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Session Title:	[P2] Poster Presentation 2
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[P2-1]

Deep Input Normalization for Machine Sound Anomaly Detection with Convolutional Recurrent Neural Network

Hankyeol Lee, Jungwon Ryu, Euiyoel Oh, Changgone Kim, and Sooyoung Yoon (LG Display Co., Ltd., Korea)

[P2-2]

Pruning for an Image Restoration Network

Hyun-Joo Hwang, Jaebum Cho, Daewook Kim, Jewon Yoo, Sujin Choi, Hyunjin Son, Sang-Gu Lee, Hyunguk Cho, Seungin Baek, Won-Hyouk Jang, Yongjo Kim, and Eunkyung Koh (Samsung Display Co., Ltd., Korea)

[P2-3]

Development of 3D Crosstalk Classification Model Using Deep Learning

Young-Sang Ha, Je-Hong Ryu, Beom-Shik Kim, and Young-Chan Kim (Samsung Display Co., Ltd., Korea)

[P2-5]

Beyond Human Inspection: Focusing Networks for Review System

Eui-Young Jeong, Jong-Myong Choi, Hanaul Noh, and Pilho Kim (Samsung Display Co., Ltd., Korea)

[P2-6]

Efficiently Generate Train Data with Uncertainty of Prediction Values

Daewoo Myoung, Won-Hyouk Jang, Yoonjung Chai, Wonjun Lee, and Chol Ho Kim (Samsung Display Co., Ltd., Korea)

[P2-7]

A Study on the Simulation Automation and Design Improvement of PCB for Display

Jiwon Kim, Jungsoo Youn, Hyochul Lee, Insoo Wang, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-8]

Automatic Measurement with TEM/FIB Images by Convolution Neural Network

Seokkwon kim, Taesoek Jeong, Kyunghun Shin, Junghoon Jo, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-9]

Full IR-Drop Simulation with Display Adapted Solve Methods for High Resolution OLED Display Panel

Chol Ho Kim, Won Jun Lee, Hae Ryeong Park, Yongwoo Lee, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-10]

A Study on the Dimensional Accuracy of Super-Resolution SEM Images Upscaled by Deep Learning

Hyunjoo Hwang, Daewook Kim, Sujin Choi, Jewon Yoo, Eunkyung Koh, Hyunsang Seo, Hyunguk Cho, Seungin Baek, Yongjo Kim, and Jaebum Cho (Samsung Display Co., Ltd., Korea)

[P2-11]

A Study on the Evaluation Index of Glare Restoration Performance based on Deep Learning

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

[P2-12]

Design Automation and Verification Platform of PCB for Display

Younyee Kang, Sungkwon Kim, Yongsang Cho, Jiwon Kim, Insoo Wang, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-13]

Fast Image Restoration for Under-Panel Camera

Daewook Kim, Sujin Choi, Jewon Yoo, Hyunjoo hwang, Hyunguk Cho, Seungin Baek, Yongjo Kim, and Jaebum Cho (Samsung Display Co., Ltd., Korea)

[P2-14]

Implementation of Template Based Web Simulation System

Jiyoo Park, Jihoon Shin, Eunji Kim, Junghoon Jo, Seungin Baek, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-15]

Pixel Layout Generation Algorithm for AMOLED Displays

Myunghun Lim, Jungsuk Bang, Min Kang, Yongwoo Lee, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-16]

Multi-Output CNN Model for RC Extraction

Keuk Jin Jeong, Myunghun Lim, Min Kang, Yongwoo Lee, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-17]

In-Fab Monitoring Method based on Artificially Intelligent Optical Property Prediction Technology

Youngjun Yoo, Jongbeom Hong, Eunkyung Koh, Changhun Lee, Younho Han, Gunshik Kim, Won-Hyouk Jang, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-18]

Target-Oriented Material Design based on a Key Parameter: New Blue Thermally Activated Delayed Fluorescent Emitters with Long Lifetime

Seran Kim, Dongsun Yoo, Hoilim Kim, Junha Park, Hyosup Shin, Hyunyoung Kim, Jiyoung Lee, Youngmi Cho, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-19]

Novel Verification Operation Design Methodology Using Timing Assertion for Display Produce

Minjoo Lee, Insoo Wang, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-20]

Automated Interconnection Method for Freeform Displays

Jeongcheol Noh, Jiyoung Lee, Deawoo Myoung, Hyunyoung Choi, Hearyeong Park, Yongwoo Lee, and Yongjo Kim (Samsung Display Co., Ltd., Korea)

[P2-21]

Implentation of Convolution Neural Network in Display IC Maintaining Accuracy

Jun-Gyu Lee, Kuk-Hwan Ahn, Hyun-Jun Kim, and Hyeon-Min Kim (Samsung Display Co., Ltd., Korea)

[P2-22]

Novel Optical Simulation Method for flexible OLED with Optically Thick Incoherent Layers

Yong Sub Shim (Samsung Display, Republic of Korea), Younho Han (Samsung Display, Republic of Korea)

[P2-23]

Numerical Study on the Behavior of Conductive Particles in the Bonding Process

Daeyong Kim and Jinsung Hwang (Samsung Display Co., Ltd., Korea)

[P2-24]

SPICE TFT Modeling Using Reinforcement Learning

Wonwoo Choi, Sooyoung Lee, Younyeol Yu, Kiseok Chang, Ilho Kim, Seokwoo Lee, and Sooyoung Yoon (LG Display Co., Ltd., Korea)

