin Lee (KRICT, Korea)

[P2-042] 14:00-15:30

Research on the Design Scheme of 65 Inch 0.4mm Frame TV

Xin Zhou, Qi Liu, Wei Zhang, Yinhu Huang, Byung Cheon Lim, Zhangtao Wang, and Xibin Shao (Hefei BOE Display Tech. Co., Ltd., China)

[P2-043] 14:00-15:30

Modeling of Optimal Facility Layout considering Stocker and Pillar Structure in the Display Industry

Taeyoung Kim, Dongwook Kim, and Ilkyeong Moon (Seoul Nat'l Univ., Korea)

[P2-044] 14:00-15:30

High Deposition Rate Al_2O_3 Insulator Deposited by Atmospheric Pressure Spatial ALD

Kwang Su Yoo, Dong-Gyu Kim, Won-Bum Lee, and Jin-Seong Park (Hanyang Univ., Korea)

[P2-045] 14:00-15:30

Fabrication of OLED Devices through Dry Etching and Orthogonal Photolithography Process Using Fluorinated Positive-Tone Photoresist

Doo Hong Kim (Univ. of Seoul, Korea), Changjae Lee, Kayoung Kim (Inha Univ., Korea), Yu Ha Jang (Univ. of Seoul, Korea), Myungwoong Kim, Jin-Kyun Lee (Inha Univ., Korea), and Byung Jun Jung (Univ. of Seoul, Korea)

[P2-046] 14:00-15:30

Suitable Compositions to Decrease Swelling of a Polydimethylsiloxane Mold for Accurate Replication of Metasurfaces

Nara Jeon, Dong Kyo Oh, Chunghwan Jung, and Junsuk Rho (POSTECH, Korea)

[P2-047] 14:00-15:30

Flexible and Invisible Metal Grid Transparent Electrode Using Lift-Off Process

Chaewon Kim (KITECH, Korea), Byeong-Kwon Ju (Korea Univ., Korea), and Kyung-Tae Kang (KITECH, Korea)

[P2-048] 14:00-15:30

Low-Pressure Evaporation Monitoring System

Taejeong Kwak and Sungjune Jung (POSTECH, Korea)

[P2-049] 14:00-15:30

Facile Preparation of Parylene C Films for Flexible Optoelectronics

Jee Hoon Sim, Hyeonwook Chae, Su-Bon Kim, and Seunghyup Yoo (KAIST, Korea)

[P2-050] 14:00-15:30

Device Design for Ultra-Flexible OLEDs with External Light Extraction Structures

Junho Kim, Subon Kim (KAIST, Korea), Hanul Moon (Dong-A Univ., Korea), and Seunghyup Yoor (KAIST, Korea)

[P2-051] 14:00-15:30

Studies on Degradation of Electrical Properties due to Channel Surface Damage of InGaZnO Thin-film Transistors by Stripper

Taehyeon Kim, Changyong Oh, and Bo Sung Kim (Korea Univ., Korea)

[P2-052] 14:00-15:30

Improve the Charge Transfer Characteristics of OFET Devices by Controlling the Crystallinity of the Organic Semiconductor Layer

Seongjib Cho and Eunju Lim (Dankook Univ., Korea)

[P2-053] 14:00-15:30

Poly(methyl methacrylate) Doping Effect On Solution-Processed Indium-Gallium-Zinc-Oxide Thin-Film Transistors Having Thin Active Lay

Jonghyun Jeong and Jaewook Jeong (Chungbuk Nat'l Univ., Korea)

[P2-054] 14:00-15:30

Ni-Based Elastic Metal Alloy Dry Etching for High Resolution Stretchable AMOLED

Donghoon Kim (Korea Univ., Korea), Jin-Nyoung Jang (APS Research Corporation, Korea), Sangheon Lee, and Munpyo Hong (Korea Univ., Korea)

[P2-055] 14:00-15:30

2D Material-Based Debonding Layer for Production Process of Flexible Displays

Ha Young Lee, Chan-Soo Kim, and Dongwook Lee (Hongik Univ., Korea)

[P2-056] 14:00-15:30

Intuitive Two Dimensional Representation of Display Color Gamut Volume

Jae Sung Park, Se Hyeok Park, Younghoon Jeong, and Young Su Moon (Samsung Electronics Co., Ltd., Korea)

[P2-057] 14:00-15:30

Unidirectional Vivid Color Window Signage Using Resin Layer Doped with Dyestuff and Pigments Which Enables to Make Images Invisible from Back Side

Kunio Sakamoto, Miyabi Hayakawa, and Kazuho Tsuji (Konan Univ., Japan)

[P2-058] 14:00-15:30

Chromodot II: Non-Electrical Color Changeable Pixel Dots for Board/Window Signage Display Using Light Control and Vivid Color Generating Technologies

Kunio Sakamoto, Akira Matsukawa, and Jumpei Ito (Konan Univ., Japan)

[P2-059] 14:00-15:30

Systematic Control of Negative Transconductance in Organic Heterojunction Transistor for High-Performance, Low-Power Flexible Ternary Logic Circuits

Chungryeol Lee, Junhwan Choi (KAIST, Korea), Hocheon Yoo (Gachon Univ., Korea), and Sung Gap Im (KAIST, Korea)

[P2-060] 14:00-15:30

Effect of Surface Modified ZnO Nanoparticles on Quantum Dots Light-Emitting Diodes as Electron Transport Layer

Byoungho Kang, Jaesung Lee, Sanghoon Jung, Saehyuk Yeom, and Wanghoon Lee (GERI, Korea)

[P2-062] 14:00-15:30

Anion Vacancy Defect Passivation of 2D-layered Tin-Based Perovskite Thin-Film Transistor

Jae-Hyeok Cho, Tan Tan Bui, and Myung-Gil Kim (Sungkyunkwan Univ., Korea)

[P2-063] 14:00-15:30

On Demand Disposable Yet Highly Stable-Structured Substrate for Paper OLED Security Device

Do-Gwan Kim and Yong-Cheol Jeong (KITECH, Korea)

[P2-064] 14:00-15:30

Enhanced Electro-Actuating Deflection Using Piezoelectric Nanocomposite

Ji Yoon Park, Jun Hyuk Shin, and Su Seok Choi (POSTECH, Korea)

[P2-065] 14:00-15:30

Hybrid Transparent Electrodes with Nanomesh Structures Made by Silver Nanowires

So Hyun Jo, Yun Ah Kim, and Byungkwon Lim (Sungkyunkwan Univ., Korea)

[P2-066] 14:00-15:30

Molecular Tailored Ionic Liquid-Based Ultra-Stable and High-Performance Microscupercapacior for Operation of Micro LED Display

Gaeun Park, Dawoon Lee, and Jaekyun Kim (Hanyang Univ., Korea)

[P2-067] 14:00-15:30

3-Dimensional Micro-Cliff Graphene Electrode for High Energy Density and Ultra-Stable Wearable Energy Application

Dawoon Lee (Hanyang Univ., Korea), U Hyeok Choi (Inha Univ., Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P2-068] 14:00-15:30

Effects of Annealing Conditions on the Electrical Characteristics of ITZO TFTs

Shibo Zhang, Jidong Jin, and Jaekyun Kim (Hanyang Univ., Korea)

[P2-069] 14:00-15:30

Synergistic Integration of $BaTiO_3$/PDMS Pyramidal Structured Film for Tribo-Piezoelectric Energy Harvester for Battery-Free Display Applications

Junsu Seong (Hanyang Univ., Korea), Youngkyun Kim, and Jaekyun Kim (Hanyang Univ., Korea)

[P2-070] 14:00-15:30

Bandwidth Enhanced Graphene–Organic Hybrid Photoconductor by Utilizing Organic Donor–Acceptor System

Yongmoon Lee, Sukgyun Cha, and Changsoon Kim (Seoul Nat'l Univ., Korea)

[P2-071] 14:00-15:30

Organic Photovoltaic (OPV)/ITZO Heterojunction Phototransistors for Broad Wavelength Light Sensing

Gi-Sang Choi (Hanyang Univ., Korea), Jun Yeub Lee, Kwan Hyun Cho (KITECH, Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P2-072] 14:00-15:30

Highly Performance Flexible Carbon-Based Electrode for Large-Area Screen Printing Energy Device

Eunsoo Kim, Dawoon Lee, and Jaekyun Kim (Hanyang Univ., Korea)

[P2-073] 14:00-15:30

A Study on Low-Resistance Conductive Balls through Optimization of Cu Surface Treatment

Jong-Keun Choi, Young-Gyun Kim, and Kwan-Young Han (Dankook Univ., Korea)

[P2-074] 14:00-15:30

High-Performance Micro-Supercapacitor Embedded with VOC Sensing and Micro LEDs Display Capability

Nguyen Thi Huyen, Jeongho Lee, Dawoon Lee, Yongjun Song, Gaeun Park (Hanyang Univ., Korea), U Hyeok Choi (Inha Univ., Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P2-075] 14:00-15:30

Highly Conductive, Adhesive, and Flexible Epoxy Acrylate-Based Ionic Gel Polymer Electrolyte for Large-Area Patterned Wearable Device Application

Minjeong Kim, Dawoon Lee, and Jaekyun Kim (Hanyang Univ., Korea)

[P2-076] 14:00-15:30

A Single-Unit Top-Emission White OLED with High Color Stability for Micro-Display Applications

Liang Gao, Huiqing Pang, Ray Kwong, and Sean Xia (Beijing Summer Sprout Tech. Co., Ltd., China)

[P2-077] 14:00-15:30

Large-Area and Free-Standing MoS_2/Ion-Gel Transistors for High-Sensitivity Low-Power Photodetection

Soobin Lee, Seohyun Maeng, Dawoon Lee (Hanyang Univ., Korea), Hyunseok Lee (Chungbuk Nat'l Univ., Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P2-078] 14:00-15:30

Facile Synthesis Route for Halide Perovskite Nanoparticles Using Ultrasonic Spray

Dong-Jun Kim, Bongjun Choi, and Jung-Yong Lee (KAIST, Korea)

[P2-079] 14:00-15:30

Influencing Factors of Photosensitive Polyimide on QD Display: High Mass Resolution GC/Orbitrap MS Analysis

Yeonjoo Seo, Aeran Jung, Hyun sook Kim, Jaehan Lee, and Chang woo Lee (Samsung Display Co., Ltd., Korea)

[P2-080] 14:00-15:30

Reliability Performance of Low-Voltage Amorphous Metal Thin-Film Transistors

Sean Muir (Amorphyx Inc., USA)

[P2-081] 14:00-15:30

Photocured Hybrid Elastomeric Substrate by Using Inorganic-Organic Hybrid Polymer for Stretchable Display

Falguni Ahmed, SeungMin Shin, Joonho Song (Korea Univ., Korea), Gerhard Domann, Daniela Collin (Fraunhofer Inst. für Silicatforschung, Germany), and Munpyo Hong (Korea Univ., Korea)

[P2-083] 14:00-15:30

Photonic Encryption Platform Using UV-Transparent Silicon Nitride and Vectorial Hologram

Dongmin Jeon, Joohoon Kim, and Junsuk Rho (POSTECH, Korea)

