

IMiD 2023

The 23rd International Meeting on Information Display
August 22-25, 2023 / BEXCO, BUSAN, KOREA

Session Title:	P1. Poster Session 1
Session Date:	August 23 (Wed.), 2023
Session Time:	13:20-14:50
Session Room:	Hall 2A

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

Development of Composite Substrates for Stretchable Transparent Electronics

Min Jae Sung, Jong Ho Lee (KETI, Korea), Sora Jang (Jeonbuk Nat'l Univ., Korea), Chul Jong Han (KETI, Korea), Bum-Joo Lee (Jeonbuk Nat'l Univ., Korea), and Byungwook Yoo (KETI, Korea)

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

Non-Linear Elastic Properties of OCA for Deformable Display Using Finite Element Method Analysis

Sang Hyun Han, Jun Hyuk Shin, and Su Seok Choi (POSTECH, Korea)

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

Computational Analysis of Global Deformation of Free from Factor Display Components based on Local Strain Calculation Algorithm

Kang-Han Kim (KITECH, Korea), Kuk Young Cho (Hanyang Univ., Korea), and Yong-Cheol Jeong (KITECH, Korea)

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

Organic/Inorganic Hard Coating for Anti-Fragile Ultrathin Glass

Hyeongjung Kim, Kang-Han Kim, Min Ju Kong, and Yong-Cheol Jeong (KITECH, Korea)

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

Tensile Testing of Organic/Inorganic Multi-Barrier for Flexible Displays

Hyeunwoo Kim, Hyeongjun Lee (Sunmoon Univ., Korea), Sun-Woo Lee, Seung Jin Oh (KAIST, Korea), Yongwon Kim, Hyoyeol Ryu (Sunmoon Univ., Korea), Taek-Soo Kim (KAIST, Korea), and Jeong Hyun Kwon (Sunmoon Univ., Korea)

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[P1-006]

13:20-14:50

Tensile Testing of an Al₂O₃/TiO₂ Nanolaminate Fabricated by Low-Temperature ALD

Hyeongjun Lee, Hyeunwoo Kim (Sunmoon Univ., Korea), Seung Jin Oh, Sun-Woo Lee (KAIST, Korea), Hyoyeol Ryu, Yongwon Kim (Sunmoon Univ., Korea), Taek-Soo Kim (KAIST, Korea), and Jeong Hyun Kwon (Sunmoon Univ., Korea)

[P1-007]

13:20-14:50

Highly Flexible and Simple Fabrication of Textile-Based OLEDs Utilizing Parylene-C Transfer Process

Ha-Eun Cho and Kyung Cheol Choi (KAIST, Korea)

[P1-008]

13:20-14:50

Glass-Cloth Reinforced Siloxane Composite Structured Film for Protection of Foldable UTG Cover Window

Hyun Seok Kang, Yung Lee, Sehun Park, Geumkyu Yi (KAIST, Korea), Jun-Hyuk Lim, Jihoon Ko (Solip Tech Co., Ltd., Korea), and Byeong-Soo Bae (KAIST, Korea)

[P1-009]

13:20-14:50

Optimizing Surface Energy of Oxide-Metal-Oxide Electrodes for High-Performance of Stretchable Organic Light-Emitting Diodes

Hyun Woo Cho, Dong Hyun Kim, Chang Min Lee, Tae Wook Kim, Yeong Beom Kim, Syed Hamad Ullah Shah, Keum-Jin Ko, P. Justin Jesuraj, and Seung Yoon Ryu (Korea Univ., Korea)

[P1-010]

13:20-14:50

Influence of Strain and Capacitance according to Stretching Direction

Min Soo Park, Hyung-Jin Youn, and Sukin Yoon (Sanayi System Co., Ltd., Korea)

[P1-011]

13:20-14:50

An Optimized Design of Kirigami Structures for Stretchable Electronics

Hakjun Yang, Sang Hyun Han, and Su Seok Choi (POSTECH, Korea)

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[P1-012]

13:20-14:50

Research on Hybrid Sheets with High EMI Shielding and Heat Dissipation Properties for Foldable Displays

Tae-Wan Kim, Dong-Hoon Jang, and Kwan-Young Han (Dankook Univ., Korea)

[P1-013]

13:20-14:50

Analysis of Stress Distribution as Rolling Test Parameter Using Pressure Sensitive Sheet for Rollable Display

Su Young Yang, Jae Ho Song, Sangwoong Baek, and Chan-Jae Lee (KETI, Korea)

[P1-014]

13:20-14:50

A New Detachable Substrate Obviating the Need of LLO for Fabricating Flexible Oxide TFT Array

Ju Hun Lee, Hee-Ok Kim, Jong-Heon Yang, Chi-Sun Hwang, Jae-Eun Pi, Seung-Youl Kang (ETRI, Korea), Wooseok Yang, Taeyeong Yun (KETI, Korea), Seung-Yeon Kim, Young-Ju Choi (EVERCHEMTECH, Korea), and Jaehyun Moon (ETRI, Korea)

[P1-015]

13:20-14:50

Study on Mechanical Durability and Electrical Reliability of Stretchable IGZO Thin-Film Transistors against Long-Term Repeated Mechanical Stress

Min Young Kim, Hyeong Wook Kim, and Bo Sung Kim (Korea Univ., Korea)

[P1-017]

13:20-14:50

Improvement of the Bias Instability Characteristics driven by Organic Film in IGZO TFT for OLED Back Plane

Yubeen Lim, Ahrum Sohn, Jung-June Kim, Hanseok Lee, Won-Sang Ryu, Youn-Gyoung Chang, Jiyong Noh, and Kwon-Shik Park (LG Display Co., Ltd., Korea)

[P1-018]

13:20-14:50

Small-Molecular Charge Injection Layers Regulating Injection Barriers and Their Applications to Organic-Inorganic Complementary Inverters

Youngmin Han, Seongjae Kim, Chang-Hyun Kim, and Hocheon Yoo (Gachon Univ., Korea)

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[P1-019]

13:20-14:50

Light-Assisted/Light-Driven Memory Behaviors Using C8-BTBT-Fluoropolymer PTCDI-C13 Vertically-Stacked Floating-Gate Heterostructures

Seungme Kang, Seongjae Kim, and Hocheon Yoo (Gachon Univ., Korea)

[P1-020]

13:20-14:50

Fully Self-Aligned Homo-Junction InGaZnO TFTs Enabled by Deep UV- Irradiation Treatment

Xuan Zhang, Dhruv Sharma, and Sung Woon Cho (Suncheon Nat'l Univ., Korea)

[P1-021]

13:20-14:50

Solution-Processed InZnO Thin-Film Transistors for High-Performance and High-Stability Display Backplane

Hyeri Kang, Xuan Zhang, Dhruv Sharma, and Sung Woon Cho (Suncheon Nat'l Univ., Korea)

[P1-022]

13:20-14:50

The Cu₂O Thin Film Applied to the Degradation of Organic Pollutants by Controlling Potential and pH

Dhruv Sharma, Xuan Zhang, and Sung Woon Cho (Suncheon Nat'l Univ., Korea)

[P1-023]

13:20-14:50

Hole Carriers Transport Enhancement in Inkjet-Printed Single-Walled Carbon Nanotube Transistors by Self-Assembled Monolayer Doping Effect

Dong Hyun Lee (Gachon Univ., Korea), Siwon Hwang, Bongjun Kim (Sookmyung Women's Univ., Korea), and Hocheon Yoo (Gachon Univ., Korea)

[P1-024]

13:20-14:50

Unusual Charge Transport Induced by Ion Migration in Tin-Halide Perovskites

Taewan Roh, Huihui Zhu, Wonryeol Yang, Ao Liu, and Yong-Young Noh (POSTECH, Korea)

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[P1-025]

13:20-14:50

Improved Surface Uniformity of Spray-Coated Organic Semiconducting Films via Thermally Assisted Reformation

Dongyeol Seo, Donguk Kim, and Felix Sunjoo Kim (Chung-Ang Univ., Korea)

[P1-026]

13:20-14:50

High-Performance 2D/3D Hybrid Tin Perovskite Transistors Enabled by Fluorinated Organic Cation

Wonryeol Yang, Geonwoong Park, Ao Liu (POSTECH, Korea), Hong Beng Lee, Jae-Wook Kang (Jeonbuk Nat'l Univ., Korea), Huihui Zhu, and Yong-Young Noh (POSTECH, Korea)

[P1-027]

13:20-14:50

Interface Optimization Using Hydrogen-Rich SiO₂ for High Performance InZnO TFTs

Seong-In Cho and Sang-Hee Ko Park (KAIST, Korea)

[P1-028]

13:20-14:50

Enhanced Photoresponse in Visible-Light Using a Heterojunction Phototransistor with a Structure of Zr-Doped SnO₂ on IGZO

Yu Bin Kim, Jun Hyung Jeong, Min Ho Park, Min Gye Kim, Jeong Min Yun, and Seong Jun Kang (Kyung Hee Univ., Korea)

[P1-029]

13:20-14:50

Highly Transparent Solution Processed Color Cognitive Visible-Light Stimulated IGZO Optoelectronic Synaptic Transistor via Cd Dopant

Jun Hyung Jeong, Min Ho Park, Jin Hyun Ma, Yu Bin Kim, and Seong Jun Kang (Kyung Hee Univ., Korea)

[P1-030]

13:20-14:50

Effect of Annealing Temperature on In-Ga-Zn-O Charge Trap-Based Synaptic Transistor

Junhyeong Park, Yuseong Jang, and Soo-Yeon Lee (Seoul Nat'l Univ., Korea)

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[P1-031]

13:20-14:50

A Study on the Self-Rectifying TiO₂ Memristor Mechanism Produced by a Vacuum-Free Solution Process

Min Ho Park and Seong Jun Kang (Kyung Hee Univ., Korea)

[P1-032]

13:20-14:50

Low-Energy Patternable 3-Dimensional Crosslinkers with Carbene Chemistry for High-Resolution Organic Electronics