[P2-25]

Fast and Rigorous Electromagnetic Simulation of Dipole Emission in a Periodically Corrugated Light-Emitting Diode Structure based on Diffraction Tracking

Chanhyung Park, Jeong Min Shin, Sanmun Kim, Juho Park, and Min Seok Jang (KAIST, Korea)

[P2-26]

Holistic Optimization of Periodically Corrugated Organic Light-Emitting Diodes for Extraordinary Front Emission

Jeongmin Shin, Chanhyung Park, Sanmun Kim, and Min Seok Jang (KAIST, Korea)

[P2-27]

Effect of Resistive Switching by inserting Thin Layer in Peptide Memristor

Hae Chan Choi, Jeong Hyun Yoon, Min-Kyu Song, and Jang-Yeon Kwon (Yonsei Univ., Korea)

[P2-28]

Multi-Resistive State IGZO-Based Memristor by Controlled Set Voltage Region

Jeong-Min Park, Young-Woong Song, and Jang-Yeon Kwon (Yonsei Univ., Korea)

[P2-29]

Image Classification : 3D Display Lens Alignment Inspection

Je-Hong Ryu, Young-Sang Ha, and Ki-Don Joo (Samsung Display Co., Ltd., Korea)

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[P3-1]

Hinges in Foldable and Rollable Devices, Technical Review

Insun Hwang, Hyun Min Park (AUFLEX, Korea), and Yeoung Jin Chang (Gachon Univ., Korea)

[P3-2]

Fabrication of Stretchable and Transparent Nanonetwork Electrode Using Electrospinning and Sacrificial Layer

Kyungmin Kim and Jung-Yong Lee (KAIST, Korea)

[P3-3]

Electrically Controlled Bendable Actuator for Deformable Display

Jun Hyuk Shin (POSTECH, Korea), Ji Yoon Park (Kyung Hee Univ., Korea), Sang Hyun Han, and Su Seok Choi (POSTECH, Korea)

[P3-4]

Analytical Study of Multilayered Rollable OLED Display Structure Using Finite Element Method

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

[P3-5]

Parametric Study of Serpentine Electrode Shape for Stretchable Display

Suan Lee, Jiyoon Lee, and Su Seok Choi (POSTECH, Korea)

[P3-6]

Optimization of Free-Form Electrode based on Inkjet Printing Method

Seyoung Choi, Soyul Kwak, Jihyeon Kang, Seohyeon Jang, Hojong Eom, Ohhyun Kwon, and Inho Nam (Chung-Ang Univ., Korea)

[P3-7]

Curable Hard Coating Additive for Anti-Scratch, Transparent, Hydrophobic Flexible Cover Window

Kang-Han Kim and Yong-Cheol Jeong (KITECH, Korea)

[P3-8]

On Demand Flammable Yet Stable OLED Device based on Paper for Security Device

Do-Gwan Kim and Yong-Cheol Jeong (KITECH, Korea)

[P3-9]

Hydrogel of Ion Side Chain Polymer for Ionic Conductor with Versatile Properties

Sungryong Kim, Jungsu Kim, Junwoo Lee, and Taiho Park (POSTECH, Korea)

[P3-10]

Transparent and Stretchable Interconnects with Ag-Nanomesh/ITO Double Layer Structure

Young Ho Kim (UST, Korea), Hyuk-Jun Kang, Dae-Geun Choi (KIMM, Korea), and Chan Woo Park (UST, Korea)

[P3-11]

Supramolecular Movable Cross-Linker in Pressure Sensitive Adhesives: Movable Cross-Linking Effects on Adhesion Properties

Mo-Beom Yi, Tae-Hyng Lee, and Hyun-Joong Kim (Seoul Nat'l Univ., Korea)

[P3-12]

A Fiber-Based White Organic Light-Emitting Diode for Truly Wearable Display Applications

Yong Ha Hwang and Kyung Cheol Choi (KAIST, Korea)

[P3-13]

Monolithic Integration of Stretchable and Transparent Indium-Tin-Oxide Interconnects with Oxide Thin-Film Transistors

Sohee Kim, Ilgeum Lee, Jae Bon Koo, Chan Woo Park, and Sooji Nam (ETRI, Korea)

[P3-14]

Encapsulated Stretchable OLEDs on LASER Patterned Polyimides

Taehyun Kim, Subon Kim, Donggyun Lee, and Seunghyup Yoo (KAIST, Korea)

[P3-15]

Highly Stretchable and Transparent Adhesive Films Using Hierarchically Structured Rigid-Flexible Dual-Stiffness Nanoparticles

Jongil An, Seung-Rak Son, Jin-Wook Choi, Soyern Kim, Jisung Park, Chan Beom Park (Soongsil Univ., Korea), Hoyun Byun (Samsung Display Co., Ltd., Korea), and Jun Hyup Lee (Soongsil Univ., Korea)

[P3-16]

Dynamic Stretchable OLED Display Having Individually Encapsulated Pixels

Gyujeong Lee, Sangwoo Kim, Jangyeol Yoon, Jeong-Tae Park, Jong-Ho Hong, and Sung-Chan Jo (Samsung Display Co., Ltd., Korea)

[P3-17]

Precise Subtractive Patterning Method of AgNWs on Deformable Platform

Geonhee Kim, Jinsu Yoon, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[P3-18]

Enhancement of Adhesion and Reflectance of Silver Thin-Film via Thiol Terminated Self-Assembled Monolayer for Reliable Stretchable Electronics