[P2-084] 14:00-15:30

Stackable, Solid-Electrolyte-Gated Carbon Nanotube Thin Film Transistors

Haksoon Jung, Jimin Kwon, Seongmin Heo, and Yong-Young Noh (POSTECH, Korea)

[P2-085] 14:00-15:30

Unravelling the Impact of Inter-Tube Junctions on Conductivity of Carbon Nanotubes/Conjugated Polymer Composites for Flexible Conductors

Seong Hyeon Kim and Kilwon Cho (POSTECH, Korea)

[P2-086] 14:00-15:30

The Effects of the Oxygen Content in Ti_3AlC_2 MAX Precursor on the Electrical and Physical Characteristics of Ti_3C_2TX MXene Nanosheets

Su Bin Choi, Hyun Sik Shin, Duc Khanh Tran, Jun Sang Choi, Jagan Singh Meena, and Jong-Woong Kim (Jeonbuk Nat'l Univ., Korea)

[P2-087] 14:00-15:30

Interdisciplinary Study on the Photovoltaic Characteristics of Next-Generation Light-Emitting Diodes for Revealing the Degradation Mechanism

Jaehoon Kim (Dong-A Univ., Korea)

[P2-088] 14:00-15:30

Efficient InP Quantum Dots Using $P(DEA)_3$ as P Precursor

Suhyeon Kim, Jungho Kim, and Jiwan Kim (Kyonggi Univ., Korea)

[P2-089] 14:00-15:30

Transparent Elastomer Composites with Programmed Auxetic Mechanical Metamaterial for Stretchable Display Applications

Jun-Chan Choi, Jae-Hong Sun (KIST, Korea), Seunghyun Lee (Seoul Nat'l Univ. of Science and Tech., Korea), and Seungjun Chung (KIST, Korea)

[P2-092] 14:00-15:30

Enhancing the Robustness of Metasurfaces via Versatile Encapsulation Coating

Junhwa Seong, Younghwan Yang, and Junsuk Rho (POSTECH, Korea)

[P2-093] 14:00-15:30

Demonstration the Effect of Quantum Barrier Thickness on Optoelectronic Performances in InGaN/AlGaN-Based Near Ultraviolet Light-Emitting Diodes

Abu Bashar Mohammad Hamidul Islam, Tae Kyoung Kim, Yu-Jung Cha, Jae Won Seo, Jiun Oh (KENTECH, Korea), Dong-Soo Shin, Jong-In Shim (Hanyang Univ., Korea), and Joon Seop Kwak (KENTECH, Korea)

[P2-094] 14:00-15:30

Electrochromic Device Using Graphene Transparent Flexible Electrode

Ju Hyun Park (Korea Univ., Korea), Doo-Hee Cho, SangKyu Lee, Chil Seong Ah, Sanghoon Cheon (ETRI, Korea), Byeong-Kwon Ju (Korea Univ., Korea), and Tae Youb Kim (ETRI, Korea)

[P2-095] 14:00-15:30

Experimental Parameters for the Drop-on-demand Jetting Performance of High Viscosity Ink Formulation

Eun Young Lee, Min Young Kim, Robert Bail, Chil Won Lee, and Byung Doo Chin (Dankook Univ., Korea)

[P2-096] 14:00-15:30

Resistive Switching Behaviors in Ta_2O_5 Layer at Low Temperature: Towards Flexible, Invisible, Cryo-Electronic Applications in Aerospace

Ajit Kumar, Mokurala Krishnaiah, Dhananjay Mishra, Sung Hun Jin (Incheon Nat'l Univ., Korea)

[P2-097] 14:00-15:30

Transmittance Variable Flexible Electrochromic Device in Wideband (Visible & Near-Infrared)

Sangkyu Lee, Chil Seong Ah, Juhyun Park, Doohee Cho, Sangkoon Cheon, and Tae-Youb Kim (ETRI, Korea)

[P2-098] 14:00-15:30

Dual Functionality of Earth-Abundant Quaternary Flexible Cu_2CoSnS_4 Films for Next-Generation Wearable Electronics

Mokurala Krishnaiah, Ajit Kumar, Dhananjay Mishra, Hyunbin Cho, and Jin Sung Hun (Incheon Nat'l Univ., Korea)

[P2-099] 14:00-15:30

Role of Nickel Sulfide Over-Coating via SILAR on Hydrothermally Grown Cobalt Oxide Scaffolds and Evolution of Electrochemical Performance in Supercapacitor Electrodes

Dhananjay Mishra, Niraj Kumar, and Sung Hun Jin (Incheon Nat'l Univ., Korea)

[P2-100] 14:00-15:30

Optical Efficiency Improvement Using Metasurfaces Analyzed by Fabrication Imperfection

Junkyeong Park, Yeseul Kim, Seong-Won Moon, and Junsuk Rho (POSTECH, Korea)

[P2-101] 14:00-15:30

Electromagnetic Shielding Film Prepared by Low-Temperature Sintering of Silver Paste for Flexible Displays

Sun Hong Yoon (KETI, Korea)

[P2-102] 14:00-15:30

Micro-Encapsulation of Magnetochromic & Electrochromic Photonic Inks for Flexible Display

Jungmin Kim (KETI, Korea), Wonmok Lee (Sejong Univ., Korea), and Young-Seok Kim (KETI, Korea)

[P2-103] 14:00-15:30

Novel Silicone Adhesive Development with Enhanced Interfacial Adhesion to Polycarbonate in Display Assembling

Seung-A Lee (WACKER Chemical Korea, Korea)

[P2-104] 14:00-15:30

Mechanical Su-Schrieffer-Heeger Chain with Multi-Mode Local Resonance

Yeongtae Jang (POSTECH, Korea), Eunho Kim (Jeonbuk Nat'l univ., Korea), Junsuk Rho (POSTECH, Korea)

[P2-105] 14:00-15:30

Flexible and Transparent Electrode of Hybrid Ti_3C_2TX MXene-Silver Nanowires for High Performance Quantum Dot Light-Emitting Diodes

Wei Jiang, Kaiying Zhao, and Cheolmin Park (Yonsei Univ., Korea)

[P2-106] 14:00-15:30

Ti_3C_2Tx MXene Electrodes with Highly Environmetal Stability for Transparent and Flexible Field-Induced Display

Yeonji Kim, Seokyeong Lee, Jihye Jang, Jin Woo Oh, and Cheolmin Park (Yonsei Univ., Korea)

[P2-107] 14:00-15:30

Wireless and Stand-Alone Sensing Display Enabled by Direct Capacitive Coupling

Jihye Jang, Seokyeong Lee, Jin Woo Oh, Yeonji Kim, and Cheolmin Park (Yonsei Univ., Korea)

[P2-108] 14:00-15:30

Highly Stable Dual-Mode Image Sensing Display with Metal–Organic Framework-Assisted Metal-Ion Doped All-Inorganic Perovskite Film

Jin Woo Oh, Seokyeong Lee, Jihye Jang, Yeonji Kim, and Cheolmin Park (Yonsei Univ., Korea)

[P2-109] 14:00-15:30

Stroboscopic Effect of Metasurface in UV Regime

Seokwoo Kim and Junsuk Rho (POSTECH, Korea)

[P2-110] 14:00-15:30

Molecular Displays with Full Darkfield Color and Dynamic Plasmon Resonant Energy Transfer

Hongyoon Kim and Junsuk Rho (POSTECH, Korea)

[P2-111] 14:00-15:30

Efficient Oxygen Vacancy Suppression and Electrical Stabilization of Solution Processed In2O3:Q (Q = S, Se) Thin-Film Transistor with Chalcogen Alloying

Paul Lee, Minh Nhut Le, Gahye Kim (Sungkyunkwan Univ., Korea), Sung Min Kwon (Chung-Ang Univ., Korea), Jeong-Wan Jo (Univ. of Cambridge, UK), Jaehyun Kim (Northwestern Univ., USA), Yong-Hoon Kim (Sungkyunkwan Univ., Korea), Sung kyu Park (Chung-Ang Univ., Korea), Kyunghan Ahn, and Myung-Gil Kim (Sungkyunkwan Univ., Korea)

[P2-112] 14:00-15:30

Non-destructive Analysis of the Deterioration of TTA-Based Fluorescence Organic Light-Emitting Diodes

Ki Ju Kim, Seong Hwan Hong, Young Kwan Kim, Taekyung Kim (Hongik Univ., Korea)

[P2-113] 14:00-15:30

Double-Layer Nano-Structure on Silicon Nitride for Top-Emitting OLED

D.-H. Cho, Y.-S. Park, S. Choi, H. Cho, B.-H. Kwon, J.-W. Shin, and N.-S. Cho (ETRI, Korea)

[P2-114] 14:00-15:30

Enhanced Hole Injection Property of Organic Light-Emitting Diodes by Partially Doping Ndp-9 in Hole Transport Layer

Kanghoon Kim, Wonhyeok Park, Sang Soo Kim, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P2-115] 14:00-15:30

Efficient Green Phosphorescent Organic Light Emitting Diodes with Narrow Emission Bandwidth and Low Efficiency Roll-Off Using a Rigid Ligand

Kiun Cheong, Seung Chan Kim, and Jun Yeob Lee (Sungkyunkwan Univ., Korea)

[P2-116] 14:00-15:30

Application of Porous Pyramid Film on Top-Emitting Oleds for Enhanced Lightemitting Performance

Baeksang Sung (Hanbat Nat'l Univ., Korea), Chul Woong Joo (ETRI, Korea), Jun Chang Yang (KAIST, Korea), Seungwan Woo, Jae-Hyun Lee (Hanbat Nat'l Univ., Korea), Steve Park (KAIST, Korea), and Jonghee Lee (Hanbat Nat'l Univ., Korea)

[P2-117] 14:00-15:30

Stable and Efficient Red Hyperfluorescence Organic Light-Emitting Diodes Using Fast Reverse Intersystem Crossing Assistant Dopant

Chae Yeon Jeon, Hyun Seung Lee, Bo Kyung Seo (Kyung Hee Univ., Korea), Dong Jin Shin, Jun Seop Lim, Jun Yeob Lee (Sungkyunkwan Univ., Korea), and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

[P2-118] 14:00-15:30

Molecularly Engineered Hole Transport Network for High Efficient Micro-OLEDs

Borina Ha, Hyukmin Kweon (Hanyang Univ., Korea), Seonkwon Kim (Yonsei Univ., Korea), Ukjin Jeong (Hanyang Univ., Korea), Seunghan Lee, Moon Sung Kang (Sogang Univ., Korea), Jeong Ho Cho (Yonsei Univ., Korea), and Do Hwan Kim (Hanyang Univ., Korea)

[P2-119] 14:00-15:30

A Comprehensive Study on the Early Stage Degradation of Blue Fluorescent OLED

Hakjun Lee, Yeonju Jung, Young, Kwan Kim, and Taekyung Kim (Hongik Univ., Korea)

[P2-120] 14:00-15:30

Highly Efficient Yellow Fluorescent OLED over 15% of EQE Using Localized Surface Plasmon Resonance (LSPR) Effect

Hyewon Nam, Hakjun Lee, Kyo Min Hwang, Young Kwan Kim, and Taekyung Kim (Hongik Univ., Korea)