Jiyeon Ha (Hanyang Univ., Korea), Yujin Seong (UNIST, Korea), Hyukmin Kweon, Ukjin Jeong, Seokran Choi, Borina Ha, Soyeon Lee (Hanyang Univ., Korea), BongSoo Kim (UNIST, Korea), and Do Hwan Kim (Hanyang Univ., Korea)

[P1-033]

13:20-14:50

Rational Design of Iontronic Polymer Semiconductor based on Ion Compatible Photo-Crosslinker

Hayoung Oh (Hanyang Univ., Korea), Wanho Cho (UNIST, Korea), Hyukmin Kweon, Dong Jun Kim, Ukjin Jeong, Jinmin Park (Hanyang Univ., Korea), BongSoo Kim (UNIST, Korea), and Do Hwan Kim (Hanyang Univ., Korea)

[P1-034]

13:20-14:50

Pseudo-Halide Engineering for Ultra-High Mobility Perovskite Transistors

Geonwoong Park, Wonryeol Yang, Ao Liu, and Yong-Young Noh (POSTECH, Korea)

[P1-035]

13:20-14:50

Degradation Behavior of Amorphous InSnGaZnO Thin Film Transistor under Various DC and AC Gate Bias Stress

Chankyu Lee and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P1-036]

13:20-14:50

Water-Processed Dielectric Layer for Eco-Friendly High Performance Organic Thin Film Transistors

MiRiNae Lee, Youngju Lee, Swarup Biswas (Univ. of Seoul, Korea), Dongwook Lee (KITECH, Korea), and Hyeok Kim (Univ. of Seoul, Korea)

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[P1-037]

13:20-14:50

Synaptic Transistor based on Tellurium Fabricated by Sputtering at Room Temperature

Seung Min Lee (Chungnam Nat'l Univ., Korea), Su Hyeon Ahn, Hyung Jin Kim (Inha Univ., Korea), and Hyun-suk Kim (Chungnam Nat'l Univ., Korea)

[P1-038]

13:20-14:50

Solution-Processable Polymer Semiconductor Thin Film Transistors

Seungyeon Koh, HwaPyeong Noh, Yongju Lee, Biswas Swarup, and Hyeok Kim (Univ. of Seoul, Korea)

[P1-039]

13:20-14:50

Efficient Neuromorphic Computing with Lithium Ion-Based Synaptic Transistors for Low Energy Consumption

Ji-Min Park (Chungnam Nat'l Univ., Korea), Hwiho Hwang, Min Suk Song, Hyungjin Kim (Inha Univ., Korea), and Hyun-Suk Kim (Chungnam Nat'l Univ., Korea)

[P1-040]

13:20-14:50

NIR Sensing Ambipolar Organic Phototransistor based on Solution Processable N-Type Semiconductor

HwaPyeong Noh, Yongju Lee, Mi Ri Nae Lee, Swarup Biswas (Univ. of Seoul, Korea), Dong-Wook Lee (KITECH, Korea), and Hyeok Kim (Univ. of Seoul, Korea)

[P1-041]

13:20-14:50

Directly Photo-Patternable High-k Polymer Gate Dielectrics for Future Electronics

Seong Cheol Jang, Gunoh Lee, Kyung Jin Lee, and Hyun-Suk Kim (Chungnam Nat'l Univ., Korea)

[P1-042]

13:20-14:50

Optimizing Characteristics of Indium Gallium Zinc Oxide Thin Film Transistors through Plasma-Enhanced Atomic Layer Deposition

Jaewon Park, Ji-Min Park, Ji-Hyeon Min, and Hyun-suk Kim (Chungnam Nat'l Univ., Korea)

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[P1-044]

13:20-14:50

Organic Thin Film Transistor based on the Organic-Inorganic Hybrid Ferroelectric Insulator Layer

Hyowon Jang, Yongju Lee, Swarup Biswas (Univ. of Seoul, Korea), Dong-Wook Lee (KITECH, Korea), and Hyeok Kim (Univ. of Seoul, Korea)

[P1-045]

13:20-14:50

Highly Photoresponsivity IGZO Ultraviolet Phototransistor via Additional Solution Processed ZnO Nanoparticle Layer

Jin Hyun Ma, Jun Hyung Jeong, Seong Jae Kang, and Seong Jun Kang (Kyung Hee Univ., Korea)

[P1-046]

13:20-14:50

A Phototransistor for Performs Artificial Synaptic Action by Controlling Off-Current with Illumination

Seungme Kang (Gachon Univ., Korea), Byungchul Jang (Kyungpook Nat'l Univ., Korea), Sunyoung Sohn (Sangji Univ., Korea), and Hocheon Yoo (Gachon Univ., Korea)

[P1-047]

13:20-14:50

Improvement in Performance of α -IGZTO Transistor via Hydrogen Doping

Jeonga Lee, Seeun Kim, Cheolhee Choi, and JaeKyeong Jeong (Hangyang Univ., Korea)

[P1-048]

13:20-14:50

HfZrO₂ Thin-Film Synaptic Transistor Using ALD Process for Advanced Neuromorphic Computing

Eun Seo Jo and You Seung Rim (Sejong Univ., Korea)

[P1-049]

13:20-14:50

Ionic Gel/IGZO Hybrid Structure-Based Electric Double-Layer Gated Synaptic Transistor

Kyong Jae Kim and You Seung Rim (Sejong Univ., Korea)

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[P1-050]

13:20-14:50

Compositional Tailoring of In-Free GZO Layers by PEALD for Remarkably Stable IGZO/GZO Thin-Film Transistors

Hye-Jin Oh, Yoon-Seo Kim (Hanyang Univ., Korea), Joon Seok Park, Sunhee Lee (Samsung Display Co., Ltd., Korea), Hyun-Jun Jeong, and Jin-Seong Park (Hanyang Univ., Korea)

[P1-051]

13:20-14:50

Research on Indium-Based Precursor Structural Differences Using PEALD Technology

HoYoung Lee, SeongKyu Kang, and JaeKyeong Jeong (Hanyang Univ., Korea)

[P1-052]

13:20-14:50

Improving Broadband Detection of Quantum Dot/Oxide Semiconductor Heterojunction Phototransistor through Ga_2O_3 Passivation Layer

Yongjun Jeong, Junho Lee, Sangyeon Kim, and JaeKyeong Jeong (Hanyang Univ., Korea)

[P1-053]

13:20-14:50

Drive Current Enhancement of InGaZnO Thin-Film Transistors by Adoption of High-k Gate Dielectric Materials

Jae-Hyeong Park, Kihwan Kim, Hyo-Bae Kim, Ji-Hoon Ahn (Hanyang Univ., Korea), Ju Heyuck Baeck, Jiyong Noh, Kwon-Shik Park (LG Display Co., Ltd., Korea), and Saeroonter Oh (Hanyang Univ., Korea)

[P1-054]

13:20-14:50

A Study on the Temperature and Time Dependence of Characteristics in Fe-FET Devices

TaeGyu Yang, Heyoung Kang, SeungHee Cha, and JaeKyeong Jeong (Hanyang Univ., Korea)

[P1-055]

13:20-14:50

Scaling Amorphous Indium-Gallium-Zinc-Tin-Oxide TFTs with High Mobility through Oxygen Partial Pressure Control

Se Eun Kim, Bangju Park, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P1-056]

13:20-14:50

A Study of Epitaxial Growth of In-Zn-O via Plasma-Enhanced Atomic Layer Deposition

Seonwoong Bang, Minjae Kim, Yena Kim, and Jae Kyeong Jeong (Hanyang Univ., Korea)

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[P1-057]

13:20-14:50

High Performance ITZO TFTs with HMDS Passivation

Xinkai Sun, Jidong Jin, Zhenyaun Xiao, and Younghyun Kim (Hanyang Univ., Korea)

[P1-058]

13:20-14:50

Impact of Atomic-Layer-Deposition Cycle Duty Variation on the Properties and Performance of Indium Gallium Oxide Thin-Film Transistors

Jae Seok Hur, Seong Hun Yoon, Ho Young Lee, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P1-059]

13:20-14:50

Optimization of Solution-Processed Amorphous Cadmium Gallium Oxide for High Performance Thin-Film Transistors

Minh Nhut Le, Paul Lee (Sungkyunkwan Univ., Korea), Seung-Han Kang (Chung-Ang Univ., Korea), Kyunghan Ahn (Sungkyunkwan Univ., Korea), Sung Kyu Park (Chung-Ang Univ., Korea), Jaesang Heo (Samsung Display Co., Ltd., Korea), and Myung-Gil Kim (Sungkyunkwan Univ., Korea)

[P1-060]

13:20-14:50

Semiconducting Polymer Nanostructures for High-Performance All-Polymer Logic Gates in Integrated Circuits

Chae Won Kim, Keon Joo Park, Jin Seok Yoon, Nakhee Kang, Sam Nyung Yi, Hyung Soo Ahn, Kyoung Hwa Kim, and Young Tea Chun (Korea Maritime and Ocean Univ., Korea)

[P1-061]

13:20-14:50

Integration of Zn-ON and Tellurium Thin-Film Transistors Enables Highly Stable CMOS Inverter with Low-Temperature Processing

Joo-On Oh, Muhammad Naqi, and Sunkook Kim (Sungkyunkwan Univ., Korea)

[P1-062]

13:20-14:50

Balanced Ambipolar Charge Transport Achieved through Bilayer Organic Nanowire Fabrication

Keon Joo Park, Chae Won Kim, Jin Seok Yoon, Nakhee Kang, Sam Nyung Yi, Hyung Soo Ahn, Kyoung Hwa Kim, and Young Tea Chun (Korea Maritime and Ocean Univ., Korea)

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[P1-063]

13:20-14:50

Impedance Analysis of Solution-Processed Amorphous Indium-Gallium-Zinc Oxide Thin Films

Jaehyun Ahn and Jaewook Jeong (Chungbuk Nat'l Univ., Korea)

[P1-064]