Sujin Jeong, Hyungsoo Yoon, Dahyun Kim, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

Session Title:	[P4] Poster Presentation 4
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[P4-1]

Study on Structure and Process Optimization of Color Modulation Hole-Only Quantum Dot Light Emitting Diode

Young-Min Park, Jae-In You, Suk-Ho Song, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P4-2]

High Luminance Top-Emitting White Organic Light-Emitting Diodes for Microdisplay Applications

Seong Ji Lee, Jin-Wook Shin, Dae Hyun Ahn, Chul Woong Joo, Hyunsu Cho, Nam Sung Cho (ETRI, Korea), Jonghee Lee (Hanbat Nat'l Univ., Korea), Hyoc Min Youn, Young Jae An (Dongjin Semichem Co., Ltd., Korea), Hyunkoo Lee (Sookmyung Women's Univ., Korea), and Chan-Mo Kang (ETRI, Korea)

[P4-3]

Study of Vertical Thin-Film Transistor Applied pn-Heterojunction Channel Layer

Gyeonghyeon Choi, Goeun Pyo, and Jaeeun Jang (DGIST, Korea)

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[P5-1]

Investigation of Hydrogen Diffusion Mechanism and Electrical Properties in In-Ga-Zn-O Thin Film through PECVD SiN:H and Post-Annealing

Hee Yeon Noh, Joonwoo Kim, June-Seo Kim, Myoung-Jae Lee, and Hyeon Jun Lee (DGIST, Korea)

[P5-2]

Influence of Post-Annealing Temperature on the Electrical Characteristics and Bias Stability of c-Axis Aligned Crystalline IGZO TFTs

Hyun-Woo Kim, Young-Jin Kang, Tae-Kyu Kim, and Yong-Hoon Kim (Sungkyunkwan Univ., Korea)

[P5-3]

Positive Bias Stress and Negative Bias Illumination Stress Stability of Amorphous InSnZnO (a-ITZO) Dual Layer Thin Film Transistor

Jeongho Lee, Seohyun Maeng, Hayoung Kim, Sohee Kim, and Jaekyun Kim (Hanyang Univ., Korea)

[P5-4]

High Performance Metal-Oxide TFTs Using ITZO/IGZO Double-Layer Channel Structure

Youngjin Kang, Boyeon Park, Jeehoon Kim, and Yong-Hoon Kim (Sungkyunkwan Univ., Korea)

[P5-5]

High Performance Thin-Film Transistor Using IGO by Low Temperature Crystallization

HyeongJin Park and Jaekyeong Jeong (Hanyang Univ., Korea)

[P5-6]

Rapid Fabrication of Amorphous IGZO TFTs by Using Solution Combustion Synthesis

Tae-gyu Kim, Jaeyoung Kim, Kyobin Keum, and Yong-Hoon Kim (Sungkyunkwan Univ., Korea)

[P5-7]

Key Roles of Trace Oxygen Treatment for High-Performance Zn-Doped CuI p-Channel Transistors

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

[P5-8]

Sodium Incorporation for Enhanced Performance of Two-Dimensional Tin-Based Perovskites Transistors

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

[P5-9]

Metal-Oxide Thin-Film Transistors Operating at Low-Voltages for Display Backplanes

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

[P5-10]

The Restorative Effect of Fluorocarbon Encapsulation on the Device Performance of Molybdenum Disulphide Thin-Film Transistors Operating at Low-Voltages for Active-Matrix Displays

Jun-Young Jeon, Byeong-Cheol Kang, Sang-Joon Park, and Tae-Jun Ha (Kwangwoon Univ., Korea)

[P5-11]

Abnormal Thermal Instability of Al-Doped InSnZnO Thin-Film Transistor with SiN_x/SiO_x Double Passivation Layer

Junghoon Yang and Sang-Hee Ko Park (KAIST, Korea)

[P5-12]

Effect of Ti Interlayer on the Contact Resistance of In-Ga-Sn-O Thin Film Transistors

Ho jae Lee, Min jae Kim, Jae seok Hur, Seong hun Yoon, Hee sung Han, and Jae kyeong Jeong (Hanyang Univ., Korea)

[P5-13]

Improved Field-Effect Mobility of In-Zn-Sn-O Thin Film Transistor by Oxidized Metal Layer

Gwang Bok Kim, Jeong A Lee, Min Hoe Cho, Sang Won Chung, Jae Hoon Cho, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P5-14]

High-Performance Solution-Processed WSe_2 Transistors

Taoyu Zou, Hyunjun Kim, and Yong-Young Noh (POSTECH, Korea)

[P5-15]

Current Modulation in Conducting Polymer Composites with Overcoating of a Dedoping Layer in Organic Field-Effect Transistors

Chaeseon Jeong, Donguk Kim, and Felix Sunjoo Kim (Chung-Ang Univ., Korea)

[P5-16]

High Performance Indium Gallium Oxide Transistors at a Low Temperature Using a Tantalum Catalytic Layer for Flexible Applications

Yoonji Choi, Seong Jip Kim (KETI, Korea), Gwangbok Kim, Jae Kyeong Jeong (Hanyang Univ., Korea), and Byungwook Yoo (KETI, Korea)

[P5-17]

Low-Temperature Processable Polyimide Gate Dielectrics for Flexible Pentacene Thin Film Transistors

Taek Ahn (Kyungsung Univ., Korea)

[P5-18]