[P2-121] 14:00-15:30

Fabrication of Efficient Organic Light-Emitting Diodes Using Fully Vacuum-Free Lamination Method

Yejin Kim, Hyuckjin Nam, Yu Seong Lee, Inwoo Lee, and Changhun Yun (Chonnam Nat'l Univ., Korea)

[P2-122] 14:00-15:30

Effective Suppressing of Exciton Quenching with Lithium Doped Bphen as an Additional Electron-Injection Layer

Giyeon Lee and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P2-123] 14:00-15:30

Magnetic Field Effects on Emitting Layer Structure of Electroplex System Organic Light Emitting Diode

Seong Hwan Hong, Bum Joon Park, Young Kwan Kim, and Taekyung Kim (Hongik Univ., Korea)

[P2-124] 14:00-15:30

Enhanced Lifetime of Blue Fluorescent Organic Light-Emitting Diodes (OLEDs) by Introducing Electron Leakage Current Pathway in Electron Blocking Layer

You Na Song, Bu Bae Park, Jaesung Kim, Young Kwan Kim, and Taekyung Kim (Hongik Univ., Korea)

[P2-125] 14:00-15:30

Effect of Host Polarity on Triplet Exciton Harvesting for Development of High-Performance Thermally Activated Delayed Fluorescence Based Organic Light Emitting Diodes

Chang Woo Koh, Jinhyo Hwang, Hyoseong Lee, Min Ju Cho, Dong Hoon Choi, and Sungnam Park (Korea Univ., Korea)

[P2-126] 14:00-15:30

Deep Blue MR-TADF Emitters through Suppression of Triplet Exciton Quenching

Ezhakudiyan Ravindran, Hee Won Son, Jimin Kim, and Min Chul Suh (Kyung Hee Univ., Korea)

[P2-127] 14:00-15:30

Boron and Carbazole Embedded Deep Blue MR-TADF Emitter for Efficient Hyper Fluorescence

Ezhakudiyan Ravindran, Jimin Kim, Hee Won Son, and Min Chul Suh (Kyung Hee Univ., Korea)

[P2-128] 14:00-15:30

Study on Reliability Enhancement of Flexible Transparent Electrodes based on PEDOT:PSS

Inwoo Lee, Jaehwan Cha, Yu Seong Lee, Yejin Kim, and Changhun Yun (Chonnam Nat'l Univ., Korea)

[P2-129] 14:00-15:30

High Mobility and Perfect Crosslinkable Hole Transport Copolymer for Highly Efficient Solution-Processed OLED

Thi Na Le, Jimin Kim, and Min Chul Suh (Kyung Hee Univ., Korea)

[P2-130] 14:00-15:30

Highly Efficient Red and Green Solution-Processed OLEDs Utilizing a Small Molecular Host Material with High Triplet Energy

Thi Na Le, Jimin Kim, Hee Won Son, and Min Chul Suh (Kyung Hee Univ., Korea)

[P2-131] 14:00-15:30

Development of Highly Sensitive Low Energy Inverse Photoemission Spectroscopy for the Transport Gap Measurement of Organic Materials

Jong-Am Hong, Kyu-Myung Lee, Beom-Su Kim, Ji-Woong Choi, and Yongsup Park (Kyung Hee Univ., Korea)

[P2-132] 14:00-15:30

Analysis of Conduction Mechanisms and Optical Characteristics of Blue OLEDs by Temperature-Dependent Measurements

Ilgyu Choi, Sangjin Min, Jong-In Shim, and Dong-Soo Shin (Hanyang Univ., Korea)

[P2-133] 14:00-15:30

Analysis of the Effect of the Interlayer on the Doped Organic P-N Heterojunction Charge Generation Layers Using Impedance Spectroscopy

Somi Park, So-Young Boo, Eun-Jeong Jang, Akeem Raji (Hanbat Nat'l Univ., Korea), Akpeko Gasonoo (Univ. of Calgary, Canada), and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

[P2-134] 14:00-15:30

Analysis of Interfacial Charges in Aged Co-Host Eml Organic Light-Emitting Diodes with Impedance Spectroscopy

So-Young Boo, Jaeyong Park, Somi Park, Eun-Jeong Jang, Akeem Raji, Jonghee Lee, and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

[P2-135] 14:00-15:30

Improved Flexibility and Light Extraction for Organic Light Emitting Diodes Via 1D Periodic Nano-Grating Structure

Ju Sung Lee, Jungjin Yang, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-136] 14:00-15:30

Efficient Charge Generation Materials for Tandem OLEDs

Dong Kwang Kim, Keshavananda Prabhu C P, Hye In Yang, Jin Young Kim, Kenkera Rayappa Naveen, Hee Tae Yang, and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

[P2-137] 14:00-15:30

Effects of Solar Radiation on Organic Light-Emitting Diodes and Their Solutions

Jungjin Yang, Jinwoo Park, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-138] 14:00-15:30

Mechanisms of the Charge Injection and Transportation in Blue Fluorescent Organic Light-Emitting Diodes

Jongin Lim, Jungjin Yang, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-139] 14:00-15:30

Improvements of Lifetime of Organic Light-Emitting Diodes with a Liq Doped Layer

Boobae Kim, Jungjin Yang, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-140] 14:00-15:30

Synthesis and Characterization of Boron-Based Multi-Resonance TADF Materials for Efficient Pure Blue OLEDs

Hyung Jin Cheon (Gyeongsang Nat'l Univ., Korea), Youn-Seob Shin, Noh-Hwal Park, Jeong-Hwan Lee (Inha Univ., Korea), and Yun-Hi Kim (Gyeongsang Nat'l Univ.)

[P2-141] 14:00-15:30

New Hole Transport Polymers: Orthogonal Solvent System for Solution Processable Organic Light-Emitting Diodes

Hyeon Doo Je, Seunguk Cho, Na Yeon Kwon, Su Hong Park, Min Ju Cho, and Dong Hoon Choi (Korea Univ., Korea)

[P2-142] 14:00-15:30

Dendritic D-σ-A Type HLCT Blue Emitters for Solution-Processed OLEDs

Sung Hoon Jung, Na Yeon Kwon, Hyeon Doo Je, Min Ju Cho, and Dong Hoon Choi (Korea Univ., Korea)

[P2-143] 14:00-15:30

Novel Materials and Structures for High Efficiency and Long Lifetime Green Phosphorescent OLEDs

Soojung Youn, Jungjin Yang, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-144] 14:00-15:30

Achieving High Efficiency by Using ZnO Nanoparticles as Electron Injection Layer in Inverted OLEDs

Se-Jin Lim, Da-Young Park, Hyun Kim, Go-Eun Kim, Sang-Uk Byun, and Dae-Gyu Moon (Soonchunhyang Univ., Korea)

[P2-145] 14:00-15:30

Effect of Moth-Eye-Shaped Anti-Reflection Structure on the Light Efficiency of Organic Light-Emitting Diodes Studied by Optical Simulation

Sung-Woo Choi, Jung-Gyun Lee, and Jae-Hyeon Ko (Hallym Univ., Korea)

[P2-146] 14:00-15:30

Improvement of Efficiency and Lifetime of Blue Fluorescent Organic Light-Emitting Diodes with a Buffer Layer

Changpyo Hong, Jungjin Yang, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-147] 14:00-15:30

Dual Fabry-Perot Effect for Blue Top-Emitting Organic Light-Emitting Diodes

Jun Yong Kim (Kyungpook Nat'l Univ., Korea), Sang Yoon Lee, Kwan Hyun Cho (KITECH, Korea), and Yun Seon Do (Kyungpook Nat'l Univ., Korea)

[P2-148] 14:00-15:30

A Novel Technology for Efficient Quantum Dot Organic Light-Emitting Diodes Using Functional Light-Emitting Encapsulation Structure

Yoonsung Yoo1, Chul Woong Joo, Hyunsu Cho, Chan-mo Kang, Sukyung Choi, Jin-Wook Shin, Nam Sung Cho, Hyungwoo Suh (ETRI, Korea), Jonghee Lee (Hanbat Nat'l Univ.), and Byoung-Hwa Kwon (ETRI, Korea)

[P2-149] 14:00-15:30

Analysis of Hole-Transporting Molecules by Time-Drive Electrochemical and Optical Spectroscopic Methods

Hye-Ri Joe, Tae-Ho Yang, Akeem Raji, Seo-Yoon Lee, and Jae- Hyun Lee (Hanbat Nat'l Univ., Korea)

[P2-150] 14:00-15:30

Analysis on Recombination Mechanisms of Organic Light-Emitting Diodes by Differential Carrier Lifetime Method

Sang Jin Min, Gyeong Won Lee, Jong-In Shim, and Dong-Soo Shin (Hanyang Univ., Korea)

[P2-151] 14:00-15:30

Ultra-High Resolution Organic Light-Emitting Diodes based on Plasmonic Patterned Nanograting Array

Ryungyu Lee, Keun-Yeong Choi and Hojin Lee (Soongsil Univ., Korea)

[P2-152] 14:00-15:30

Design Strategy of Organic Light-Emitting Diode Structure for High Resolution Microdiaplay with High Color Gamut and Efficiency

Hyunsu Cho, Chan-mo Kang, Sukyung Choi, Chul Woong Joo, Byoung-Hwa Kwon, Jin-Wook Shin, Kukjoo Kim, Dae Hyun Ahn, and Nam Sung Cho (ETRI, Korea)

[P2-153] 14:00-15:30

Control of Hydrogen Concentration in InGaZnO Thin Film Using Cryopumping System

Se-yeon Jung, Taehoon Sung, Sein Lee, and Jang-Yeon Kwon (Yonsei Univ., Korea)

[P2-154] 14:00-15:30

Inter-Layer Crosslinking for Enhancing Operational Stability of Inverted QD-EL Devices

Dong Gil Kwak and Moon Sung Kang (Sogang Univ., Korea)

[P2-155] 14:00-15:30

Extremely Effective Piezoelectric Energy Harvesting Using Gradient-Index Lens with Elastic Bragg Mirror

Geon Lee, Jeonghoon Park, Dongwoo Lee, and Junsuk Rho (POSTECH, Korea)

[P2-156] 14:00-15:30

Enhancing Photoluminescence Performance of Halide Perovskite with High Electron-Donating Power Solvent

Yunna Kim, Nakyung Kim, and Byungha Shin (KAIST, Korea)

[P2-157] 14:00-15:30

Efficient Green Perovskite Light-Emitting Diodes Deposited via Thermal Evaporation with a Polymer Passivation Layer

Nakyung Kim, Mingue Shin, Joonyun Kim, Jinu Park, and Byungha Shin (KAIST, Korea)

[P2-158] 14:00-15:30

Pure Blue Light Emitting Diodes based on Stoichiometrically Engineered Quasi 2D Halide Perovskite

Seoyeon Park, Joonyun Kim, and Byungha Shin (KAIST, Korea)

[P2-159] 14:00-15:30

Phosphonate-Passivated $CsPbBr_3$ Nanoplatelets for Efficient Pure-Blue Light Emitting Diodes

Jinu Park, Joonyun Kim, and Byungha Shin (KAIST, Korea)