13:20-14:50

High-Performance p-FETs in WSe₂ Enabled by Oxygen-Substituted Se-Vacancy Healing

Younghyun Ju, Pavan Pujar, and Sunkook Kim (Sungkyunkwan Univ., Korea)

[P1-065]

13:20-14:50

Efficiently Formed Pure Orthorhombic-Hf_{0.5}Zr_{0.5}O₂ for Use in Negative Capacitance Field-Effect Transistors

Yuseong Lee, Haewon Cho, Pavan Pujar, and Sunkook Kim (Sungkyunkwan Univ., Korea)

[P1-066]

13:20-14:50

Effectiveness of Utilizing Large-Scale Nonporous Indium-Gallium-Zinc-Oxide (IGZO) for Detecting Visible-To-Near-Infrared (NIR) Light, with the Goal of Improving Image Sensor Circuitry Performance

Yunjeong Yu, Anamika Sen, and Sunkook Kim (Sungkyunkwan Univ., Korea)

[P1-067]

13:20-14:50

Fabrication of α -ITZO Charge-Trapping FET Using Ion-Beam Sputtered Al₂O₃/HfO₂/Al₂O₃ for Memory-In-Pixel Display Applications

Seoung Min Park, Tae Hyeon Noh, and Younghyun Kim (Hanyang Univ., Korea)

[P1-068]

13:20-14:50

Subgap Engineering based on Sonication for Visible Light Detection of IGZO Phototransistor

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

[P1-069]

13:20-14:50

Investigating the Effect of Source and Drain Electrode Materials on the Electrical Characteristics of Amorphous In-Sn-Zn-O Thin-Film Transistors

Yo Seop Chi, Seong Ui An (Hanyang Univ., Korea), Dae-Hwan Ahn, Jae-Hoon Han (KIST, Korea), and Younghyun Kim (Hanyang Univ., Korea)

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[P1-070]

13:20-14:50

Synaptic Characteristics of Organic Field-Effect-Transistors with a Polymer Charge Trap Layer for Neuromorphic Applications

Hyeona Jo, Hoyoung Cho, Moohyun Kim, So-Young Bak, Danyoung Cha, Moonsuk Yi, Sungsik Lee, and Jeongkyun Roh (Pusan Nat'l Univ., Korea)

[P1-071]

13:20-14:50

Solution-Processed Ternary Oxide Dielectric Thin Films for Thin-Film Transistors Applications

Chaerim Kim, Seokhyeon Baek, Wonsik Kim, Jeongyeon Na, and Sungjun Park (Ajou Univ., Korea)

[P1-072]

13:20-14:50

Hydroxyl Group Free Crosslinked Poly(4-vinylphenol) Gate Dielectric for Hysteresis Free Thin Film Transistor

Nam Woo Kim and Taek Ahn (Kyungsoong Univ., Korea)

[P1-073]

13:20-14:50

Direct Photo-Patternable and Surface Energy Controlled Polyimides as Gate Dielectric for Flexible Display Backplane

Nam Woo Kim and Taek Ahn (Kyungsoong Univ., Korea)

[P1-074]

13:20-14:50

Low-Voltage Operating, Air-Stable Organic Thin Film Transistors with Polymer Gate Insulator Synthesized via Initiated Chemical Vapor Deposition

Jungjun Kim, Taejin Mun, Wonryung Lee, and Hyejeong Seong (KIST, Korea)

[P1-075]

13:20-14:50

Investigation of Trap Density at Polymer-Dielectric Interfaces of Polymeric Field-Effect Transistors with Photo-Induced Charge-Accumulation Spectroscopy

Yu Kang Song, Jaehyun Yu, and Jiyoul Lee (Pukyong Nat'l Univ., Korea)

[P1-076]

13:20-14:50

Device Engineering in Sol-Gel-Based Metal-Oxide Thin-Film Transistors

Sang-Joon Park and Tae-Jun Ha (Kwangwoon Univ., Korea)

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[P1-077]

13:20-14:50

Effects of Metal Ion-Doping on the Electrical Characteristics of Oxygen Annealed Metal-Oxide Thin-Film Transistors Operating at Sub-V

Se-Ryong Park, Sang-Joon Park, and Tae-Jun Ha (Kwangwoon Univ., Korea)

[P1-078]

13:20-14:50

Improvement of Specific Contact Resistivity of Amorphous IGZO Thin-Film Transistors through ALD-AZO Interlayer

Joo Hee Jeong, Dongseon Kim, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P1-079]

13:20-14:50

Low Power Emission Pulse Generation Circuit based on P-Type LTPS TFTs for Active-Matrix Organic Light-Emitting Diode Displays

Min Kyu Chang, Ji Hoon Kim, Seoyeong Jeong, and Hyongsik Nam (Kyung Hee Univ., Korea)

[P1-080]

13:20-14:50

A Compact α -IGZO TFT Pixel Circuit for Micro-LED Displays with Clamped Inverter Structure

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

[P1-081]

13:20-14:50

A New Compact Progressive Emission MicroLED Pixel Circuit with Only Three Scan Signals

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

[P1-082]

13:20-14:50

Just-Noticeable-Difference Applicable for Wide Viewing Distance Range and Extremely Low Luminance

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

[P1-083]

13:20-14:50

High-Reliability Emission Driver Circuit based on Metal Oxide Thin-Film Transistors Using Q Node Separating Structure

Eun Kyo Jung, Hwarim Im (Sungkyunkwan Univ., Korea), Kyung-Hoon Chung, Haemin Kim (Samsung Display Co., Ltd., Korea), and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

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[P1-084]

13:20-14:50

Efficient Powering in Display Subsystem Using GaN-Based Ultra-Slim DC-DC Converter

Satoshi Ikeda (Panasonic Corp., Japan), Natsuki Maeda, Kimihiro Nishijima, and Eiji Sakai (Sojo Univ., Japan)

[P1-085]

13:20-14:50

Novel Vth Compensation Methods Using Body Effect in Micro Display

Qianqian Wang, Gang Chen, Jacob Choi, and Ryan Lee (Meta, USA)

[P1-086]

13:20-14:50

Driver on Array with Oxide TFT for Narrow Bezel Width

Jang Hoo Lee, Hyuck Su Lee, Seungjae Moon, and Byung Seong Bae (Hoseo Univ., Korea)

[P1-087]

13:20-14:50

Simple Driving Capacitive Sensor Circuit

Seo Yun Kim, Seo Jin Kang, Hyuck Su Lee, Jang Hoo Lee, Seung Jae Moon, and Byung Seong Bae (Hoseo Univ., Korea)

[P1-088]

13:20-14:50

A Study on the Application of Convolutional Neural Network in Optical Camera Communication

Jong-In Kim, Hyun-Sun Park, and Jung-Hyun Kim (KOPTI, Korea)

[P1-089]

13:20-14:50

Low-Temperature Polycrystalline Silicon Thin-Film Transistor-Based Scan Driver Circuit with Multiple Outputs for Mobile Displays

Hye-Won Woo, Eun Kyo Jung, Hwarim Im, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

[P1-090]

13:20-14:50

A High-Speed Pixel Circuit based on Low-Temperature Polycrystalline Silicon Thin-Film Transistor Compensable for Threshold Voltage, Mobility Variation, and IR Drop

Han Cheol Lee, Eun Kyo Jung, Hwarim Im, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

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[P1-091]

13:20-14:50

An Energy-Efficient Display System for AR/VR Applications

Seokhwan Roh and Byeong-gyu Nam (Chungnam Nat'l Univ., Korea)

[P1-092]

13:20-14:50

Novel AM-OLED Pixel Circuit Compensating for Threshold Voltage Variations and Depletion Mode of α -IGZO TFT

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

[P1-093]

13:20-14:50

IR LEDs Can Be Used as Both IR Emitters and Sensors

Yu-Seong Joung and Seung-Woo Lee (Kyung Hee Univ., Korea)

[P1-094]

13:20-14:50

Remaining Useful Life Prediction through Meaningful Feature Extraction Using SHAP

Ye-In Park and Suk-Ju Kang (Sogang Univ., Korea)

[P1-095]

13:20-14:50

Chemical Analysis of Precision Micro PCB by Laser Desorption Ionization Time of Flight Imaging Mass Spectrometer

Byeong Heon Song, Seung Woo Kim, Hyun Sik Kim (ASTA Inc., Korea), Yong Ho Lee (Korea Research Inst. of Material Property Analysis, Korea), and Jae Cheol Lee (ASTA Inc., Korea)

[P1-096]

13:20-14:50

Study of OCA-Like Silicone OCR as the Advanced Display Lamination Technology for Various Display Formfactor

Seung-A Lee (WACKER Chemical Korea Inc., Korea)

[P1-097]

13:20-14:50

One-Way Observable Aerial Display Using Corner Cube Prisms Doped with Dyestuff or Pigments Which Enable to Make Transparent from Back Side

Kunio Sakamoto and Shota Shiojiri (Konan Univ., Japan)

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13:20-14:50

Improvement of Amorphous Silicon Island Conical Protrusion in Thin Film Transistor Channel on G8.6 Large Glass

Jie Zhang, Hejing Zhang, Fan Yang, Zhen Liu, James Hsu, and Wade Chen (Chongqing HKC Optoelectronics Tech. Co., Ltd., China)

[P1-099]

13:20-14:50

Improvement of Metal Peeling on Electronic Paper for High Temperature and High Humidity Storage Evaluation

Junlong Fan, Chunyan Lin, Hejing Zhang, Zhen Liu, James Hsu, and Wade Chen (Chongqing HKC Optoelectronics Tech. Co., Ltd., China)

[P1-100]

13:20-14:50

A Method and Theoretical Research to Improve the Timeliness of Black Regime and G-Line of G8.6 TFT-LCDs

Song Sun, Jin-song Lu, Ran-long Wang, Qin Xiong, Deng-li Yao, Kai-jun Liu, Wen-jin Hong, and Zhe-hao Xu (Chongqing HKC Optoelectronics Tech. Co., Ltd., China)

[P1-101]