Transfer Characteristics of InGaZnO Thin Film Transistors with Different Oxygen Partial Pressures

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

[P5-19]

Mechanism of Low Frequency Noise and Trap Density Profile in Dual Gate Metal Oxide Thin Film Transistor

Kanghyun Kim (Samsung Display Co., Ltd., Korea), Min Jung Kim (Korea Univ., Korea), Younggil Park (Samsung Display Co., Ltd., Korea), Seung Hee Jin, and Jae Woo Lee (Korea Univ., Korea)

[P5-20]

The Effect of Silicon Incorporation on Threshold Voltage Shift of Solution-Processed Indium-Zinc Oxide Thin Film Transistor

Hyuntaek Woo and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P5-21]

Performance Improvement in p-Channel Tin Monoxide Thin-Film Transistors via Bilayer Gate Dielectric Stack Using Hafnium Zirconium Oxide and Aluminum Oxide

Hochang Lee, Taikyu Kim, Hongwei Xu, Seungwan Seo, Cheol Hee Choi, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P5-22]

Perfluorocyclobutane Containing Crosslinked Polyimide Gate Dielectric for Thin Film Transistors

Jae Kyung Lee and Taek Ahn (Kyungsung Univ., Korea)

[P5-23]

Bay-Substitution Effect of Peryelene Diimides Nanowires on Supramolecular Chirality and Phototransistors

Jaeyong Ahn, Xiaobo Shang (Seoul Nat'l Univ., Korea), Jeong Hyeon Lee, Jin Chul Kim (UNIST, Korea), Hiroyoshi Ohtsu (Tokyo Inst. of Tech., Japan), Wanuk Choi (KIER, Korea), Inho Song (Seoul Nat'l Univ., Korea), Sang Kyu Kwak (UNIST, Korea), and Joon Hak Oh (Seoul Nat'l Univ., Korea)

[P5-24]

Low-Dimensional Semiconductor-Based Complementary Inverters with Tunable Switching Threshold

Seoyeon Jung, Jihyun Lee (Sookmyung Women's Univ., Korea), Sangyeon Pak, Jungmoon Lim, Seungnam Cha (Sungkyunkwan Univ., Korea), and Bongjun Kim (Sookmyung Women's Univ., Korea)

[P5-25]

Polycrystalline Indium Gallium Tin Oxide Thin-Film Transistors with High Mobility Exceeding 100 cm^2/Vs

Bokyoung Kim, Taewoong Moon, Sueon Lee, Do Hyun Kim, Yebyeol An, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P5-26]

Plasma Treatment of Amorphous IGZO with O_2 and Ar Reactive Gases

Jae Geun Woo, Chan Min Jeong, Eun Seong Yu, Hyuck Su Lee, Seo Jin Kang, and Byung Seong Bae (Hoseo Univ., Korea)

[P5-27]

Energy Band Offset Induced Threshold Voltage Shift of A-InGaZnO TFTs Under Bias Light Illumination

Hyojung Kim (Samsung Display Co., Ltd., Korea), Jangkun Song, and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P5-28]

Polyimide-Doped Indium-Gallium-Zinc-Oxide Based Flexible Phototransistor for Visible Light Detection

Ki Seok Kim, Min Seong Kim, Jusung Chung, Dongwoo Kim, I Sak Lee, and Hyun Jae Kim (Yonsei Univ., Korea)

[P5-29]

Inorganic Sn-Rich Perovskite/Metal-Oxide Phototransistors Fabricated through Partial UV Irradiation for Optoelectronic Applications

Chanho Jo, Seojun Lee, Dong-Won Kang, and Sung Kyu Park (Chung-Ang Univ., Korea)

[P5-30]

Low-Voltage Operating Metal-Oxide Thin-Film Transistors with High-k Crystalline Metal-Oxide Dielectrics for Active-Matrix Displays

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

[P5-31]

Effect of O_2 Flow Rate on the IGZO Thin Films Properties for Transistor Performance

Gi-Young Hong, Chur-Hyun Shin, Jong-Hoon Kim, Ho-Chang Yang, Il-Gu Kim, and Seung-Hyun Lee (KETI, Korea)

[P5-32]

Super Stable Self-Aligned Oxide TFT with High Mobility via Optimizing Oxygen Plasma Time during SiO_2 Deposition by PEALD

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

[P5-33]

How To Boost the Ion Mobility in the Enhancement-Mode Organic Electrochemical Transistors

Seongmin Heo, Jimin Kwon, Insang You (POSTECH, Korea), Mingyu Jung (UNIST, Korea), Junghoon Lee (Dongseo Univ., Korea), Changduk Yang (UNIST, Korea), and Yong-Young Noh (POSTECH, Korea)

[P5-34]

Air-Stable Ambipolarity of Organic Semiconductors in Embedded Nanofibril Structure for Complementary-like Electronic Circuits

Byeong-Chan Park, Young-Jae Lee, and Kang-Jun Baeg (Pukyong Nat'l Univ., Korea)

[P5-35]

Low-Voltage Operation of Solid-State Electrolyte Gate Insulator CNT Transistors with High Transconductance

Haksoon Jung, Jimin Kwon, Seongmin Heo, and Yong-Young Noh (POSTECH, Korea)

[P5-36]

Effect of Thermally Induced Phase Transition on the Carrier-Transport of $CH_3NH_3PbI_3$ Thin Film Transistor

Farjana Haque and Mallory Mativenga (Kyung Hee Univ., Korea)