[P2-160] 14:00-15:30

Fabrication of Meniscus-Free Stretchable Vertical Interconnect Access

Jinsu Yoon, Jiseok Seo, Geonhee Kim, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[P2-161] 14:00-15:30

The Effect of Solvent Engineering on the Morphology and Performance of Perovskite Solar Cells

Syed Hamad Ullah Shah, Chang Min Lee, Dong Hyun Kim, Geon-Woo Jeong, Dong Hyun Choi, Tae Wook Kim, Yeong Beom Kim, Hyun Woo Cho, Min Jae Park, Amjad Islam, and Seung Yoon Ryu (Korea Univ., Korea)

[P2-162] 14:00-15:30

Tailored Density Modulation of Carbon Nanotube Random Networks at the Channel for High-Performance Thin-Film Transistors

Hayun Kim, Hyunuk Oh, Byeongmoon Lee, Hyunjun Yoo, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[P2-163] 14:00-15:30

Electrical Characteristics of Short Length Peptide Memristor Device due to Inserted Thin SiO_2 Layer Thickness

Jun Seo Lee, Jeong Hyun Yoon, and Jang-Yeon Kwon (Yonsei Univ., Korea)

[P2-164] 14:00-15:30

Lift-Off Patterning of OLED Active Layer

Seunghan Lee (Sogang Univ., Korea), Hyobin Ham (UNIST, Korea), Chang Hyeok Lim (Sogang Univ., Korea), Hyukmin Kweon (Hanyang Univ., Korea), Dongheon Han (Sogang Univ., Korea), Do Hwan Kim (Hanyang Univ., Korea), BongSoo Kim (UNIST, Korea), and Moon Sung Kang (Sogang Univ., Korea)

[P2-165] 14:00-15:30

Ion Impurity Measurements in Organic Thin Films on High Voltage Application

Masaru Inoue (TOYOTech LLC, USA), Noriaki Oyabu (TOYO Corp., Japan), Takuro Iwata, Keisuke Ohdaira, and Hideyuki Murata (JAIST, Japan)

[P2-166] 14:00-15:30

Optical and Electrical Approaches for the Recombination Zone in FIrpic Based Blue Phosphorescent Organic Light Emitting Diodes

Yeong Beom Kim, Dong Hyun Kim, Chang Min Lee, Geon-Woo Jeong, Dong Hyun Choi, Tae Wook Kim, Syed Hamad Ullah Shah, Hyun Woo Cho, Min Jae Park, Amjad Islam, and Seung Yoon Ryu (Korea Univ., Korea)

[P2-167] 14:00-15:30

Low-Frequency Noise Analysis on Solution-Processed and Vacuum-Deposited Organic Light-Emitting Diodes

Jaekwon Kim, Wonjun Shin, Suhyeon Lee, Jong-Ho Lee, and Jeonghun Kwak (Seoul Nat'l Univ., Korea)

Session Title:	P3. Poster Session 3
Session Date:	August 26 (Fri.), 2022
Session Time:	14:00-15:30
Session Room:	Room 2A Hall

[P3-001] 14:00-15:30

High-Efficiency Quad-Colored White Tandem Quantum Dot-Light-Emitting Diodes based on Non-Cd Quantum Dots

Suk-Young Yoon, Sun-Hyoung Lee, Yang-Hee Kim, Ali Imran Channa, Seoyeon Park, Hyun-Min Kim, Hyo-Jin Yeo and Heesun Yang (Hongik Univ., Korea)

[P3-002] 14:00-15:30

Bonding Characteristics of the PEI Interlayer for a Two-Substrates OLED

Jun-Yeong Lee, Tae-Jin Lee, Dong-Heon Yoo, Yoen-Wook You, Chang-Min Yoon, and Cheol-Hee Moon (Hoseo Univ. Korea)

[P3-003] 14:00-15:30

Highly Stable Methacrylate-Functionalized Perovskite Nanocrystal/Siloxane Composite for Color-Conversion Layer in Display

Yongmin Shin (KAIST, Korea), Byung-Hwa Kwon(ETRI, Korea), Junho Jang, and Byeong-Soo Bae (KAIST, Korea)

[P3-004] 14:00-15:30

Improvement of OLED Display Quality through Light Scattering

Hong Yeon Lee, Seung Yeon Jeong, Oh Jeong Kwon, Hye Ji Kang, Su Jeong Kim, Duck Jong Suh, and Sung Han Kim (Samsung Display Co., Ltd., Korea)

[P3-005] 14:00-15:30

A Study on the Role and Specifications of Black Matrix Materials in OLED

Su Jeong kim, Jong-Ho Son, Jinhyeong Lee, Mihwa Lee, and Sung Han Kim (Samsung Display Co., Ltd., Korea)

[P3-006] 14:00-15:30

Indolocarbazole Based Photo-Cross-Linkable Polymer for Solution-Processed Organic Light-Emitting Diodes

Jeong Yong Park and Do-Hoon Hwang (Pusan Nat'l Univ., Korea)

[P3-007] 14:00-15:30

Synthesis and Properties of Thermally Cross-linkable New Hole-Injection Polymer with High Hole Mobility for Solution-Processed OLEDs

Seon Lee Kwak and Do-Hoon Hwang (Pusan Nat'l Univ., Korea)

[P3-008] 14:00-15:30

Halogenated Multiple Resonance Thermally Activated Delayed Fluorescence Emitters with Enhanced Reverse Intersystem Crossing Rates

Youngnam Lee and Jong-In Hong (Seoul Nat'l Univ., Korea)

[P3-009] 14:00-15:30

Study of Perovskite Nanocrystal Dispersion in Chiral Liquid Crystals

Wontae Jung, Seungmin Nam, and Su Seok Choi (POSTECH, Korea)

[P3-010] 14:00-15:30

FDTD Simulation Study on Light Extraction Efficiency of Core-Shell Nanorod Light-Emitting Diodes

Kang Seok Kim, Gi Jun Ju, and Younghyun Kim (Hanyang Univ., Korea)

[P3-011] 14:00-15:30

Development of UV Photodetector based on Organic/Inorganic Hybrid Materials

Sehyuk Yeom, Sanghoon Jung, Jaesung Lee, Byoungho Kang, and Wanghoon Lee (GERI, Korea)

[P3-012] 14:00-15:30

Device Lifetime Evaluation of TADF Materials according to the Location of CN Substituents

Yeon Jae Choi, Kyeoung Wan Kim, Tae Hoon Ha, Jeong-Yeol Yoo, Byung Doo Chin, and Chil won Lee (Dankook Univ., Korea)

[P3-013] 14:00-15:30

Synthesis and Evaluation of Hosts with TADF Characteristics for Low-Efficiency Roll-Off

Tae Hoon Ha, Seung Wan Kang, Hyuk Woo Jang, Jeong-Yeol Yoo, Byung Doo Chin, and Chil won Lee (Dankook Univ., Korea)

[P3-014] 14:00-15:30

Enhanced Light Extraction of Organic Light-Emitting Diode Using Low Temperature and Pressure Microcontact-Printed Microlens Array

Subin Hwa, Baeksang Sung, Jonghee Lee, and Min-Hoi Kim (Hanbat Nat'l Univ., Korea)

[P3-015] 14:00-15:30

Surface Passivation via Chlorine Ion Doping for Highly Stable Formamidinium-Based Tin Perovskite Solar Cells

Jinhyeok Choi and Kilwon Cho (POSTECH, Korea)

[P3-016] 14:00-15:30

Multifunctional Encapsulation Using Perovskite Nanoparticles for Efficient Color Conversion Organic-Light Emitting Diodes

Hyungwoo suh (ETRI, Korea), Yongmin Shin, Junho Jang (KAIST, Korea), Hyunsu Cho, Chul Woong Joo, Sukyung Choi, Jin-Wook Shin, Chan-mo Kang, Dae Hyun Ahn, Yoonsung Yoo (ETRI, Korea), Won Jun Lee (Dankook Univ., Korea), Byeong-Soo Bae (KAIST, Korea), and Byoung-Hwa Kwon (ETRI, Korea)

[P3-017] 14:00-15:30

Fabrication of the Reverse-Trapezodial Microstructure for Uniform Light Extracting Eifficiency

Sangwoo Kim, Kwang Soo Bae, Young Je Cho, Gun Hee Kim, Sang Hwan Cho, and Sung-Chang Jo (Samsung Display Co., Ltd., Korea)

[P3-018] 14:00-15:30

Picolinate Ligand-Assisted Deep-Red Emissive Ir(III) Complex Phosphorescent Emitter

Chanhyeok Kim, Taehyun Kim, and Taiho Park (POSTECH, Korea)

[P3-019] 14:00-15:30

Improvement in Quantum Yield of $FAPbBr_3$ Perovskite Nanocrystals by Zwitterionic Ligand Surface Treatment

Inyoung Jeong, Kyeongwan Kang, Minwoo Lee, Sooyeon Yeon, and Nuri Oh (Hanyang Univ., Korea)

[P3-020] 14:00-15:30

Substituent Engineering and Intermolecular Distancing Effects for Aggregation Induced Emissive Iridium(III) Complexes Based Solution-Processable PhOLEDs

Taehyun Kim, Chanhyeok Kim, and Taiho Park (POSTECH, Korea)

[P3-021] 14:00-15:30

Optical Analysis of Tandem Organic Light-Emitting Diodes: Revisiting the Notion of Efficiency Doubling

Seyoung Yoon, Woochan Lee, Junho Kim, and Seunghyup Yoo (KAIST, Korea)

[P3-022] 14:00-15:30

Minimized Blue Light Leakage of Green Quantum Dot Passing Through Blue Light Source

Cheong-Min Shin, Byoung-Hwa Kwon (ETRI, Korea), Chang-Jae Yu, and Jae-Hoon Kim (Hanyang Univ., Korea)

[P3-023] 14:00-15:30

Molecularly Architectured Ferroelectric Electroluminescent Polymer for Single-Material Self-Powered Sensing Display

Seokyeong Lee, Jin Woo Oh, Jihye Jang, Yeonji Kim, Kaiying Zhao, and Cheolmin Park (Yonsei univ., Korea)

[P3-024] 14:00-15:30

Body-Attached Wearable OLED Medical Device for Therapeutic Effects

Yongjin Park, Hagseon Kim (KAIST, Korea), Hye-Ryung Choi(SNUBH, Korea), Yongmin Jeon (Gachon Univ., Korea), Jung Won Shin (SNUBH, Korea), and Kyung Cheol Choi (KAIST, Korea)

[P3-025] 14:00-15:30

End to End Generative Adversarial Networks for Accelerated Magnetic Resonance Image Reconstruction

Md. Biddut Hossain, Joon Hyun Kim, Oh-Seung Nam, Tuvshinjargal Amgalan, Shariar Md Imtiaz (Chungbuk Nat'l Univ., Korea), Kwon Yeon Lee (Sunchon Nat'l Univ., Korea), Seong Gyoon Park (Kongju Nat'l Univ., Korea), and Nam Kim (Chungbuk Nat'l Univ., Korea)

[P3-026] 14:00-15:30

Optical Properties of Stretchable Electroactive Photonic Gels

Jun Hyuk Shin, Ji Yoon Park, and Su Seok Choi (POSTECH, Korea)