13:20-14:50

High Mobility Oxide Thin Film Transistor with Amorphous In-Ga-Sn-O Fabricated by RF-Magnetron Sputtering

Hyunil Jo, Seong-hun Bae, Juhan Kim, Nayoon Lee, and Young-woo Heo (Kyungpook Nat'l Univ., Korea)

[P1-102]

13:20-14:50

Study on Plasma-Enhanced Chemical Vapor Deposition Film Fracture Toughness Characteristic and Its Influence to Organic Light-Emitting Display Encapsulation

Xinwei Gao, Kang Zhao, Shuai Zhang, Peng Li, Kaihong Ma, Huai-Ting Shih, and Jianwei Yu (Hefei BOE Joint Tech. Co., Ltd., China)

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13:20-14:50

Influence of Low-Pressure Evaporation on Uniform Film Formation

Seongju Kim and Sungjune Jung (POSTECH, Korea)

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13:20-14:50

Development of Molybdenum Thin Film Process Using Multi-Rotary Cathode

Yuusuke Ujihara, Atsuo Ono, Tomokazu Suda, Tatsunori Isobe, Masaki Takei, and Junya Kiyota (ULVAC, Inc., Japan)

[P1-105]

13:20-14:50

Development of Out-Gassing Control System for the High Stability Oxide Semiconductor Deposition Process

Giwoon Sung, Doseon Yu, Jinsoo Park, Youjong Lee, and Myung Soo Huh (Samsung Display Co., Ltd., Korea)

[P1-106]

13:20-14:50

Hydrogen Content Control in Amorphous Oxide Semiconductors by Buffer Layer Engineering

Seong-Jin Park, Kang Kim, and Sang-Hee Ko Park (KAIST, Korea)

[P1-107]

13:20-14:50

Hot Implantation for Amorphous-InGaZnO Sheet Resistance Control

Toshimasa Ui, Ryosuke Goto, Yuya Yamane, Tatsuya Morio, Tomokazu Nagao, Keisuke Yasuta, Kenji Watari, Makoto Konushi, Masatoshi Onoda, and Shojiro Dohi (Nissin Ion Equipment Co., Ltd., Japan)

[P1-108]

13:20-14:50

Development of VUV Light Source for Elimination of Static Charge in Vacuum Process

Donggil Jung and Donghoon Lee (SUNJE R&D Center, Korea)

[P1-109]

13:20-14:50

Coplanar Asymmetric Nanogap Patterns Obtained by Adhesion Lithography and Their Applications to Versatile Materials-Based Gate-Tunable Schottky Diodes

Minseo Kim, Seongjae Kim, and Hocheon Yoo (Gachon Univ., Korea)

[P1-110]

13:20-14:50

Optimizing Process Conditions for Peeling Protective Film Using Removal Tape by Finite Element Analysis

Jungsik Nam, Byongug Park, Kyungah Lee, and Hyunjun Kim (Samsung Display Co., Ltd., Korea)

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13:20-14:50

Optical Monitoring Technology for Flexural Strength of Foldable Glass

Junsu Park, Sangjun Seok, Namhyuk Kim, and Nari Ahn (Samsung Display Co., Ltd., Korea)

[P1-112]

13:20-14:50

UV Selective Curing Technology in Area Printing Process

Dohun Lee, Taeho Lee, BongSik Noh, and Donghoon Hyun (Samsung Display Co., Ltd., Korea)

[P1-113]

13:20-14:50

Scalable Manufacturing of Dielectric Metasurfaces through Thermally-Curable Nanocomposite Printing

Hyeonsu Heo, Joohoon Kim, and Junsuk Rho (POSTECH, Korea)

[P1-114]

13:20-14:50

Development of SIMS Analysis Technology Specialized for Printing Display Panels

Jungsub Hwang, Jihye Lee, Jungwoon Jung, Jaehan Lee, and Nari Ahn (Samsung Display Co., Ltd., Korea)

[P1-115]

13:20-14:50

Threshold Voltage Control of Oxide Thin-Film Transistor with PN Semiconductor Heterojunction Structure

Jung Hoon Han (Korea Univ., Korea), Sooji Nam, Sung Haeng Cho, Chihun Sung (ETRI, Korea), and Byeong-Kwon Ju (Korea Univ., Korea)

[P1-116]

13:20-14:50

Flexible OLED Device with Adhesive Interlayer

Su-Min Son, Gun-Young Park, and Cheol-Hee Moon (Hoseo Univ., Korea)

[P1-118]

13:20-14:50

Application of Adhesion Lithography to Organic/Inorganic Multilayer Thin Film Encapsulation

Seung Woo Lee, Wung Sun Eo, Jun Yeop Lee, Seung Hwa Choi, Sung Kyu Jang, and Sung Min Cho (Sungkyunkwan Univ., Korea)

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13:20-14:50

Fabrication of Passive-Matrix Organic Light Emitting Diodes by Self-Aligned Imprint Lithography Process

Han Gil Lee, Yu Rim Jeong, ChangJun No, Changyun Na, Suyoung Kim, and Sung Min Cho (Sungkyunkwan Univ., Korea)

[P1-120]

13:20-14:50

Nanoscale Engineering of Al-Doped Double-Layered InGaSnO Films for Improving Performance and Bias Stability

Yubin Park and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P1-121]

13:20-14:50

Sodium Chloride Dipping Treatment for Performance and Stability Enhancement of Sputtered Amorphous In-Ga-Sn-O Thin Film Transistors

Saemi Lee and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P1-122]

13:20-14:50

Influences of Nitrogen Doping on the Device Performance and Stability of InGaSnO TFTs

Jinha Ryu and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P1-123]

13:20-14:50

Low-Temperature Fabrication of High Performance α -InGaZnO/ α -InGaSnO Bilayer Channel TFTs

Jaewoo Shin and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P1-124]

13:20-14:50

Effect of 2 MHz Frequency Power Applied to the Substrate during SiNx PECVD on TFT Characteristics

Sejin Ahn, Mingi Kim, Chanho Kim, Woojin Lee, and Sung Min Cho (Sungkyunkwan Univ., Korea)

[P1-125]

13:20-14:50

Fast Response Time Developed Curved Vertical-Alignment (VA) for High Definition Display

Chun Ma, An-Thung Cho, Chengyi Huang, James Hsu, and Wade Chen (Chuzhou HKC Optoelectronics Tech. Co., Ltd., China)

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13:20-14:50

Fabrication and Optimization for Phosphorescent Organic Light-Emitting Diodes with Micro-Size Pixel

Dongryul Lee, Woojo Kim, and Sungjune Jung (POSTECH, Korea)

[P1-127]

13:20-14:50

Effect of Selective Atmospheric Argon Plasma Treatment on Amorphous In-Ga-ZnO Thin Film Transistor

Yong Hyeok Seo, Dong Hyun Lee, Sang Yeon Park, Won Woo Lee, Dongwoon Lee, Hocheon Yoo, Yongmin Jeon, Sang Jik Kwon, and Eou-Sik Cho (Gachon Univ., Korea)

[P1-128]

13:20-14:50

Liquid Drop Volume Measurement Using Chromatic Confocal Sensor for Inkjet Printing Process

Jae Bum Pahk, Konta Yu, Lae Ho Kim, and Myung Soo Huh (Samsung Display Co., Ltd., Korea)

[P1-129]

13:20-14:50

Optimizing IR Blocking Performance of ITO/Ag/ITO Multilayers

Jung Hyun Jeon, Seung Jae Moon, Jong Mo Lee, and Byung Seong Bae (Hoseo Univ., Korea)

[P1-130]

13:20-14:50

Contact Resistance and Optical Properties of TCO Electrodes for Transparent Display

Se Yong Choi, Eun Seong Yu, Seung Jae Moon, Jong Mo Lee, and Byung Seong Bae (Hoseo Univ., Korea)

[P1-131]

13:20-14:50

Improving the Reliability and Suitability of Oxide Thin-Film Transistors for Low-Voltage Applications

Seung Jun Choi, Eun Seong Yu, Min Seong Kim, Seung Jae Moon, and Byung Seong Bae (Hoseo Univ., Korea)

[P1-132]

13:20-14:50

Study for UV Bessel Beam Applications in an OLED Display

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

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13:20-14:50

An In-Situ PECVD Process of Stoichiometric SiO₂ Deposition for Semiconductor Devices

Yejin Jeong, Hongrae Kim, Jiwon Choi, Donghyun Oh (Sungkyunkwan Univ., Korea), Yung-Bin Chung, Woo-Seok Jeon, Jungyun Jo (Samsung Display Co., Ltd., Korea), Duy Phong Pham, and Junsin Yi (Sungkyunkwan Univ., Korea)

[P1-134]

13:20-14:50

Comparing Growth Behaviors of PEALD In₂O₃ Layer Using Amine and Alkyl Based Novel Indium Precursors

Gyeong Min Jeong, Yoon-Seo Kim, Hae Lin Yang (Hanyang Univ., Korea), Myoungwoon Kim, Sangick Lee, Yonghee Kwone, Sangyong Jeon, Youngjae Im (DNF Co., Ltd., Korea), and Jin-Seong Park (Hanyang Univ., Korea)

[P1-135]

13:20-14:50

Inspection Methodology of Foreign Material Detection in the Lamination Layer of Mobile Phone

Dowan-Kim, Jichan Jung, Youngjae Lee, Whoyoung Jung, and JangKi Baek (Samsung Display Co., Ltd., Korea)

[P1-137]

13:20-14:50

Structural Optimization of Slot-Die Head with T-Shaped Manifold for Uniform Coating of Organic Thin Films

Gieun Kim, Mose Jung, Juan Kim, Jeongpil Na, Songeun Hong, and Jongwoon Park (KOREATECH, Korea)

[P1-138]

13:20-14:50

Fabrication of OLEDs with High-Aspect-Ratio Spherical Microlens Using Needle Coating

Juan Kim, Jeongpil Na, Mose Jung, Songeun Hong, Gieun Kim, and Jongwoon Park (KOREATECH, Korea)

[P1-139]