[P5-37]

Real-Time Healthcare Monitoring Platform with Solution Based High-Sensitivity Metal Oxide Electrochemical Transistors

Joon Hui Park and You Seung Rim (Sejong Univ., Korea)

[P5-38]

Carbon Chain Length and Annealing Temperature Dependency of Self-Assembled Monolayer-Doped IGZO Thin-Film Transistors

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

[P5-39]

Organic-Inorganic Hybrid Gate Dielectrics Synthesized Using Plasma Polymerization for Flexible Electronics

Gwan In Kim, Dong Hyun Choi, Min Seong Kim, Won Kyung Min, Jin Hyeok Lee, and Hyun Jae Kim (Yonsei Univ., Korea)

[P5-40]

Crystallization of SiN Capped InSb Films on Glass by Rapid Thermal Annealing

Otokichi Shimoda, Yuki Sawama, C. J. Koswaththage, Takashi Noguchi (Univ. of the Ryukyus, Japan), Takashi Kajiwara, Taizoh Sadoh (Kyushu Univ., Japan), and Tatsuya Okada (Univ. of the Ryukyus, Japan)

[P5-41]

Measuring Channel Potential in Solution-Processed, Dual-Gate Amorphous InGaZnO Thin-Film Transistors Using Gated Multiprobe Method

Soyoung Choi and Jaewook Jeong (Chungbuk Nat'l Univ., Korea)

[P5-42]

Extension of a 10 mm long {100}-Oriented Grain Boundary Free Silicon Domain Crystallized by Continuous Wave Green Laser

Muhammad Arif, Nobuo Sasaki, Satoshi Takayama, and Yukiharu Uraoka (Nara Inst. of Science and Tech., Japan)

[P5-43]

Optimization of the OLED Charging Delay for Improving Low Gray Scale Picture Quality in the AMOLED Displays

Se-Hwan Na, Won-Kyung Min (Yonsei Univ., Korea), Do-Hyung Kim, Han-Wook Hwang, Hyun-Chul Choi (LG Display Co., Ltd., Korea), and Hyun-Jae Kim (Yonsei Univ., Korea)

[P5-44]

Solution-Processed Calcium Titanate Perovskite Film and Its Thickness-Dependent Hysteresis Behaviors

Subin Lee and Hocheon Yoo (Gachon Univ., Korea)

[P5-45]

Negative Differential Resistance Performance in 0D/3D Mixed Dimensional Heterostructure Using ZnO Quantum Dots

Somi Kim, Taehyun Park, and Hocheon Yoo (Gachon Univ., Korea)

[P5-46]

Investigation of Performance Improvement through Boron Implantation in the Source/Drain Area of Self-Aligned Coplanar a-IGZO TFTs

Seung Hee Kang, I Sak Lee, Kyungmoon Kwak (Yonsei Univ., Korea), Nack Bong Choi, Han Wook Hwang, Hyun Chul Choi (LG Display Co., Ltd., Korea), and Hyun Jae Kim (Yonsei Univ., Korea)

[P5-47]

Effect of N_2O Plasma treatment on the IGZO TFTs and its Vth distribution

Namsik Kim, Jee Ho Park, Jonghun Lim, Hyeongjung Kim Sangbin Suh, and Jintae Kim (LG Display Co., Ltd., Korea)

[P5-48]

Improve Electrical Properties of IGZO TFTs by Adopting Zn, Ga Rich Layer

HyungTae Kim, Jeeho Park, JeongWoong Baek, SungHan Lim, YongJo Kim, and Jintae Kim (LG Display Co., Ltd., Korea)

[P5-49]

Effect of Multi-Layer Thickness on the Reliability of the IGZO TFTs

Sangbin Suh, Jeeho Park, Jonghoon Lim, Hyeongjung Kim, Namsik Kim, and Jintae Kim (LG Display Co., Ltd., Korea)

[P5-50]

Effect of Passivation Oxygen Contents on the Performance of IGZO TFTs

Eunji Jang, Jeeho Park, Wonil Han, Yeonhoo Jung, and Jintae Kim (LG Display Co., Ltd., Korea)

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[P6-1]

One-Way Observable Edge-Lit Window Signage Display Using Dye-Doped Thin Resin Layer Which Enables to Make Images Invisible from Back Side

Kunio Sakamoto and Yusuke Fujie (Konan Univ., Japan)

[P6-2]

Unidirectional Projection Screen for Window Signage Which Enables to Make Images Invisible from Back Side Using Polarized Light Control Technology

Kunio Sakamoto and Hikaru Tanouchi (Konan Univ., Japan)

[P6-3]

Optimally Modulated Luminance for Suppressing Flicker in Displays

Eunjung Lee, Hyungsuk Hwang, Jaejoong Kwon, and Sungchan Jo (Samsung Display Co., Ltd., Korea)

[P6-4]

Attitude toward Use(ATU) of New Screen Form Factor Consitering Contents

Daeun Park and YungKyung Park (Ewha Womans Univ., Korea)

[P6-5]

Color Gamut Volume Inconsistency Over Chromatic Adaptation Transforms

Youn Jin Kim, Kyung Jin Kang, and Myoung Young Lee (LG Electronics Inc., Korea)

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[P7-1]

Donut-Shaped Fourier Peplography

Jiheon Lee (Hankyoung Univ., Korea), Jaehoon Lee, Hyun-Woo Kim, Min-Chul Lee (Kyushu Inst. of Tech., Japan), and Myungjin Cho (Hankyoung Univ., Korea)