[P3-027] 14:00-15:30

Faster Operation with Spike Signal Process Mimicking the Human Brain

Seungkyu Lee and Steve Park (KAIST, Korea)

[P3-028] 14:00-15:30

Optical Microlithography of Elastic Polymer Network Electrolyte for High-Integrated Ion-Driven Electronics

Ukjin Jeong (Hanyang Univ., Korea), Wanho Cho (UNIST, Korea), Hyukmin Kweon, Seokran Choi, Borina Ha, Jiyeon Ha (Hanyang Univ., Korea), BongSoo Kim (UNIST, Korea), and Do Hwan Kim (Hanyang Univ., Korea)

[P3-029] 14:00-15:30

Multilevel Microstructured Pixelated Pressure Sensor Array with Bending Insensitivity for Soft Applications

Se Young Kwon, Gyeongsuk Park, and Steve Park (KAIST, Korea)

[P3-030] 14:00-15:30

Bio-Inspired and Reversibly Autonomous Thermoregulation via Thermal Homeostatic Device

Gyeongsuk Park, Hyunmin Park, Junyouong Seo, Junchang Yang, and Steve Park (KAIST, Korea)

[P3-031] 14:00-15:30

Enhancement of Mechanical Properties based on Deformable-Covalently Attachable IPNs for Foldable Electronics

Seokran Choi, Hyukmin Kweon, Ukjin Jeong, Borina Ha, Jiyeon Ha, and Do Hwan Kim (Hanyang Univ., Korea)

[P3-032] 14:00-15:30

Ultra-High Sensitive Au-Doped Silicon Nanomembrane Based Wearable Sensor Arrays for Continuous Skin Temperature Monitoring with High Precision

Mingyu Sang, Kyowon Kang, and Ki Jun Yu (Yonsei Univ., Korea)

[P3-033] 14:00-15:30

Sensitive and Self-healing Strain Sensor for Respiration Monitoring in Normal Environment/Underwater

Zhengyang Kong, Joo Sung Kim, Hanbin Choi, Dong Jun Kim (Hanyang Univ., korea), Wu Bin Ying (CAS, China) and Do Hwan Kim (Hanyang Univ., korea)

[P3-034] 14:00-15:30

Silent Speech Recognition Using Crystalline Silicon Based Strain Sensor

Taemin Kim, Kyowon Kang, Kiho Kim, Kwanho Kim, and Ki Jun Yu (Yonsei Univ., Korea)

[P3-035] 14:00-15:30

All Biocompatible Hybrid Composite based on Piezo-Triggered Ionic Conduction for Implantable Bioelectronics

Jihong Kim, Joo Sung Kim, Ritamay Bhunia, Dongjun Kim, Bo Kyung Kim, Hayoung Oh, and Do Hwan Kim (Hanyang Univ., Korea)

[P3-036] 14:00-15:30

A Soft and Biodegradable Polymer Based Multi-channel Waveguide for Optogenetics

Myeongki Cho and Ki Jun Yu (Yonsei Univ., Korea)

[P3-037] 14:00-15:30

Fully Implantable, Wireless Optoelectronic Devices for Photodynamic Therapy and Photodynamic Diagnosis

Kiho Kim, Insik Min, and Ki Jun Yu (Yonsei Univ., Korea)

[P3-038] 14:00-15:30

Self-Healable N-type Conjugated Polymers for Field-Effect Transistors

Zi-En Chiang (Nat'l Taipei Univ. of Tech., Taiwan), Tzung-You Han (Nat'l Tsing-Hua Univ., Taiwan), Hao-Yang Chen, Chia-Ju Lee (Nat'l Taipei Univ. of Tech., Taiwan), Mao-Chun Fu (Nat'l Taipei Univ. of Tech., Taiwan), Hsin-Chiao Tien (Nat'l Taipei Univ. of Tech., Taiwan), Ho-Hsiu Chou (Nat'l Tsing-Hua Univ., Taiwan), Tomoya Higashihara (Nat'l Taipei Univ. of Tech., Taiwan), and Wen-Ya Lee (Nat'l Taipei Univ. of Tech., Taiwan)

[P3-039] 14:00-15:30

N-Type Self-Doping Effect in Conjugated Polymer through Ami-Nopropyl Side Chain Engineering for Field-Effect Transistors

Ting-Feng Yu, Ming-Yu Wen (Nat'l Taipei Univ. of Tech., Taiwan), Mao-Chun Fu, Uran Sato (Yamagata Univ., Japan), Chen-Tsyr Lo (Nat'l Sun Yat-Sen Univ., Taiwan), Tomoya Higashihara (Yamagata Univ., Japan), and Wen-Ya Lee (Nat'l Taipei Univ. of Tech., Taiwan)

[P3-040] 14:00-15:30

Stretchable Polymer Semiconductors for Field-Effect Transistors and Artificial Synaptic Transistors

Hsin-Chiao Tien, Wei-Ting Liao, and Wen-Ya Lee (Nat'l Taipei Univ. of Tech., Taiwan)

[P3-041] 14:00-15:30

Near Infrared Organic Light Emitting Diodes Using Micro-Cavity Effect for Bio-Phototherapy

Eun Hae Cho, Yongjin Park (KAIST, Korea), Yun Chi (City Univ. of Hong Kong, Hong Kong), and Kyung Cheol Choi (KAIST, Korea)

[P3-042] 14:00-15:30

Bioinspired Triboelectric Nanogenerator Sensor for Self-powered Gait Analysis and Long-term Postoperative Monitoring

P.H. Wei, Y.H Tseng, C.Yeh, F.C Kao, and Z.H. Lin (Nat'l Tsing Hua Univ., Taiwan)

[P3-043] 14:00-15:30

Optically Optimized Tissue Oximeter by Controlling Light Penetration into Tissue with Compact Configuration

Min Hyung Kang (KETI, Korea), Gil Ju Lee (Pusan Na'l Univ., Korea), Young Min Song(GIST, Korea), and Young Kyu Hong (KETI, Korea)

[P3-044] 14:00-15:30

Functionalized $MoSe_2$ Nanosheets Incorporated in Active Layer for High Performance Bulk Heterojunction Organic Solar Cells and X-ray detectors

Hailiang Liu, Jehoon Lee, Seonyeong Kim, Eunji Hong, and Jungwon Kang (Dankook Univ., Korea)

[P3-045] 14:00-15:30

Frequency-Selective Acoustic and Haptic Smart Skin for Dual-Mode Dynamic/Static Human-Machine Interface

Dong-hee Kang, Jonghwa Park, Heeyoung Chae, Sujoy Kumar Ghosh (UNIST, Korea), Changyoon Jeong (Yeungnam Univ., Korea), Yoojeong Park, Seungse Cho, Youngoh Lee, Jinyoung Kim, Yujung Ko, Jae Joon Kim, and Hyunhyub Ko (UNIST, Korea)

[P3-046] 14:00-15:30

Battery-Free, Fully Implantable Bladder-Integrated Optoelectronic System for Wireless Monitoring-and Treatment of Chronic Urinary Bladder Dysfunction

Tae-Min Jang, Joong Hoon Lee (Korea Univ., Korea), Eunkyoung Park (Soonchunhyang Univ., Korea), Kyu-Sung Lee (Sungkyunkwan Univ. School of Medicine, Korea), and Suk-Won Hwang (Korea Univ., Korea)

[P3-047] 14:00-15:30

Stretchable Hydration Sensor for Skin Water Loss Detection based on Polyvinyl Alcohol/Lithium Chloride Composite

Sangyun Na, Jeonghee Yeom, Yoojin Chang, Yeju Kwon, Young-Eun Shin, Yong-Jin Park, and Hyunhyub Ko (UNIST, Korea)

[P3-048] 14:00-15:30

RED Organic Light-Emitting Diodes Attached to DNA Film for Bio-Compatible Phototherapy

Hye Jeong Yeon, Ju Ri Kim, Yongjin Park, Eun Hae Cho, Dong Ki Yoon, and Kyung Cheol Choi (KAIST, Korea)

[P3-049] 14:00-15:30

Bioresorbable Soft Brain Implants for Neurochemical Monitoring

Seung Min Yang, Jae Hyung Shim (Korea Univ., Korea), Hyun-U Cho (Hanyang Univ., Korea), Chul-Ho Lee (Korea Univ., Korea), Dong Pyo Jang (Hanyang Univ., Korea), and Suk-Won Hwang (Korea Univ., Korea)

[P3-050] 14:00-15:30

Flexible 3-Dimensional Device for Correlation Analysis through Simultaneous Measurement of Real-Time Brain Surface and Intracortical Neural Signals

Ju Young Lee, Sang Hoon Park, Young Uk Cho, Jeong Eun Ju, and Ki Jun Yu (Yonsei Univ., Korea)

[P3-051] 14:00-15:30

Real-Time Toxic Gas Monitoring System based on Flexible Silicon Nanomembrane

Jongwoon Shin, Kyubeen Kim, Insik Min, and Ki Jun Yu (Yonsei Univ., Korea)

[P3-052] 14:00-15:30

Electrical Impedance Tomography Based Stretchable Thin Film Tactile Sensor

Kyubeen Kim, Jung-Hoon Hong, and Ki Jun Yu (Yonsei Univ., Korea)

[P3-053] 14:00-15:30

Flexible Substrate with Increased Transmittance Using a Luminescent Organic Material for Efficient Flexible Optoelectronic Devices

Carmela Michelle Esteban, Ramakant Sharma, Woochan Lee, Jeoungmin Ji, and Seunghyup Yoo (KAIST, Korea)

[P3-054] 14:00-15:30

High-Polarity Fluorine-Based Polymers Applied to Nanogenerator and Eield-Effect Transistor as The Real-Time Electrostatic Monitoring System

Yan-Ci Cheng, Pei-Hsuan Chung, Qi-An Hong, Chang-Jing Liu, and Wen-Ya Lee (Nat'l Taipei Univ. of Tech., Taiwan)

[P3-055] 14:00-15:30

Near-Infrared Organic Photodiodes with Improved Charge Transfer Absorption

Jeoungmin Ji, Hyung Suk Kim, Ramakant Sharma, Woochan Lee, Carmela Michelle Esteban, and Seunghyup Yoo (KAIST, Korea)

[P3-056] 14:00-15:30

Optimization of Dot Diffuser Design for Wearable Phototheraputics

Sunhyoung Koo, Jaehyuk Park, Taehyun Kim, Subon Kim (KAIST, Korea), Hanul Moon (Dong-A Univ., Korea), and Seunghyup Yoo (KAIST, Korea)

[P3-057] 14:00-15:30

Skin-Attachable and High-Performance Organic Printed Active-Matrix Devices for Health Monitoring Platform

Woojo Kim (POSTECH, Korea), Keehoon Kang (Seoul Nat'l Univ., Korea), Christian Bech Nielsen (Queen Mary Univ. of London, UK), and Sungjune Jung (POSTECH, Korea)

[P3-058] 14:00-15:30

Fabrication and Characterization of Stretchable Electrodes on a Biaxially Pre-Strained PDMS Substrate for Biosensing Applications