13:20-14:50

Impact Strength Simulation of PI (Polyimide) Substrate and UTG (Ultra-Thin Glass) Substrate for the Reliability of Rollable Display

Chaerin Son, Hyojung Son (Kyungpook Nat'l Univ., Korea), Ki-Yong Lee (FlexiGO Inc., Korea) and Byoung-Seong Jeong (Kyungpook Nat'l Univ., Korea)

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13:20-14:50

Design of an Impact Strength Evaluation Method for Durability of Rollable Displays

Hyojung Son, Chaerin Son, Hyun-Jae Park (Kyungpook Nat'l Univ., Korea), Ki-Yong Lee (FlexiGO Inc., Korea), Byoung-Seong Jeong (Kyungpook Nat'l Univ., Korea)

[P1-141]

13:20-14:50

A Reflective Bank Structure with 15um Subpixel Pitch for Display Application

Youngji Lim, Yeongbeom Lee, Jeongno Lee, and Chul Jong Han (KETI, Korea)

[P1-142]

13:20-14:50

Flexible and Transparent Bottom Gate Organic Thin-Film Transistors with Solution Processable Polymer

Yoojeong Ko, Hyo-Won Jang, Hyeok Kim, and Dong-Wook Park (Univ. of Seoul, Korea)

[P1-143]

13:20-14:50

Virtual Layout with Direction Constraint in Autonomous Mobile Robot Routing

Yonggu Kim, Wenchao Li, Nan Zhang, and Xueming Liu (Samsung Display Co., Ltd., China)

[P1-144]

13:20-14:50

Biocompatible and flexible PBTTT Organic Thin-Film Transistor Using Parylene-C Substrate and Gate Dielectric

Ah-Hyun Hong, Eunyeong Park, Jinkoo Kim, Hojun Jang, and Dong-Wook Park (Univ. of Seoul, Korea)

[P1-145]

13:20-14:50

Highly Improved Current Density and Power Conversion Efficiency of Perovskite Solar Cells via Plasma Polymer Fluorocarbon Antireflection Coating

Eunmi Cho, Mac Kim (KRICT, Korea), Jin-Seong Park (Hanyang Univ., Korea), and Sang-Jin Lee (KRICT, Korea)

[P1-146]

13:20-14:50

Ferroelectric Memory Thin-Film Transistors on Curved Surface Using Micro Contact Printing-Assisted Lift-off Patterning

Subin Hwa, Sungjun Yang, and Min-Hoi Kim (Hanbat Nat'l Univ., Korea)

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13:20-14:50

Collimated Organic Molecular Beam Made by Triple Nozzle Evaporator

Sungmoon Kim, Daejoon Chi, Taekgi Lee, Jonghun Jeon, and Jibok Yoo (Depolab Inc., Korea)

[P1-148]

13:20-14:50

Dispenser Printing and IPL Sintering of AgNW/PEDOT:PSS Composite-Based Transparent Conductive Film for Flexible OLED Application

Youngwook Noh and Kwan Hyun Cho (KITECH, Korea)

[P1-149]

13:20-14:50

Effective Dry Etching of InGaZnO Thin Films by Inductively Coupled Plasma Reactive Ion Etching Using HCl/A

Changyong Oh, Myeong Woo Ju, Jun Ho Song, and Bo Sung Kim (Korea Univ., Korea)

[P1-150]

13:20-14:50

Sequential Deposition of Host-Dopant Layers for Doping State Control of OLED with Plane-Source Evaporating System

Ji Hoon Kim, Jeong-Yeol Yoo (Dankook Univ., Korea), Chang Hoon Whang (OLEDON, Korea), and Byung Doo Chin (Dankook Univ., Korea)

[P1-151]

13:20-14:50

Laser Drilling of High-Aspect Ratio Through-Holes in Glasses for Future Display

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

[P1-152]

13:20-14:50

Metal-Assisted Chemical Etching for Fabricating Nanostructures for Display

Jiwon Seok, Jian Cheng Bi, Jun-Young Park, Seo Hyun Song, Sang-Ho Shin, and Byeong-Kwon Ju (Korea Univ., Korea)

[P1-153]

13:20-14:50

Photocurable Hybrid Polymer Capping for Pixelized Encapsulation, with Application to Stretchable OLED

Jaewan Park, Falguni Ahmed (Korea Univ., Korea), Gerhard Domann, Daniela Collin (Fraunhofer ISC, Germany), and MunPyo Hong (Korea Univ., Korea)

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13:20-14:50

Large Surface of Nano-Structured ZnO Thin Film Phosphor Fabricated on GZO Substrate for Lighting Application

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

[P1-155]

13:20-14:50

High Performance Green Phosphorescent Emitters Suitable for BT.2020 Color Gamut

Jing Wang, Ying Hou, Huiqing Pang, Wei Cai, Zheng Wang, Hongbo Li, Zhen Wang, Raymond Kwong, and Sean Xia (Beijing Summer Sprout Tech. Co., Ltd., China)

[P1-156]

13:20-14:50

Tailoring Absorption Capability of Highly Efficient Green-Emissive ZnSeTe Quantum Dots via Core Size Variation

Suk-Young Yoon, Yang-Hee Kim, Yongwoo Kim, Goo Min Park, and Heesun Yang (Hongik Univ., Korea)

[P1-157]

13:20-14:50

High-Performance Blue ZnSeTe Quantum Dot-Light-Emitting Diodes via Heterostructural Variation and Electron Transport Layer Modification

Yang-Hee Kim, Suk-Young Yoon, Hyun-Min Kim, Dae-Yeon Jo, Hyungmin Yang, Hyo-Jin Yeo, and Heesun Yang (Hongik Univ., Korea)

[P1-158]

13:20-14:50

Investigating the Elastic Properties of Mixed Halide Organic-Inorganic Perovskites for Optimized Optoelectronic Applications

Furqanul Hassan Naqvi, Sung Min Park, and Jae Hyeon Ko (Hallym Univ., Korea)

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13:20-14:50

Dynamic Tuning of Bound States in Continuum via Electrochemical Deposition

Seokwoo Kim and Junsuk Rho (POSTECH, Korea)

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13:20-14:50

Highly-Efficient Deep-Red Organic Light-Emitting Devices with Curcuminoid Boron Difluoride Derivatives

Sunyoung Sohn (Sangji Univ., Korea), Hae Un Kim, Taehyun Kim, Chanhyuk Kim, and Taiho Park (POSTECH, Korea)

[P1-161]

13:20-14:50

Novel Platinum(II) Complex based on Tetradentate Ligand and High Performance in Blue Phosphorescent Organic Light-Emitting Diodes

Chan Hee Ryu (Kangwon Nat'l Univ., Korea), Un Hyeok Jo, Jun Yeob Lee (Sungkyunkwan Univ., Korea), and Kang Mun Lee (Kangwon Nat'l Univ., Korea)

[P1-162]

13:20-14:50

Application of Si₃N₄ Nanofiber Internal Scattering Layer on Blue Thermally Activated Delayed Fluorescence Organic Light-Emitting Diodes for Enhancing Efficiency and Viewing Angle Characteristics

Jun-Young Park, Jian Cheng Bi, Seo Hyun Song, Seonghyeon Park (Korea Univ., Korea), Young Wook Park (Sun Moon Univ., Korea), and Byeong-Kwon Ju (Korea Univ., Korea)

[P1-163]

13:20-14:50

Highly Conductive p-Type Transparent Conducting Electrode with Sulfur-Doped Copper Iodide

Ga Hye Kim and Myung-Gil Kim (Sungkyunkwan Univ., Korea)

[P1-164]

13:20-14:50

Composition-Dependent Trapezoidal Quantum Barrier Effect on Efficiency Droop in GaN-Based Light-Emitting Diodes

Semi Oh, Sehyuk Yeom, Byoungho Kang, Sanghoon Jung, Jaesung Lee, and Wanghoon Lee (GERI, Korea)

[P1-165]

13:20-14:50

Tailoring Surface States of Indium Phosphide Quantum Dots

Namyong Gwak, Minwoo Lee, Seungki Shin, and Nuri Oh (Hanyang Univ., Korea)

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13:20-14:50

Analysis of Temperature-Dependent Piezoelectric Fields in InGaN/GaN-Based Blue Light-Emitting Diodes

Young Kyoung Kim, Chan Geun Park, Sang Jin Min, Jong-In Shim, and Dong-Soo Shin (Education Research Industry Cluster at Ansan, Korea)

[P1-167]

13:20-14:50

Analysis of Molecular-Oriented and Highly Efficient Organic Photovoltaic Devices

Hoseung Kang, Haechang Jeong, and Sunyoung Sohn (Sangji Univ., Korea)

[P1-168]

13:20-14:50

GaN-Based Light-Emitting Diodes with Microstructures Fabricated by Direct Optical Wiring Technology

H. Kang, H. Lim (Jeonbuk Nat'l Univ., Korea), C. C. Kim (LESSENGERS Inc., Korea), and J. Cho (Jeonbuk Nat'l Univ., Korea)

[P1-169]

13:20-14:50

Synthesis of Highly Emissive AgInS₂ Quantum Dots via Ag-to-In Cation Exchange Reaction

Seong Min Park (Hongik Univ., Korea), Kyoungwon Park (KETI, Korea), and Heesun Yang (Hongik Univ., Korea)

[P1-170]

13:20-14:50

Dispersion Effect of Polymer on Thermally Activated Delayed Fluorescent Organic Light-Emitting Diodes

Jonghyun Choi, Mamatimin Abbas, Laurence Vignau (CNRS, France), and Byeong-Kwon Ju (Korea Univ., Korea)

[P1-171]

13:20-14:50

Temperature-Dependent Optoelectronic Characteristics of InGaN-And AlGaInP-Based Light-Emitting Diodes

Gyeongdon Kang, Joohan Bae, Sangjin Min, Jong-In Shim, and Dong-Soo Shin (Education Research Industry Cluster at Ansan, Korea)

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13:20-14:50

A Simple Process to Achieve Stable Green and Red Emitting Lead Free Perovskite for Opto-Electronic Applications