[P7-2]

Enhanced Depth Estimation Using Histogram Matching

Jiheon Lee (Hankyoung Univ., Korea), Jaehoon Lee, Hyun-Woo Kim, Min-Chul Lee (Kyushu Inst. of Tech., Japan), and Myungjin Cho (Hankyoung Univ., Korea)

[P7-3]

Computational Photon Counting Visual Quality Enhancement by Using Wavelet Denoising

Jaehoon Lee, Kazuaki Honda (Kyushu Inst. of Tech., Japan), Jiheon Lee, Myungjin Cho (Hankyong Nat'l Univ., Korea), and Min-Chul Lee (Kyushu Inst. of Tech., Japan)

[P7-4]

Car A-Pillar Blind Spot Visualization and Object Recognition System Using Car Dash Cam

Jaehoon Lee, Hyun-Woo Kim (Kyushu Inst. of Tech., Japan), Jiheon Lee, Myungjin Cho (Hankyong Nat'l Univ., Korea), and Min-Chul Lee (Kyushu Inst. of Tech., Japan)

[P7-5]

Accurate Depth Map Reconstruction Method by Using Optimum Distance Calculation

Kazuaki Honda, Jaehoon Lee, Hyun-Woo Kim (Kyushu Inst. of Tech., Japan), Jiheon Lee, Myungjin Cho (Hankyong Nat'l Univ., Korea), and Min-Chul Lee (Kyushu Inst. of Tech., Japan)

[P7-6]

Research on Noise Reduction Techniques for the 3D Visualization Under the Scattered Media Conditions

Ryo Shinohara, Hyun-Woo Kim, Jaehoon Lee (Kyushu Inst. of Tech., Japan), Jiheon Lee, Myungjin Cho (Hankyong Nat'l Univ., Korea), and Min-Chul Lee (Kyushu Inst. of Tech., Japan)

[P7-7]

A Study on Statistical Analysis Using Segmentation and Numbering in Digital Holographic Microscopy (DHM) Technology

Hyun-Woo Kim, Jaehoon Lee (Kyushu Inst. of Tech., Japan), Jiheon Lee, Myungjin Cho (Hankyong Nat'l Univ., Korea), and Min-Chul Lee (Kyushu Inst. of Tech., Japan)

[P7-8]

A Study of Digital Holographic Microscopy (DHM) Using a Gaussian Weighted Sideband in the Fourier Domain

Hyun-Woo Kim (Kyushu Inst. of Tech., Japan), Jiheon Lee, Myungjin Cho (Hankyong Nat'l Univ., Korea), Naoki Konishi, and Min-Chul Lee (Kyushu Inst. of Tech., Japan)

[P7-9]

VR Synchronization Using Muscle Activity Strain Textile Sensors

SangUn Kim, SeongMo Gu, EunJi Yeun, and JooYong Kim (Soongsil Univ., Korea)

[P7-10]

One-Way Observable Light-Emitting Aero Signage Display Using Light Transmission Tube Which Enables to Make Transparent View from Back Side

Kunio Sakamoto and Suguru Monzen (Konan Univ., Japan)

[P7-11]

SMA's Power Efficiency Improvement Plan Using Silver Paste Layer In Lighter Tactile Realization VR Device

Sang Jin Kim, Sang Un Kim, and JooYong Kim (Soongsil Univ., Korea)

[P7-12]

Real-Time 3D Rendering and Eye-Tracking for High Resolution Light Field 3D Display

Rang Kyun Mok, Hyun Jin Cho, Su Bin Jung, and Beom Shik Kim (Samsung Display Co., Ltd., Korea)

[P7-13]

A Study on 3D Pixel for High-Definition 3D Display

Young-Sang Ha, Beom-Shik Kim, Jae-Joong Kwon, and Young-Chan Kim (Samsung Display Co., Ltd., Korea)

[P7-14]

Development of Rewritable Hologram with High Efficiency Azobenzene Polymer Optimized for Green-Laser

Kyung-Il Joo (KOPTI, Korea), Hye Ju Kang (KRICT, Korea), Seon Kyu Yoon, Kwang-Hoon Lee (KOPTI, Korea), Jae-Won Ka (KRICT, Korea), and Hak-Rin Kim (Kyungpook Nat'l Univ., Korea)

[P7-15]

Impact of Partial Masking Black Matrix on Lenticular Lens Array Film for High Quality Multiview 3D Display Image

Jeong Woo Park, Hyun Jin Cho, Beom-Shik Kim, Su-bin Jeong, Young-chan Kim, and Seong-Chan Cho (Samsung Display Co., Ltd., Korea)

[P7-16]

Distortion Correction in Tomographic Near-Eye Displays with Light Field Optimization

Siwoo Lee, Seungjae Lee, Dongyeon Kim, and Byoungho Lee (Seoul Nat'l Univ., Korea)

[P7-17]

Analysis on Underestimation of Eye-Box Measurements in Near-to-Eye Displays with Considering Rotation Center of Eye

Sehwan Lim, Kwang-Soon Choi, and Jiwoon Yeom (KETI, Korea)

[P7-18]

Hologram Synthesis Method based on Ray-Tracing Rendering for Holographic Stereogram Printing

Erkhembaatar Dashdavaa, Chang-Won Shin, Hui-Ying Wu (Chungbuk Nat'l Univ., Korea), Seong Gyoon Park (Kongju Nat'l Univ., Korea), Jung-jae Ko (Chungbuk Nat'l Univ., Korea), and Nam Kim (Chungbuk Nat'l Univ., Korea)