Gihak Kim, Jonghyun Jeong, and Jaewook Jeong (Chungbuk Nat'l Univ., Korea)

[P3-059] 14:00-15:30

Improved Image LAG Performance Using Reset Transistor on TFT X-Ray Sensor

Hanbin Jang (Dankook Univ., korea), Jinwook Heo(Biosenstech Inc., Korea), and Eunju Lim (Dankook Univ., korea)

[P3-061] 14:00-15:30

Design Rules for Skin Attachable Inkjet Printed Active Array Devices

Gyungin Ryu and Sungjune Jung (POSTECH, Korea)

[P3-062] 14:00-15:30

Micro-Lens Encapsulation of Micro/Mini LED Using Thixotropic Siloxane Resin for High Light Extraction

Byung Jo Um, Seung-mo Kang, Hyunhwan Lee, Junho Jang, and Byeong-Soo Bae (KAIST, Korea)

[P3-063] 14:00-15:30

Investigation of Confocal Scanning Electroluminescence from InGaN-based Microscale Light-Emitting Diodes

Yuna Lee, Jinwoo park, and Jaekyun Kim (Hanyang Univ., Korea)

[P3-065] 14:00-15:30

Micro LED EL Test Method Using Probing Wafer

Huijin Kim, Young-Woong Lee, Boseong Son, and Si-Hyun Park (Yeungnam Univ., Korea)

[P3-066] 14:00-15:30

Fabrication and Investigation of Uniformly Spaced Vertical Nanorod Array Light-Emitting Diodes (LEDs)

Youngwook Shin, Jinwoo Park, Byeongwoo Bak, and Jaekyun Kim (Hanyang Univ., Korea)

[P3-067] 14:00-15:30

Analysis of Temperature-Dependent Voltage Efficiency of InGaN/GaN-Based Blue Light-Emitting Diodes

Chan Geun Park, Sang Jin Min, Jong-In Shim, and Dong-Soo Shin (Hanyang Univ. ERICA, Korea)

[P3-068] 14:00-15:30

Monolithic Vertical MicroLEDs for Flexible Biomedical Stimulator

Sang Hyun Park (KAIST, Korea), Han Eol Lee (Jeonbuk Nat'l Univ., Korea) and Keon Jae Lee (KAIST, Korea)

[P3-069] 14:00-15:30

Investigation of Efficiency Droop in InGaN/GaN-Based Blue Light-Emitting Diodes by Temperature-Dependent Photocurrent Measurement

Ji Won Kim, Sangjin Min, Dong-Soo Shin, and Jong-In Shim (Hanyang Univ. ERICA, Korea)

[P3-071] 14:00-15:30

Analysis of Power Efficiencies of Light-Emitting Diodes with Different Defect Densities by Temperature-Dependent Performance Characterization

Jae Hyeok Park, Sang Jin Min, Jong-In Shim, and Dong-Soo Shin (Hanyang Univ. ERICA, Korea)

[P3-072] 14:00-15:30

Analysis of Impedance Spectroscopy on InGaN-Based Blue Light-Emitting Diodes Under Optical Excitation: Differential-Carrier-Lifetime Study

JooHan Bae, Dong-Gu Kim, SangJin Min, Jong-In Shim, and Dong-Soo Shin (Hanyang Univ. ERICA, Korea)

[P3-073] 14:00-15:30

Nonvolatile Memory Device for Processing-in-Memory(PIM) Using Perovskite Materials

Seung Jae Lee and JungYong Lee (KAIST, Korea)

[P3-074] 14:00-15:30

Integration Structure Analysis of Capacitive Touch Sensor and Coplanar Waveguide for Display Antenna Technology

Sang Gyeong Nam and Su Seok Choi (POSTECH, Korea)

[P3-075] 14:00-15:30

Piezoelectric Display Speaker Design with Enclosure System Using Boundary Element Analysis

In Pyo Hong, Sang Hyun Han, Da Hyun Ryu, and Su Seok Choi (POSTECH, Korea)

[P3-076] 14:00-15:30

Improved Performance of Organic Photodetector Using Doped Zinc Oxide Interfacial Layer

Ri Gyeong Kwon, Jae Min Jeon, Jin Ho Park, Woo Jin Jeong, Hee Jung Kwak, and Jun Young Kim (Gyeongsang Nat'l Univ., Korea)

[P3-077] 14:00-15:30

Environmentally-Adaptive Stretchable Human Motion Monitoring Strain Sensor based on Serpentine-Shaped Ion Gel Film

Yongjun Song, Dawoon Lee, and Jaekyun Kim (Hanyang Univ., Korea)

[P3-078] 14:00-15:30

Robust and Wear-Resistant UV-Crosslinked Protective Layer for Flexible Sensors

Hee Seon Choi, Do-Gwan Kim, Kang-Han Kim, HyeongJung Kim (KITECH, Korea), Kuk Young Cho (Hanyang Univ., Korea), and Yong-Cheol Jeong (KITECH, Korea)

[P3-079] 14:00-15:30

Sensitive Sensor based on Oxide Thin Film Transistor

Sehun Jeong, Jingyu Kim, Siracosit Sarawut, and Sang-Hee Ko Park (KAIST, Korea)

[P3-080] 14:00-15:30

Improvement of Printed Pixel Uniformity of Organic Photodetectors for a Low-cost, Thin Film Transistor-Type Fingerprint Sensors

Jun Suh Hwang, Hyun Jun Kim, Byung Doo Chin (Dankook Univ., Korea), Eui Chan Kim, Ezgi Darici, and Kang Il Seo (CLAP Co., LTD., Korea)

[P3-081] 14:00-15:30

Multi-Layered Triboelectric Nanogenerator for Artificial Synapse

Yong-Jin Park, Yun Goo Ro, Young-Eun Shin, Sangyun Na, Yoojin Chang, and Hyunhyub Ko (UNUST, Korea)

[P3-082] 14:00-15:30

Low-Voltage Stretchable Electroluminescent Devices for Sound-in-Display Electronics

Hyejin Lee , Seungse Cho, Dong-hee Kang, and Hyunhyub Ko (UNIST, Korea)

[P3-083] 14:00-15:30

Highly Sensitive Temperature Insensitive Wearable Strain Sensor with Bilayer Polymer Substrates to Control Electrical Transport in Nanoparticles

Taesung Park, Ho Kun Woo, Byung Ku Jung (Korea Univ., Korea), Byeonghak Park (Sungkyunkwan Univ., Korea), Junsung Bang, Woosik Kim, Sanghyun Jeon, Junhyuk Ahn (Korea Univ., Korea), Yunheum Lee (Sungkyunkwan Univ., Korea), Yong Min Lee (Korea Univ., Korea)

[P3-084] 14:00-15:30

Sol-Gel Processed Y_2O_3 Capacitor Based Physical Unclonable Function (PUF)

Donghoon Lee, Jae Eun Jang (DGIST, Korea), Jaewon Jang (Kyungpook Nat'l Univ., Korea), and Hongki Kang (DGIST, Korea)

[P3-085] 14:00-15:30

Optimization of a-IGZO TFTs with Drain Offset Structure for High-Voltage Sensors and Actuator Driver Applications

Jungha Lee, Jae Eun Jang, and Hongki Kang (DGIST, Korea)

[P3-086] 14:00-15:30

Monolithic Circuit Integrated with VOC Sensor based on a-IGZO TFT

Eseudeo Yun, Yongchan Kim (Soongsil Univ., Korea), Hanbin Choi, Do Hwan Kim (Hanyang Univ., Korea), and Hojin Lee (Soongsil Univ., Korea)

[P3-087] 14:00-15:30

Retina-Inspired Structurally Tunable Synaptic Perovskite Nanocones

Kaiying Zhao, Kyuho Lee, and Cheolmin Park (Yonsei Univ., Korea)

[P3-088] 14:00-15:30

Synthesis of Uniform-Morphology and High-Quality Fluorescent Red InP Quantum Dots and their Electroluminescence

Hyun-Min Kim, Dae-Yeon Jo, Seong Min Park, Sun-Kyo Kim, Yuri Kim, Yu-Been Kong, Seoyeon Park, and Heesun Yang (Hongik Univ., Korea)

[P3-089] 14:00-15:30

Extensive Compositional Tuning of Ternary ZnSeTe Quantum Dots toward Red Emissivity

Young-Ju Lee, Suk-Young Yoon, Sun-Hyoung Lee, Yang-Hee Kim, Seong Min Park, Hyungmin Yang, Hyo-Jin Yeo, and Heesun Yang (Hongik Univ., Korea)

[P3-090] 14:00-15:30

Color-Tunable and Band-Edge-Emitting Ag-In-Ga-S Quaternary Quantum Dots

Yuri Kim, Ali Imran Channa, Sun-Kyo Kim, Dae-Yeon Jo, Yu-Been Kong, Young-Ju Lee, Hyungmin Yang, andHeesun Yang (Hongik Univ., Korea)

[P3-091] 14:00-15:30

Phosphine-Free Synthesis of Cd-Free Colloidal Quantum Dots with Narrow Emission Spectra

Jung-Min Lee, Jae-Young Choi (KIMS, Korea), Jong-Pal Hong (Laminar Inc., Korea), and Young-Kuk Kim (KIMS, Korea)

[P3-092] 14:00-15:30

High-Brightness and Stable Solution Processed Quantum Dot Light-Emitting Devices by Al Atomistic Surface Modulation on Gradient Quantum Dots

Jae-Sung Lee, Byoung-Ho Kang, Sang-Hoon Jung, Se-Hyuk Yeom, and Wang-Hoon Lee (GERI, Korea)

[P3-093] 14:00-15:30

Solution-Processed Fabrication of Light-Emitting Diodes Using C_sPbBr_3 Perovskite Nanocrystals

Hyeon Seung Ban and Seong-Yong Cho (Myongji Univ., Korea)

[P3-094] 14:00-15:30

Improving Photoresponsivity and Reducing PPC Effect of ZnO/Quantum-Dots Phototransistor via Solution Processable ZrO_2 Additional Layer

Jun Hyung Jeong and Seong Jun Kang (Kyung Hee Univ., Korea)

[P3-095] 14:00-15:30

Nondestructive Direct Photolithography for Patterning Quantum Dot Films by Atomic Layer Deposition of ZnO

Joon Yup Lee, Eun A Kim (Myongji Univ., Korea), Jisu Han, Yeongho Choi, Donghyo Hahm (Sungkyunkwan Univ., Korea), Chi Jung Kang (Myongji Univ., Korea), Wan Ki Bae, Jaehoon Lim (Sungkyunkwan Univ., Korea), and Seong-Yo (Myongji Univ., Korea)

[P3-096] 14:00-15:30

Direct Stacking QD Film for White Quantum Dot Light-Emitting Diodes by Atomic Layer Deposition of ZnO

Eun A Kim, Seeun Jung (Myongji Univ., Korea), Jisu Han, Jaehoon Lim (Sungkyunkwan Univ., Korea), and Seong-Yong Cho (Myongji Univ., Korea)

[P3-097] 14:00-15:30

Enhanced EL Performance of Top Emission Quantum Dot Light Emitting Diodes by ZnO Atomic Layer Deposition