Subhajit Dutta, Surjeet Kumar, Jung Hyeon Yoo, Seok Bin Kwon, Ho Chan Yoo, and Dae Ho Yoon (Sungkyunkwan Univ., Korea)

[P1-173]

13:20-14:50

Predicting the Effects of Ligands on Perovskite Nanocrystals via Machine Learning

Yunseo Lee, Jaeyoung Seo, Hyein Kong, Inyoung Jeong, and Nuri Oh (Hanyang Univ., Korea)

[P1-174]

13:20-14:50

Synthesis and Characterization of Cs₃MnBr₅ Luminescence Materials for Application in Lighting and Photodetector

Jung Hyeon Yoo, Seok Bin Kwon, Ho Chan Yoo, Geon Jong Yu (Sungkyunkwan Univ., Korea), Seung Hee Choi, Young Hyun Song (KOPTI, Korea), and Dae Ho Yoon (Sungkyunkwan Univ., Korea)

[P1-175]

13:20-14:50

Synthesis of Cs₃Cu₂Br₅ and CsBr: Cu Sub-Micron-Sized Particles for Sensor Applications via the Hot-Injection Method

Ho Chan Yoo, Seok Bin Kwon, Jung Hyeon Yoo, Geon Jong Yu, and Dae Ho Yoon (Sungkyunkwan Univ., Korea)

[P1-176]

13:20-14:50

Brightness Enhancement Film Technology in Micro LED Display

Jisu Han, Hyun Woo Jeon, Young Hoon Kim, Taehyoung Kwak, Kwon-Shik Park, and Soo Young Yoon (LG Display Co., Ltd., Korea)

[P1-177]

13:20-14:50

Impact of the Channel Height for Nanorod Ink on Its Alignment Using Dielectrophoretic Force

Lia Hong (Sookmyung Women's Univ., Korea), Doheon Koo, Hongyun So (Hanyang Univ., Korea), Woosung Park (Sogang Univ., Korea), Jaebyoung Park (Korea Univ., Korea), and Jeeyoung Shin (Sookmyung Women's Univ., Korea)

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LED Compensation Circuit for Micro-LED Display

Dong-Hun Lee and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

[P1-179]

13:20-14:50

Surface Current Analysis on Lateral Diffusions of Carriers in Micro-Lightemitting Diodes

Woo Jin Baek, Juhyuk Park, Hyun Soo Kim (KAIST, Korea), Dae-Myeong Geum (Chungbuk Nat'l Univ., Korea), and Sang Hyeon Kim (KAIST, Korea)

[P1-180]

13:20-14:50

Influence of Various Current-Induced Stresses on the Performances in GaNBased Micro-LEDs

Abu Bashar Mohammad Hamidul Islam, Tae Kyoung Kim, Yu-Jung Cha, Jae Won Seo, Jiun Oh, Minji Kim, Hyeondong Lee (KENTECH, Korea), Dong-Soo Shin, Jong-In Shim (Hanyang Univ., Korea), and Joon Seop Kwak (KENTECH, Korea)

[P1-181]

13:20-14:50

Wireless Optogenetics for In-Vivo Experiments

Janghoon Joo and Sang Min Won (Sungkyunkwan Univ., Korea)

[P1-182]

13:20-14:50

A μ LED Pixel Circuit Using Hybrid Pulse Width Modulation and Pulse Amplitude Modulation Driving Method with Low-Temperature Polycrystalline Oxide TFTs for Smart Watch

Yan Li, Hwarim Im, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

[P1-183]

13:20-14:50

A Study on the Transferable Functional Film of Mini LED or Micro

Gwan-Seop Lee, Young-Gyun Kim, Chil-won Lee, and Kwan-Young Han (Dankook Univ., Korea)

[P1-184]

13:20-14:50

Designing a Lightweight CNN Model for Interactive Display Systems

Jong-In Kim, Hyun-Sun Park, and Jung-Hyun Kim (KOPTI, Korea)

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Universal Transfer Printing via Micro-Vacuum Suction Force for Flexible Optoelectronics

Sang Hyun Park and Keon Jae Lee (KAIST, Korea)

[P1-186]

13:20-14:50

Effects of ITO Contact Sizes on Performance of 10X10 μm^2 Blue-Light MicroLEDs

Yu-Hsuan Hsu, Yi-Hsin Lin, and Ray-Hua Horng (Nat'l Yang Ming Chiao Tung Univ., Taiwan)

[P1-187]

13:20-14:50

Probing Wafer-Enabled Micro LED Electroluminescence Measurement System

Huijin Kim, Boseong Son, Young-Woong Lee, and Si-Hyun Park (Yeungnam Univ., Korea)

[P1-188]

13:20-14:50

AI-Driven Pathfinding for Micro-LED Module Repair

S. H. Noh, C. W. Park, and J. S. Yoo (Chung-Ang Univ., Korea)

[P1-189]

13:20-14:50

Two-Dimensional Micro-Raman Analysis of Strain Variations Caused by the Sidewall Etching in Micro-Light-Emitting Diodes

Jiwon Kim, Ilgyu Choi, Jeonghyeon Park, Jawon Kim (Education Research Industry Cluster at Ansan, Korea), Jongkyu Kim (POSTECH, Korea), Dong-Soo Shin, and Jong-In Shim (Education Research Industry Cluster at Ansan)

[P1-190]

13:20-14:50

Micro LED Color Conversion Technique with Red Nano Phosphor

Yusup Shin, MinJae Kang, Myungsoo Han, and YongSeok Kwak (LG Display Co., Ltd., Korea)

[P1-191]

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Micro LED Chip Defect Type Prediction by Using Photoluminescence

Hyowon Kwon, Myungsoo Han, and Il-soo Kim (LG Display Co., Ltd., Korea)

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Wide-Temperature Range Gamma Compensation of Organic-Light Emitting Devices for Automotive Display Application

Xing Huang, Bing Zhang, Zi-Liang Xue, and Bin-Feng Feng (BOE Tech. Group Co., Ltd., China)

[P1-193]

13:20-14:50

Effect of Horizontal Orientation of Sensitizer Molecule to Förster Energy Transfer in Hyper-Fluorescent Organic Light-Emitting Diodes

Junseop Lim (Sungkyunkwan Univ., Korea), Kyu Young Hwang, Seung-Yeon Kwak (Samsung Electronics Co., Ltd., Korea), Jae-Min Kim, and Jun Yeob Lee (Sungkyunkwan Univ., Korea)

[P1-194]

13:20-14:50

A Single Emitting Layer White Emission from Blue OLED Utilizing Blue Light Leakage Passing through the Quantum Dot Color Conversion Layer

Yeonju Jeong and Taekyung Kim (Hongik Univ., Korea)

[P1-195]

13:20-14:50

Over 18% of Fluorescent OLEDs via an Additional Triplet Harvesting Channel Using Novel MR-TADF Hosts

Jaesung Kim (Hongik Univ., Korea), Jin Yeong Heo (Sungkyunkwan Univ., Korea), You na Song (Hongik Univ., Korea), Seung Soo Yoon (Sungkyunkwan Univ., Korea), and Taekyung Kim (Hongik Univ., Korea)

[P1-196]

13:20-14:50

An Ultra-Thin Inorganic-Only Film for OLED Encapsulation

Wenqi Liu, Zhongyuan Sun, Zhiqiang Jiao, Che An, Jianye Zhang, Huajie Yan, Jinxiang Xue, Weijie Wang, Fengjie zhang, and Guangcai Yuan (BOE Tech. Group Co., Ltd., China)

[P1-197]

13:20-14:50

High Efficiency over 15% by Breaking the Theoretical Efficiency Limit of Fluorescent Organic Light-Emitting Diodes with Localized Plasmon Resonance Effects

Hakjun Lee, Hyewon Nam, Hyo-Jin Ye, and Taekyung Kim (Hongik Univ., Korea)

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Intermolecular Interaction based on Molecular Geometry of Hosts and Pt Complexes for White Organic Light-Emitting Diodes

Hyewon Nam, Ki Ju Kim, and Taekyung Kim (Hongik Univ., Korea)

[P1-199]

13:20-14:50

Low Pixel Blur Light Extraction Film for Organic Light Emitting Diodes Using AAO Template

Jinhwa Kim, Baeksang Sung, Sora Han, Dasol Kim, Seung Wan Woo, Jooho Lee, So-Young Boo, Hyun-Bin Kim, Jae-Young Park, Somi Park, Seung-Yo Baek (Hanbat Nat'l Univ., Korea), Chul Woong Joo (ETRI, Korea), Jae-Hyun Lee, and Jonghee Lee (Hanbat Nat'l Univ., Korea)

[P1-200]

13:20-14:50

Eco-Friendly External Light Extraction Films for Enhanced Out-Coupling Efficiency of Organic Light Emitting Diodes

Sora Han, Baeksang Sung, Dasol Kim, Jinhwa Kim, Seung Wan Woo, Jooho Lee, Seung-Yo Baek, Mijin Won (Hanbat Nat'l Univ., Korea), Chul Woong Joo (ETRI, Korea), Joo Won Han, Yong-Hyun Kim (Pukyong Nat'l Univ., Korea), Dongsoo Kim, Jae-Hyun Lee, and Jonghee Lee (Hanbat Nat'l Univ., Korea)

[P1-201]

13:20-14:50

Investigation of Triplet Exciton Dynamics for Efficiency Enhancement Layers

Bum Joon Park (Hongik Univ., Korea), Gyeong Seok Lee (Gyeongsang Nat'l Univ., Korea), Ki Ju Kim (Hongik Univ., Korea), Yun-Hi Kim (Gyeongsang Nat'l Univ., Korea), and Taekyung Kim (Hongik Univ., Korea)

[P1-202]

13:20-14:50

Investigation of Blue Organic Light-Emitting Diode Using Dinuclear Pt(II) Complex with Exceptionally Fast Radiative Decay