[P7-19]

Design Method of Freeform Holographic Mirror for Near-Eye Display

Songhyun Lee, Chanhyung Yoo, Kiseung Bang, and Byoungho Lee (Seoul Nat'l Univ., Korea)

[P7-20]

Deep Learning and Hologram Compression

Juhyun Lee and Byoungho Lee (Seoul Nat'l Univ., Korea)

[P7-21]

Occlusion-Capable Augmented Reality Display with Reduced Size and Expanded Field of View

Minseok Chae, Kiseung Bang, Youngjin Jo, Dongheon Yoo, and Byoungho Lee (Seoul Nat'l Univ., Korea)

[P7-22]

Horizontal Field of View Enhancement of a Waveguide-Type Near-Eye-Display by Re-structuring Input Image

Woongseob Han, Jae-Min Jeon, Myeong-Ho Choi, and Jae-Hyeung Park (Inha Univ., Korea)

[P7-23]

Analysis of Multiplexed Holographic Optical Element with Rigorous Coupled Wave Theory

Junyoung Jang and Jae-Hyeung Park (Inha Univ., Korea)

[P7-24]

Depth Perception Improvement of Distant 3D Image from Sticking Depth on Real Object by Moving Head or 3D Image in Arc 3D Display

Takeshi Yasui, Kisa Nakano, Haruki Mizushina, Kenji Yamamoto, and Shiro Suyama (Tokushima Univ., Japan)

[P7-25]

Advanced Secure Display Using DFD Display with Fuzzy Perceived Depth Images by Combining Random Dot Configuration and Fuzzy Luminance Distribution

Kazuya Fujikawa, Haruki Mizushina, Kenji Yamamoto, and Shiro Suyama (Tokushima Univ., Japan)

[P7-26]

Reduction of Perceived Depth Instability in Aerial Image by Reaching Hand for Aerial Image Position

Naoki Kiyose, Haruki Mizushina, Kenji Yamamoto, and Shiro Suyama (Tokushima Univ., Japan)

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[P8-1]

Deep Learning to Improve the Performance of Fingerprint Sensor Under Display

Soongyu Lee and Jinwoo Kim (Samsung Display Co., Ltd., Korea)

[P8-2]

Tearing Effect Free Single Buffering for a Field Sequential Color Display

Wook Hong, Hokwon Kim, and Joon Goo Lee (RAONTECH, Korea)

[P8-3]

Evaluation of Adverse Health Effects from OLED Display Flicker of Smartphone

Minhyuk Kim, Young-mook Choi, and Sangkok Kim (Samsung Display Co., Ltd., Korea)

[P8-4]

AMOLED Pixel Circuit for VDD Compensation

Hyuck Su Lee, Seo Jin Kang, Eun Seong Yu, Jae Geun Woo, Jong Mo Lee, Chan Min Jung, and Byung Seong Bae (Hoseo Univ., Korea)

[P8-5]

Stretching Compensation Pixel Circuit Using a-IGZO TFTs

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

[P8-6]

An Quatification Method of Hotizontal Line Defects Caused by the Interference between Flexible OLED and Touch Sensor

Junyoung Ko, Hyung-Bae Kim, Jaewoo choi, Eunsol Seo, and Yujin Shin (Samsung Display Co., Ltd., Korea)

[P8-7]

An a-IGZO TFTs Based Scan Driver Circuit for Depletion Mode with Triple Pull-Down Units

Yong-Hoo Hong, Eun Kyo Jung, Sung-Hyuck Ahn, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

[P8-8]

Scan Driver Circuit for Leakage Current Suppression in Enhancement-Mode and Depletion-Mode

Sung-Hyuck Ahn, Eun Kyo Jung, Yong-Hoo Hong, Hwarim Im, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

[P8-9]

The Low Power Architecture for Display Driver IC

Seokhwan Roh and Geunyoung Jeong (Samsung Display Co., Ltd., Korea)

[P8-10]

High Dynamic Range Gamma Correction in Organic Light Emitting Diode Displays

Kevin Kam, Wei Fan, and Ioannis Kymissis (Columbia Univ., USA)

[P8-11]

Color Shifting in High Dynamic Range Organic Light Emitting Diode Displays

Kevin Kam, Wei Fan, Vikrant Kumar, and Ioannis Kymissis (Columbia Univ., USA)

[P8-12]

Low-Voltage Driving Shift Register based on Coplanar a-InGaZnO TFTs Using Photo-Patternable Ionic Elastomer

Changhyeon Cho, Yongchan Kim, Eseudeo Yun (Soongsil Univ., Korea), Hanbin Choi, Do Hwan Kim (Hanyang Univ., Korea), and Hojin Lee (Soongsil Univ., Korea)

[P8-13]

Low-Power Capacitive Pressure Sensor Circuit based on Coplanar a-IGZO TFTs Using Photo-Patternable Ionic Polymer Gate Dielectric

Heejoo Park, Yongchan Kim, Changhyeon Cho, Jinho Moon, and Hojin Lee (Soongsil Univ., Korea)

[P8-14]

Pseudo Face-Orientation Change for 2D Communications by Spatial Blending of 2D Face Images with Different Face Orientations

Yurie Nakagawa, Haruki Mizushina, Kenji Yamamoto, and Shiro Suyama (Tokushima Univ., Japan)