Hyo Geun Lee, Eun Sang Lee, Joon Yup Lee (Myongji Univ., Korea), Jisu Han, Jaehoon Lim (Sungkyunkwan Univ., Korea), and Seong-Yong Cho (Myongji Univ., Korea)

[P3-098] 14:00-15:30

Synthesis of High-Efficiency Quantum Dots Containing Extremely Limited Cadmium Cations

Sanghoon Jung, Byoungho Kang, Jaesung Lee, Saehyuk Yeom, and Wanghoon Lee (GERI, Korea)

[P3-099] 14:00-15:30

Highly Luminescent and Air-Stable Blue Quantum Dot by Redesigning Surface Ligands

Seongwoo Cho, Sung Nam Lim, Shin Ae Song, Kiyoung Kim, and Ju Young Woo (KITECH, Korea)

[P3-100] 14:00-15:30

Low-Temperature Processed PTAA as a HTL Material for Flexible Quantum-DotLight-Emitting Diodes

Hyoun Ji Ha, Min Gye Kim, and Seong Jun Kang (Kyung Hee Univ., Korea)

[P3-101] 14:00-15:30

Synthesis of Inp/Znse/Zns Quantum Dots with High Photoluminescence Quantum Yield and Narrow Full Width at Half Maximum

Hye Seon Kim, Sung Nam Lim, Shin Ae Song, Kiyoung Kim, and Ju Young Woo (KITECH, Korea)

[P3-102] 14:00-15:30

Synthesis of Conjugated Polymers for Improving Hole Transport Ability of Quantum Dots

Yejin Gim, Sujin Park (Kumoh Nat'l Inst. of Tech., Korea), Donggu Lee (Gyeongsang Nat'l Univ., Korea), and Wonho lee (Kumoh Nat'l Inst. of Tech., Korea)

[P3-103] 14:00-15:30

Morphology-Dependency of Negative Differential Resistance by Sol-Gel Film, Nanoparticles, and Quantum Dots-Based Zinc Oxide/P-Doped-Si Heterojunction Structures

Somi Kim, Taehyun Park, and Hocheon Yoo (Gachon Univ., Korea)

[P3-104] 14:00-15:30

Synthesis of Cationic Metal Chalcogenide Colloidal Quantum Dots and their Application to NIR Photodetector

Haewoon Seo, Hyogeun Gwon, and Sang-Wook Kim (Ajou Univ., Korea)

[P3-105] 14:00-15:30

Chiral InP Magic Sized Clusters: Ligand vs. Crystal Structure

Youngjae Ryu and Sungjee Kim (POSTECH)

[P3-106] 14:00-15:30

Enhancing Humidity Resistance of the Quantum Dots by Controlling Thickness of the Silica

Yu Seong Lee, Sugyeong Jeong, Inwoo Lee, Yejin Kim, and Changhum Yun (Chonnam Nat'l Univ., Korea)

[P3-107] 14:00-15:30

Effect of QD Ink Droplet Size on Pixel Structure by Inkjet Printed QD Layer for Inverted QLED Device

Youngwoo Lee and Yong-Cheol Jeong (KITECH, Korea)

[P3-108] 14:00-15:30

The Effect of Photoinduced Layer-by-Layer Assembly with In-Plane Colloidal Quantum Well in Light-Emitting Diodes

Hyunjin Cho and Doh C. Lee (KAIST, Korea)

[P3-109] 14:00-15:30

Lattice Strain as Energy Level Modifier Enabling Unity Quantum Yield of Colloidal Quantum Dots

Byong Jae Kim, Yeongho Choi (Sungkyunkwan Univ., Korea), Ji-Sang Park (Kyungpook Nat'l Univ., Korea), and Jaehoon Lim (Sungkyunkwan Univ., Korea)

[P3-110] 14:00-15:30

Impact of Morphological Inhomogeneity on Excitonic States in ZnSeTe Quantum Dots

Dongju Jung (Sungkyunkwan Univ., Korea), Hak June Lee (Seoul Nat'l Univ., Korea), Doyoon Shin, Seongbin Im, and Wan Ki Bae (Sungkyunkwan Univ., Korea)

[P3-111] 14:00-15:30

A Research on Improvement of QLED Device Performance Using Spinel CuCo2O4 Hole Injection Layer

Min Ho Park, Min Gye Kim, Jin Hyun Ma, and Seong Jun Kang (Kyung Hee Univ., Korea)

[P3-112] 14:00-15:30

Design of Barrierless Hole Injection Landscape in All-Inorganic Quantum Dot Light-Emitting Diodes

Woon Ho Jung, Yeong-Ho Choi (Sungkyunkwan Univ., Korea), Hyeonjun Lee (KAIST, Korea), Yong Woo Kwon, and Jaehoon Lim (Sungkyunkwan Univ., Korea)

[P3-113] 14:00-15:30

Direct Patterning of Emissive Quantum Dots with Dual Functional Ligands

Jaemin Lim, Kahyung Kim, Kyuri Kim, Sejong Min, and Wan Ki Bae (Sungkyunkwan Univ., Korea)

[P3-114] 14:00-15:30

Homogeneous Alloy $In_{1-x}Ga_xP$ Quantum Dot Synthesis through In^{3+}-to-Ga^{3+} Cation Exchange Reactions with Thermal Annealing

Sang Min Yeo and Doh Chang Lee (KAIST, Korea)

[P3-115] 14:00-15:30

Controlled Location of Ga^{3+} in Highly Efficient In(Ga)P-Based Core/Shell Quantum Dots

Hyeongrae Lee and Dohchang Lee (KAIST, Korea)

[P3-116] 14:00-15:30

Optical Properties of ZnSeTe-Based Core/Shell Quantum Dots with Different Composition and Precursor Injection Method

Hyejeong Jang and Doh C. Lee (KAIST, Korea)

[P3-117] 14:00-15:30

Hole Injection Layer-Free Colloidal Quantum Dot Light-Emitting Diodes Fabricated on the Chemically Modified ITO Electrode

Sangwook Park (Pusan Nat'l Univ., Korea), Woonho Jung (Sungkyunkwan Univ., Korea), Jaeyeop Lee (Pusan Nat'l Univ., Korea), Jaehoon Lim (Sungkyunkwan Univ., Korea), and Jeongkyun Roh (Pusan Nat'l Univ., Korea)

[P3-118] 14:00-15:30

ITO-Free PEDOT:PSS Electrodes for Solution-Processable and FlexibleQuantum-Dot Light Emitting Diodes

JinHyun Ma, Mingye Kim, MinHo Park, and Seong Jun Kang (Kyung Hee Univ., Korea)

[P3-119] 14:00-15:30

Heterostructure-Controlled ZnSeTe/ZnSe/ZnS Quantum Dots for Blue-Emitting QD-LED

Seyup kim and Doh C. Lee (KAIST, Korea)

[P3-120] 14:00-15:30

Quantum-Dot Light-Emitting Diodes Using Spray Pyrolysis Method for Next-Generation Optoelectronic Devices

Min Gye Kim, Jin Hyun Ma, Min Ho Park, and Seong Jun Kang (Kyung Hee Univ., Korea)

[P3-121] 14:00-15:30

Crosslinkable Functional Layer for All-Solution Quantum Dot Light-Emitting Diode

Jeong Ha Hwang, Hyun Su Jo, Kyung Jae Lee, Dong hyun Kim, Bong Young Kim, Seok Hyoung Lee, Min Young Choi, and Donggu Lee (Gyeongsang Nat'l Univ., Korea)

[P3-122] 14:00-15:30

Effect of Zinc Halides on Surface Energy of InP Tetrapod Nanocrystals

Sunghu Kim, Seongmin Park, and Sohee Jeong (Sungkyunkwan Univ., Korea)

[P3-123] 14:00-15:30

Surface Passivation via Dodecyl-Based Ligand Engineering on $CsPb(Br,I)_3$ Perovskite Nanocrystals for Efficient Red-Emitting LEDs

Semin Ko, Hyeon Woo Jeong, Hyejin Na, Seon Joo Lee (KRICT, Korea), Myoung Hoon Song (UNIST, Korea), Jae Yong Suh (Michigan Technological Univ., USA), Soong Ju Oh (Korea Univ., Korea), Jaemin Lee, and Sungho Choi (KRICT, Korea)

[P3-124] 14:00-15:30

Direct Nanocrystal-Based Device Fabrication Method for Property Engineering and Patterning by Ink-Lithography

Junhuyk Ahn, Sanghyun Jeon, Ho Kun Woo, Junsung Bang, Yong Min Lee (Korea Univ., Korea), Steven J. Neuhaus (Univ. of Pennsylvania, USA), Woo Seok Lee, Taesung Park, Sang Yeop Lee, Byung Ku Jung, Hyungmok Joh, Mingi Seong (Korea Univ., Korea), Ji-hyuk Choi (KIGAM, Korea), Ho Gyu Yoon (Korea Univ., Korea), Cherie R. Kagan (Univ. of Pennsylvania, USA), and Soong Ju Oh (Korea Univ., Korea)

[P3-125] 14:00-15:30

Highly Luminescent and Multifunctional Zero-Dimensional Cesium Lanthanide Chloride (Cs_3LnCl_6) Colloidal Nanocrystals

Minji Lee, Hyesun Chung,Yoon Joo Choi, Ho Young Woo, Lee Da Won, and Taejong Paik (Chung-Ang Univ., Korea)

[P3-126] 14:00-15:30

Amine-Functionalized Ligand as a Charge Balancer in Colloidal Quantum DotLight Emitting Diodes

Minseok Choi (Pusan Nat'l Univ., Korea), Woonho Jung (Sungkyunkwan Univ., Korea), Jaeyeop Lee (Pusan Nat'l Univ., Korea), Jaehoon Lim (Sungkyunkwan Univ., Korea), and Jeongkyun Roh (Pusan Nat'l Univ., Korea)

[P3-127] 14:00-15:30

All-Inorganic Halide Perovskite Patterning with Adjustable Phase for High Resolution Color Filter and Photodetector Arrays

Woosik Kim, Su-Kyung Kim, Sanghyun Jeon, Junhyuk Ahn, Byung Ku Jung, Sang Yeop Lee (Korea Univ., Korea), Chanho Shin (Univ. of California San Diego, USA), Tae-Yeon Seong (Korea Univ., Korea), Sohee Jeong, Ho Seong Jang (KIST, Korea), TSe Nga Ng (Univ. of California San Diego, USA), and Soong Ju Oh (Korea Univ., Korea)

[P3-128] 14:00-15:30

Study on Solvent Orthogonality of the Double Hole Transport Layers in All Solution-Processed Quantum Dot Light-Emitting Diodes

Jaeyeop Lee (Pusan Nat'l Univ., Korea), Woonho Jung (Sungkyunkwan Univ., Korea), Minsuck Choi, Sangwook Park (Pusan Nat'l Univ., Korea), Jaehoon Lim (Sungkyunkwan Univ., Korea), and Jeongkyun Roh (Pusan Nat'l Univ., Korea)

[P3-129] 14:00-15:30

Adjusting Surface Chemistry of Quantum Dot for High-Resolution Vis / IR Photodetectors