Kyo Min Hwang (Hongik Univ., Korea), Gyeong Seok Lee (Gyeongsang Nat'l Univ., Korea), Seonghwan Hong, Yeonju Jeong (Hongik Univ., Korea), Chang Eun Choi (Gyeongsang Nat'l Univ., Korea), Young Kwan Kim (Hongik Univ., Korea), Yun-Hi Kim (Gyeongsang Nat'l Univ., Korea), and Taekyung Kim (Hongik Univ., Korea)

[P1-203]

13:20-14:50

Solution Processed Blue Organic Light Emitting Diode with Novel Structured Pt Complex for a Phosphor-Sensitized Fluorescence

Hee Won Son and Min Chul Suh (Kyung Hee Univ., Korea)

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13:20-14:50

Cross-Linkable Hole Transport Copolymer with High Mobility for Improving Interface Stability in Solution-Processed OLEDs

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

[P1-205]

13:20-14:50

Effect of Host Polarity on Efficiency of Thermally Activated Delayed Fluorescent and Hyperfluorescent Organic Light Emitting Devices

Ajay Nimbalkar, Da Hwan Lee, and Min Chul Suh (Kyung Hee Univ., Korea)

[P1-206]

13:20-14:50

A Study on New Solvent Resistant Cross-Linked Polymer as Electron Injection Layer in Inverted OLED

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

[P1-207]

13:20-14:50

New Electron Injection Material for Preventing Cathode Shrinkage in Top Emission OLED

Ramachandran Elumalai, Thi Na Le (Kyung Hee Univ., Korea), Yeonhwa Lee, Seung Yong Song (Samsung Display Co., Ltd., Korea), and Min Chul Suh (Kyung Hee Univ., Korea)

[P1-208]

13:20-14:50

Organic Color-Conversion Media with High Blue Absorption Coefficients

Shou-Cheng Dong, Bryan Siu Ting Tam, and Ching W. Tang (Hong Kong Univ. of Science and Tech., Hong Kong)

[P1-209]

13:20-14:50

Highly Improved Viewing Angle Properties of Top-Emission Microcavity Effect OLEDs with Micro Lens Array

Jiho Roh, Kwan Sik Yoon, Tae Young Kim, and Min Chul Suh (Kyung Hee Univ., Korea)

[P1-210]

13:20-14:50

Exciton Dissociation in Differently Oriented Phthalocyanine Molecules

Hui Ung Hwang, Subeen Kim, and Jeong Won Kim (KRISS, Korea)

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13:20-14:50

The Overshooting Effect of Double Electron Transport Layers based on Depth Profile

Yerin Kim, Ajay Nimbalkar, Thi Na Le, Kyu Myung Lee, Yongsup Park, and Min Chul Suh (Kyung Hee Univ., Korea)

[P1-212]

13:20-14:50

Enhancement of Light Extraction of Thermally Activated Delayed Fluorescence Organic Light-Emitting Diodes based on Light Scattering by Using TiO₂ Nanoparticles Embedded Thin Film Encapsulation

Jian Cheng Bi, Jun-Young Park, Jiwon Seok, Byeongwoo Kang, Jong Seong Lee (Korea Univ., Korea), Young Wook Park (Sun Moon Univ., Korea), and Byeong-Kwon Ju (Korea Univ., Korea)

[P1-213]

13:20-14:50

Enhanced Electrical Properties of OLED by Controlling Molecular Ordering

Seok Je Lee, Woo Young Kim, and Chul Gyu Jhun (Hoseo Univ., Korea)

[P1-214]

13:20-14:50

Optical Thin Film Encapsulation Design for Improving Color Purity of Green Microcavity Top-Emitting Organic Light-Emitting Diodes

Jun Yong Kim (Kyungpook Nat'l Univ., Korea), Sang Youn Lee, Kwan Hyun Cho (KITECH, Korea), and Yun Seon Do (Kyungpook Nat'l Univ., Korea)

[P1-215]

13:20-14:50

Utilized N-Type Exciplex Host for Improving Efficiency and Lifetime of Blue Phosphorescent Organic Light Emitting Diodes

Hye Rin Kim, Subramanian Muruganantham, Jun Hyeog Oh, and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

[P1-216]

13:20-14:50

Solution-Processed Organic Light-Emitting Devices with Sensitizers

Qin Xue (Central China Normal Univ., China) and Guohua Xie (Xiamen Univ., China)

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13:20-14:50

Charge Balance Control with Bipolar Copolymer Host Compositing of Indenocarbazole and Triazine Units for Efficient Solution-Processed OLED

Thi Na Le (Kyung Hee Univ., Korea), Jaewan Mo, Haechan Kim, Jihoon Lee (Korea Nat'l Univ. of Transportation, Korea), and Min Chul Suh (Kyung Hee Univ., Korea)

[P1-218]

13:20-14:50

Optimization of Bank Components Using SiO₂ the Next Generation OLED Display

Shin-Wook Kang, Ji-Hoon Park, and Kwan-Young Han (Dankook Univ., Korea)

[P1-219]

13:20-14:50

Expanded Multiple-Resonance Structure for Highly Efficient and Narrowband Deep-Blue Organic Light-Emitting Diodes

Jihoon Kang (Sungkyunkwan Univ., Korea), Soon Ok Jeon (Samsung Electronics Co., Ltd., Korea), Ha Lim Lee, Junseop Lim, Unhyeok Jo, and Jun Yeob Lee (Sungkyunkwan Univ., Korea)

[P1-220]

13:20-14:50

Mg:Ag Thin Film Characteristics of Various Deposition Ratio Monitored at QCM and Application to Transparent Cathode for TEOLED

Dongwoon Lee, Yong Hyeok Seo, Young Woo Kim, Minseong Park, Yeji Shin, Eou-Sik Cho, Yongmin Jeon, and Sang Jik Kwon (Gachon Univ., Korea)

[P1-221]

13:20-14:50

Highly Efficient Solution Processed Blue Hyperfluorescent OLED Device with MR TADF Material as a Final Dopant

Hee Tae Yang, Thi Na Le (Kyung Hee Univ., Korea), Yun-Hi Kim (Gyeongsang Nat'l Univ., Korea), and Min Chul Suh (Kyung Hee Univ., Korea)

[P1-222]

13:20-14:50

Investigation of Triplet-Induced Annihilation in Phosphorescent and Thermally Activated Delayed Fluorescent Organic Light-Emitting Diodes

Jixin Jiang and Jun Yeob Lee (Sungkyunkwan Univ., Korea)

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13:20-14:50

Ultra-High Resolution Organic Light-Emitting Diodes Combined with Plasmonic Nanomesh Electrodes

Ryungyu Lee, Keun-Yeong Choi, and Hojin Lee (Soongsil Univ., Korea)

[P1-224]

13:20-14:50

Analysis of Interfacial Charges in Aged Co-Host EML TADF Organic Light-Emitting Diodes with Impedance Spectroscopy

Jae-yong Park, So-Young Boo, Somi Park, Eun-Jeong Jang, Akeem Raji, Jonghee Lee, and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

[P1-225]

13:20-14:50

Fabrication of Microscale-Level Structures and Sub-Micron Thin Film on OLEDs Using Inkjet Printing Process

Dasol Kim, Chul Woong Joo, Hyunsu Cho, Sukyung Choi, Chan-mo Kang, Jin-Wook Shin, Dae Hyun Ahn, Hyungwoo Suh, Seung Wan Woo, Nam Sung Cho, Chun won Byun (ETRI, Korea), Jonghee Lee (Hanbat Nat'l Univ., Korea), and Byoung-Hwa Kwon (ETRI, Korea)

[P1-226]

13:20-14:50

Charge Generation Effect as a Key Factor in CGL Unit of Organic Light Emitting Diode

Tae Ho Seol, Deborah Eric (Dong-A Univ., Korea), Shin Han Kim (Yonsei Univ., Korea), Chang-Hee Lee, and Gi-dong Lee (Dong-A Univ., Korea)

[P1-227]

13:20-14:50

Effect of Doping Concentration of Emission Layer on the Molecular Orientation

Chang-Soo Lee, Chang-Hee Lee, Sung Hoon Choi, and Gi-dong Lee (Dong-A Univ., Korea)

[P1-228]

13:20-14:50

Analysis of the Characteristics of Organic Light-Emitting Diodes (OLEDs) with Single and Mixed Host EML by Impedance Spectroscopy

Akeem Raji, Su-Ji Kim, Akpeko Gasonoo, Jonghee Lee, and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

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13:20-14:50

Improvement of Color Gamut of QLED by Minimizing Blue Leakage with Patterned Absorption Dye

So-Young Sim, Cheong-Min Shin, Jae-Hoon Kim, and Chang-Jae Yu (Hanyang Univ., Korea)

[P1-230]

13:20-14:50

Inkjet Pixel Printing with Bipolar Host Combination and Solvent Formulation of Phosphorescent OLED Emitters

Song Hee Kang, Eun Young Lee, Yoon-Jeong Choi, and Byung Doo Chin (Dankook Univ., Korea)

[P1-231]

13:20-14:50

Solution-Processed Organic Light-Emitting Diodes Using Cross-Linkable Hole Transporting Material

Woosum Cho, Hee Jeong Park, Yongseok Yoo, Sungkoo Lee, and Seunghwan Bae (KITECH, Korea)

[P1-232]

13:20-14:50

Exploring the Impact of n-Dopant in Charge Generation Layer for Voltage Reduction in Tandem Organic Light Emitting Diodes

Deborah Eric (Dong-A Univ., Korea), Shin Han Kim (Yonsei Univ., Korea), Tae Ho Seol, Chang-Hee Lee, and Gi-Dong Lee (Dong-A Univ., Korea)

[P1-233]

13:20-14:50

Study of Current- and Temperature-Dependent Efficiency Droops of OLEDs

Subin Choi, Sangjin Min, Ilgyu Choi, Jong-In Shim, and Dong-Soo Shin (Hanyang Univ., Korea)

[P1-234]

13:20-14:50

Trimethylsilyl-Substituted Tetradentate Pt(II) Complex: A Promising Candidate for Achieving High Efficiency Deep-Blue Phosphorescent Organic Light Emitting Diodes