Jung Ho Bae, Byung Ku Jung, and Soong Ju Oh (Korea Univ., Korea)

[P3-130] 14:00-15:30

Hydrothermal Synthesis of Monoclinic-Phase Vanadium Dioxide Nanocrystals for High Performance Smart Windows

Jong Bae Kim, Yoon Joo Choi , Ho Young Woo, Da Won Lee, Hyesun Chung, and Taejong Paik (Chung-Ang Univ., Korea)

[P3-131] 14:00-15:30

Synthesis of Blue InP Multishell Quantum Dots by Exchanging theCapping Ligands of the Outer Shell

Seungchul Shin, Bomi Kim, and Jiwan Kim (Kyonggi Univ., Korea)

[P3-132] 14:00-15:30

Designing Nanocrystal-Based Multi-Sensors By One-Step Inkjet Printing

Junjung Bang, Junhyuk Ahn, and Soong Ju Oh (Korea Univ., Korea)

[P3-133] 14:00-15:30

Controlling the Indium Doping according to the CdSe Nanocrystals Size for Lowering the Fabrication Temperature

Yong Min Lee, Byung Ku Jung, Junhyuk Ahn, Taesung Park (Korea Univ., Korea), Chanho Shin, Tse Nga Ng (Univ. of California San Diego, USA), In Soo Kim (KIST, Korea), Ji-Hyuk Choi (KIGAM, Korea), and Soong Ju Oh (Korea Univ., Kore)

[P3-134] 14:00-15:30

Electrical Doping of Colloidal Semiconductor Nanocrystals: Electron-Only-Device & Hole-Only-Device

Hak June Lee (Seoul Nat'l Univ., Korea), Doyoon Shin, and Wan Ki Bae (Sungkyunkwan Univ., Korea)

[P3-135] 14:00-15:30

Unraveling the Growth Mechanism of Heterovalent Core/Shell Nanocrystals

Doyoon Shin (Sungkyunkwan Univ., Korea), Hak June Lee (Seould Nat'l Univ., Korea), Dongju Jung, Seongbin Im, and Wan Ki Bae (Sungkyunkwan Univ., Korea)

[P3-136] 14:00-15:30

Linearly Polarized Photoluminescence and Electrical Switching of the Elongated Carbon Quantum Dots

Subhangi Subedi, Suhyun Kim, Avinash K. Rella, Vineet Kumar, and Shin-Woong Kang (Jeonbuk Nat'l Univ., Korea)

[P3-137] 14:00-15:30

Controlled Sulfurization of Ag Nanorod into Ag-Ag_2S Hetero-Nanorod

Taeyong Ha, Gyuhyun Bang, Sanghwa Jeong, and Sungjee Kim (Pohang Univ., Korea)

[P3-138] 14:00-15:30

Device Performance of All Inorganic Quantum Dot Light Emitting Diodes Uusing NiOx as a Hole Transport Layer by Soluble Process

Hyojung Son, Chaerin Son, and Byoung-Seong Jeong (Kyungpook Nat'l Univ., Korea)

[P3-139] 14:00-15:30

Insight the Halide Precursor to Reveal the Role of Triiodide in Anion-Exchange Lead Halide Perovskite Nanocrystals

Ha-Chi V. Tran (Sungkyunkwan Univ., Korea), Ju Young Woo (KITECH, Korea), and Sohee Jeong (Sungkyunkwan Univ., Korea)

[P3-140] 14:00-15:30

Enhanced Efficiency of Top-Emission Quantum Dot Light-Emitting Diodes with Optimized Hole and Electron Transport Layers

Gyeong-Pil Jang, Ji-Hun Yang, Su-Young Kim, Young-Bin Chae, and Chang Kyo Kim (Soonchunhyang Univ., Korea)

[P3-141] 14:00-15:30

Synthesis of Non-Toxic Ag-Based NIR Quantum Dots and Its Application into Photoelectronic Device

Jisu Kwon, Yunmo Sung, and Sungjee Kim (POSTECH, Korea)

[P3-142] 14:00-15:30

Synthesis of Green Perovskite Quantum Dot-Silica Composites with Enhanced Stability and Improved Optical Properties

Il Heo, Ja Yeon Lee, and Ho Seong Jang (KIST, Korea)

[P3-143] 14:00-15:30

Simulation Study on a New Quantum-Dot Backlight Incorporating a Hybrid Film for LCD Applications

Jung Gyun Lee, Gi Jung Lee, and Jae Hyeon Ko (Hallym Univ., Korea)

[P3-144] 14:00-15:30

Design of Distributed Bragg Reflector for Enhancement of Color Gamut in Color Conversion Displays

Gi-Eun Kim, Dong-Seok Lee, Jeong-Hyeon Lee, Chang-Jae Yu, and Jae-Hoon Kim (Hanyang Univ., Korea)

[P3-145] 14:00-15:30

Effect of Zinc Ions on the Optical and Electrical Properties of InAs Quantum Dots-Based Photodiodes

SeongChan Kim, Sooyean Yeon, and Nuri Oh (Hanyang Univ., Korea)

[P3-146] 14:00-15:30

Brightening InP Core and Effective Shelling Process by Combinational Precursor Chemistry

Seungki Shin, Hyunwoo Jang, Namyoung Gwak, and Nuri Oh (Hanyang Univ., Korea)

[P3-147] 14:00-15:30

Improvement of Charge Balance in Quantum Dot Light-Emitting Diodes with GaZnO Electron Transport Layer

Soryeong Jeong, Hyun Jae Kim, Yoon-Su Kim, Nara Lee, Yoonji Yang, Kyoung Won Park, Chul Jong Han, and Min Suk Oh (KETI, Korea)

[P3-148] 14:00-15:30

Transfer Printing of Spatially Organized Quantum Dots on Topographically Patterned Surface

Su Bin Lee, Su Hong Min, and Dong Hyun Lee (Dankook Univ., Korea)

[P3-149] 14:00-15:30

All Inorganic Solution Processed Quantum Dots Visible Light Photodiode

Seong Jae Kang, Jun Hyung Jeong, Jin Hyun Ma, and Seong Jun Kang (Kyung Hee Univ., Korea)

[P3-150] 14:00-15:30

InP QDs with Polymer Ligand for Space Control between QDs and Dispersion in Siloxane Matrix

Boram Kim, Yonghyeok Choi, Kangwoo Lee, and Heeyeop Chae (Sungkyunkwan Univ., Korea)

[P3-151] 14:00-15:30

Effects of Metal Halide on Optical Properties of Bare InP Nanocrystals

Namyoung Gwak, Minwoo Lee, Seungki Shin, and Nuri Oh (Hanyang Univ., Korea)

[P3-152] 14:00-15:30

A Novel Strategy for Quantum Dot Thin Layers with Perfect Color Conversion and High Luminance in QD-OLED Displays

Seok-Hun Kim and Sunghoon Kim (Dong-Eui Univ., Korea)

[P3-153] 14:00-15:30

Photoluminescence Study of Solution-Processed Zinc Oxide and Indium-Galliumzinc-Oxide Thin Films

Jinyeong Lee and Jaewook Jeong (Chungbuk Nat'l Univ., Korea)

[P3-154] 14:00-15:30

High Color Purity Down Conversion Using $ZnBr_2$-$CsPbBr_3$ PerovskiteNanocrystals

Ju-Hun Lee (ETRI, Korea), Jusun Park (KITECH, Korea), Chul Woong Joo, Dae-Hyun Ahn, Joo Yeon Kim, Nam Sung Cho (ETRI, Korea), Ju Young Woo (KITECH, Korea), and Jaehyun Moon (ETRI, Korea)

[P3-155] 14:00-15:30

Tunable Color Filter by Humidity Response via Nanoporous Fabry-Perot Structure

Jaekyung Kim, Byoungsu Ko, Younghwan Yang, and Junsuk Rho (POSTECH, Korea)

[P3-156] 14:00-15:30

Electrically Switching Properties of Photonic Crystal Nano Colloid

Ju-Young Park, Pans. Priyadharshana, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P3-157] 14:00-15:30

Optimal Fusion of Hole-Transport Layer with Antibiotic for Highly Efficient Organic Light-Emitting Diodes

Dong Hyun Kim, Chang Min Lee, Amjad Islam, Dong Hyun Choi, Geon-Woo Jeong, Tae Wook Kim, Hyun Woo Cho, Yeong Beom Kim, Syed Hamad Ullah Shah, Min Jae Park, and Seung Yoon Ryu (Korea Univ., Korea)

[P3-158] 14:00-15:30

Determination of Thermoluminescence Properties of Na+Dy Co-Doped MgB_4O_7 for a Light Tracer

Jinu Park, Nakyung Kim, Jiwoon Choi, Youngseung Choi, Sanghyuk Ryu (KAIST, Korea), Sungjin Yang, Duckhyeong Jung (Poongsan R&D Institute, Korea), and Byungha Shin (KAIST, Korea)

[P3-159] 14:00-15:30

Cellulose/Carbon Black-Based Flexible Pressure Sensor with High Linearity

Dong Keon Lee, Daesik Kim, Jinsu Yoon, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[P3-160] 14:00-15:30

Color Tunable Quantum Dot Light Emitting Diode with PEIE Layer

Sung-Cheon Kang, Jae-In Yoo, Hyo-Bin Kim, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P3-161] 14:00-15:30

All Solution Quantum Dot Light-Emitting Diode Using Green Solvent.

Yalim Kim, Hyo-Bin Kim, Jae-In Yoo, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P3-162] 14:00-15:30

Swelling-Induced Surface Instability of Crosslinked Nanocrystals

Se Young Park and Moon Sung Kang (Sogang Univ., Korea)

[P3-163] 14:00-15:30

Visualizing NIR Using Monolithic QD Optoelectric Upconversion Devices in Transmissive Mode

Tae Hyun Kwon and Moon Sung Kang (Sogang Univ., Korea)

[P3-164] 14:00-15:30

Direct Photo-Lithography of Perovskite Nanocrystal with *i*-line

Ju-Young Park, Pans. Priyadharshana, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P3-165] 14:00-15:30

Argon and Oxygen Gas Flow Rate Dependency of Sputtering-Based Indium-Gallium-Zinc Oxide Transistor

Youngmin Han, Dong Hyun Lee, Sang Jik Kwon, Eou-Sik Cho, and Hocheon Yoo (Gachon Univ., Korea)

[P3-166] 14:00-15:30

All-Solution Processed Indium Phosphide Based Inverted Structure Light Emitting Diode

Hyo-Bin Kim, Jae-In Yoo, Sung-Cheon Kang, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P3-167] 14:00-15:30

Enhanced Performance of Quantum Dot Light Emitting Diode with Balanced Charge Injection Charge Injection

Zebing Liao, Kumar Mallen, Chengbin Kang, Yiyang Gao, Maksym Prodanov, and Abhishek Kumar Srivastava (The Hong Kong Univ., of Science and Tech., China)

[P3-168] 14:00-15:30

Environmentally Friendly QLED with Improved Charge Balance via Blended Hole Transport Layers

Jae-Hyeon Ahn, Sinyoung Cho, Derrick Allan Taylor, Justice Agbeshie Teku, and Jong-Soo Lee (DGIST, Korea)