Seo-Hee Jung (Inha Univ., Korea), Do-Hoon Hwang (Pusan Nat'l Univ., Korea), and Jeong-Hwan Lee (Inha Univ., Korea)

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13:20-14:50

π -Expanded Boron-Carbonyl Hybrid Acceptors for Efficient Thermally Activated Delayed Fluorescence-Organic Light Emitting Diodes Controlling Local Triplet Excited States

Jee-Hun Jang (Inha Univ., Korea), Jaehoon Jung, Min Hyung Lee (Univ. of Ulsan, Korea), and Jeong-Hwan Lee (Inha Univ., Korea)

[P1-236]

13:20-14:50

Improved Efficiency and Lifetime of Blue Phosphorescent OLEDs based on Bicarbazole-Triazine Hybrid Type Mixed Host Materials

Seung-Hyun Baek and Jeong-Hwan Lee (Inha Univ., Korea)

[P1-237]

13:20-14:50

Analysis of Spontaneous Orientation Polarization in Co-Host EML Organic Light-Emitting Diodes with Impedance Spectroscopy

So-Young Boo, Jae-Yong Park, Somi Park, Eun-Jeong Jang, Akeem Raji, Jonghee Lee, and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

[P1-238]

13:20-14:50

A Novel Spread Spectrum on Average Time-Based

Min-woo kim, Jiwon Kim, and Kyunghwan Moon (Samsung Display Co., Ltd., Korea)

[P1-240]

13:20-14:50

Thin-Film Transistor based on Wavy Structure for Stretchable Display

Jeong Eun Oh, Jinwon Bak, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P1-241]

13:20-14:50

Correlation of Density of States and Low Frequency Noise in α -IGZO Thin-Film Transistor

Kanghyun Kim (Samsung Display Co., Ltd., Korea), In Kyu Yoon, Dong Hyun Kim, Dong Geun Park, Jung Chun Kim, Seo Yeon Choi, Ki Seok Heo, Sang Hyeok Kim, So Mi Lee (Korea Univ., Korea), Young-Gil Park, Na Ri Ahn (Samsung Display Co., Ltd., Korea), and Jae Woo Lee (Korea Univ., Korea)

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Multiple Channel Layer of Indium-Based Oxide Semiconductor for High-Performance Thin-Film Transistors Fabricated by PEALD

Cheol Hee Choi (Hanyang Univ., Korea), Min Hoe Cho (Samsung Display Co., Ltd., Korea), Jihwan Choi, Chanwoo Jung, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P1-243]

13:20-14:50

Optimized Combustion Process for Low-Voltage $\text{Si}_x\text{Sn}_y\text{O}$ Thin-Film Transistors

Candell Grace Paredes Quino, Juan Paolo Bermundo, and Yukiharu Uraoka (Nara Inst. of Science and Tech., Japan)

[P1-244]

13:20-14:50

Effects of An AlO_x Passivation Layer on Solution-Processed Amorphous Indium Gallium-Zinc-Oxide TFT

Jinyeong Lee and Jaewook Jeong (Chungbuk Nat'l Univ., Korea)

[P1-245]

13:20-14:50

Oxide Transistor Based Optoelectronic Synapses with Micro LEDs

Yu-Jung Cha, Abu Bashar Mohammad Hamidul Islam, Tae Kyoung Kim, Joon Seop Kwak (KENTECH, Korea), and Sung Woon Cho (Sunchon Nat'l Univ., Korea)

[P1-246]

13:20-14:50

Effective Approach to Failure Analysis of IC-Embedded OLED Display Device

Hoseok Song, Kiwon Lee, and Jungho Choi (Samsung Display Co., Ltd., Korea)

[P1-247]

13:20-14:50

Improvement of TaO_x Memristor Variability by Bottom Electrode Surface Morphology Modulation

Moonkee Choi, Wooho Ham, and Jang-Yeon Kwon (Yonsei Univ., Korea)

[P1-248]

13:20-14:50

Skin-Healable Snail Secretion Based Neuromorphic Device for Intelligent Display

Kyungho Park, Dong Hyun Choi, Jusung Chung, Kyungmoon Kwak, Jong Bin An, Jae Seong Han, and Hyun Jae Kim (Yonsei Univ., Korea)

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13:20-14:50

Ni-Based Elastic Metal Alloy Dry Etching for High Resolution Stretchable AMOLED at Low Temperature

Donghoon kim (Korea Univ., Korea), Jin-nyoung Jan (Advanced Material Transfer Evaluation Center, Korea), and Munpyo Hong (Korea Univ., Korea)

[P1-250]

13:20-14:50

Adhesion and Coating Performance Improvement of Glass Through Carbon Radical Flame Surface Treatment with Special Organic Reagent

Gun Dae Lee, Dong Hoon Lee, Sae Rin Chun (Pukyong Univ., Korea), Seung June Lee, and Jaewoo Cho (Sunje Hitek Co., Ltd., Korea)

[P1-251]

13:20-14:50

Insight into the Jetting Behavior based on the Analysis of Waveform for Inkjet OCR

Hyunchul Kang, Jeongin Lee, and Kicheol Song (Samsung Display Co., Ltd., Korea)

[P1-252]

13:20-14:50

Correlation between Post-Deposition Annealing and Reliability of ITZO Thin-Film Transistor

DongWook Shin, Sein Lee, and Jang-Yeon Kwon (Yonsei Univ., Korea)

[P1-253]

13:20-14:50

Universal Delamination Method for Stretchable Substrates by Combining Dextran Sacrificial Layer with Capillary-Assisted Electrochemical Reaction

Minkyun Kang, Jinsu Yoon, Jong Ho Park, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[P1-254]

13:20-14:50

Nondestructive Optical Monitoring of the Hardness of Cardo Acrylate Polymers Containing Colored Pigments Using Ellipsometry

YongWoo Lee (Hanyang Univ., Korea), NakCho Choi, DongIl-Yoo, HyeRyoung Park, SangHwan Cho (Samsung Display Co., Ltd., Korea), and MinJe Ko (Hanyang Univ., Korea)

[P1-255]

13:20-14:50

Donor-Acceptor-Donor Hosts for Realizing Efficient Red Phosphorescent OLEDs

Yi-Ting Chen, Pin-Yin Huang, Kuan-Yu Su, Yi-Qi Chao (Yuan Ze Univ., Taiwan), Tsz Chung Yiu, Premkumar Gnanasekaran, Yun-Zi Zeng, Yu-Ting Lin, Yuan Jay Chang (Tunghai Univ., Taiwan), and Chih-Hao Chang (Yuan Ze Univ., Taiwan)

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13:20-14:50

Benzothiazole-Based Bipolar Hosts Used for Advancing Highly Efficient Tandem OLEDs

Pin-Yin Huang, Yi-Ting Chen, Jui-Ming Wang, Ting-Chun Lee, Chia-Chen Chung (Yuan Ze Univ., Taiwan), Wun-Yu Chen, Sih-Yu Wu, Yan-Ding Lin, Chin-Wei Lu (Providence Univ., Taiwan), and Chih-Hao Chang (Yuan Ze Univ., Taiwan)

[P1-257]

13:20-14:50

Shaping of Spectral Profiles to Near-Infrared Wavelengths by Using Transparent Electrodes Embedded with Metal Nanoparticles in OLEDs

Yi-Ting Chen, Pin-Yin Huang, Ming-Jun Lin, Jui-Ming Wang, and Chih-Hao Chang (Yuan Ze Univ., Taiwan)

[P1-258]

13:20-14:50

Encapsulation Assisted In-Situ Synthesis of Stable CsPbBr₃ Light Emitters

Jinwoo Park, Kyung Yeon Jang, Song Hee Lee, Dong-Hyeok Kim (Seoul Nat'l Univ., Korea), So-Hye Cho (KIST, Korea), and Tae-Woo Lee (Seoul Nat'l Univ., Korea)

[P1-259]

13:20-14:50

Wrap-Around Electrodes and Black Organic Layer for Micro LED Tiled Displays

Nakcho Choi, Sangwoo An, Jaechil Hwang, and Jaebeom Choi (Samsung Display Co., Ltd., Korea)

[P1-260]

13:20-14:50

Controlling Van Der Waals Forces Through Shape Memory Effect for Precise Large-Scale Transfer Printing of Micro-LEDs

Junhyung Kim, Seungbeom Kim, and Seok Kim (POSTECH, Korea)

[P1-261]

13:20-14:50

Enhanced Hole Injection Property of Inverted Organic Light-Emitting Diodes by Changing Thickness of MoO₃ Layer

Kanghoon Kim, Sung-Cheon Kang, Eunyong Choi, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

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Separatrix between the High PPI and Low PPI Area of UDC Display

Jun-hui Lou, Ru-bo Xing, Feng-zhang Hu, Meng Zhang, and Ling-xiao Du (Yungu (Gu'an) Tech. Co., Ltd., China)

[P1-263]

13:20-14:50

Relationship between Current Density and Electroluminescence Intensity for Degraded OLED Analyzed via DCM-JVL Measurements

Masaru Inoue (TOYOTech LLC, USA), Noriaki Oyabu (TOYO Corp., Japan), and Hideyuki Murata (Japan Advanced Inst. of Science and Tech., Japan)

[P1-264]

13:20-14:50

Improvement of Inverted Organic Light Emitting Diodes Performance by Using ZnO/Cs₂CO₃Electron Injection Layer

Sung-Cheon Kang, Eun-young Choi, Kanghoon Kim, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P1-265]

13:20-14:50

Recombination Zone Shift According to the Ratio of Donor and Acceptor of Complex Hos

Eun-young Choi, Sung-Cheon Kang, Kanghoon Kim, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P1-266]

13:20-14:50

A Study on the Energy Transfer Dynamics According to the Ratio of Mixed Host in Multi-Emissive Layer of Organic Light-Emitting Diodes.

You Na Song, Hakjun Lee, and Taekyung Kim (Hongik Univ., Korea)