[P8-15]

Image Quality Enhancement in Variable-Refresh-Rate AMOLED Displays Using an Initial Voltage Compensation Method

Li Jin Kim, Sujin Jung, Hee Jun Kim (Yonsei Univ., Korea), Chang Hoon Jeon, Kyung Joon Kwon (LG Display Co., Ltd., Korea), and Hyun Jae Kim (Yonsei Univ., Korea)

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[P9-1]

A New Evaluation System for Metal Oxide Compound Semiconductor Film

Kook Chul Moon (KonKuk Univ., Korea), JungUn Na, Hyoungsik Kim, GyoHyuk Yoon, JongPill Choi (Engion Co., Ltd., Korea), Wonyoung Kim, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

[P9-2]

Direct Photolithography of Quantum Dot Films by Diethylzinc Treatment for High-Resolution Emissive Display Applications

Joon Yup Lee, Gi-Hwan Kim (Myongji Univ., Korea), Jisu Han, Jaehoon Lim (Sungkyunkwan Univ., Korea), and Seong-Yong Cho (Myongji Univ., Korea)

[P9-3]

One-Way Observable Aero Signage Display Using Micro Optical Prism by Intaglio Printing Which Enables to Make Transparent View from Back Side

Kunio Sakamoto and Ryo Sakata (Konan Univ., Japan)

[P9-4]

High Performance, Ultra-Flexible Metal Oxide Thin-Film-Transistor(TFT) Enabled by Polyimide Film for Wearable Application

Jeonghyoung Lee, Jiyun Tak, Soobin Lee, and Jaekyun Kim (Hanyang Univ., Korea)

[P9-5]

Development of Bilayer Inorganic Thin Film to Prevent Oxidation of Metal Layer

W.Y. Kim, H.Y. Lee, H.J. Kang, O.J. Kwon, S.J. Kim, D.J. Suh, and S.H. Kim (Samsung Display Co., Ltd., Korea)

[P9-6]

Solution-Processed Aluminum-Titanium Oxide as Gate Insulator for a-IGZO Thin Film Transistors

Sung-Won Kim, Won-Young Kim, Hwarim Im, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

[P9-7]

Eco-Friendly All Water-Based Solution Process for Robust Ag Nano-Mesh Transparent Electrodes

Sung Min Lee, In Hyeok Oh, Yeon Woo Kim, and Suk Tai Chang (Chung-Ang Univ., Korea)

[P9-8]

Study on the Solution Processed Organic Light Emitting Diode Using a Polyetherimide Adhesion Layer

Tae-Jin Lee, Jun-Yeong Lee, and Cheol-Hee Moon (Hoseo Univ., Korea)

[P9-9]

Crystalline Boundary Reduction of 6,13-Bis(triisopropylsilylethynyl)pentacene Thin Films on a Surface-Hydrophobicity-Modified Polymeric Insulator

Jin-Hyuk Kwon, Min-Hoi Kim (Hanbat Nat'l Univ., Korea), Jin-Hyuk Bae (Kyungpook Nat'l Univ., Korea), and Jaehoon Park (Hallym Univ., Korea)

[P9-10]

Research on Luminance Inspection of Mini-LED Using Light Control Film

Byeong-Chan Choi, Byung-Chul Lee, and Kwan-Young Han (Dankook Univ., Korea)

[P9-11]

OCR Spreading Characteristics on the Curved Substrate for Lamination of the Flexible Display

Young-Gyun Kim and Kwan-Young Han (Dankook Univ., Korea)

[P9-12]

Fabrication of Organic Light Emitting Diode Micropixels using Plasma Etching without Photolithography

Hyungki Park, Chanho Kim, Sangmin Lee, Hangil Lee, Jiho Jeon, and Sung Min Cho (Sungkyunkwan Univ., Korea)

[P9-14]

Effects of Al Capping Layer Thickness on Electrical Performance and Stability of IGTO TFTs

Seong-Hyun Hwang, Hyun-Seok Cha, Hwan-Seok Jeong, Dong-Ho Lee, and Hyuck-In Kwon (Chung-Ang Univ., Korea)

[P9-15]

Fabrication of Auxiliary Electrodes Using Layer-by-Layer Inkjet Printing Process for OLED Lighting

Sung-min Sim, Jun Ho You, and Sang-Ho Lee (KITECH, Korea)

[P9-16]

Stabilization Effect of S or Se Incorporation with Indium Oxide

Paul Lee and Myung-gil Kim (Sungkyunkwan Univ., Korea)

[P9-17]

a-IGZO TFTs with CYTOP Gate Dielectric

Won-Young Kim, Sung-Won Kim, Hwarim Im, and Yong-Sang Kim (Sungkyunkwan Univ., Korea)

[P9-18]

Flexible Inorganic-Organic Nanolaminate Encapsulation for Next Generation Display

Heeyong Lee, Myung Soo Huh, Jung Eun, Jung Gon Kim, Dong Pyo Jeon, and Choel Min Jang (Samsung Display Co., Ltd., Korea)

[P9-19]

Area Selective Atomic Layer Deposition of Al_2O_3 Using Self-Assembled Monolayers

Wung Sun Eo, Hye Jin Cho, Chan Ho Kim, Se Jin Ahn, Seung Woo Lee, and Sung Min Cho (Sungkyunkwan Univ., Korea)

[P9-20]

Characterization and of UV LED Cured Acrylic Pressure-Sensitive Adhesives for Flexible Displays.

Ji-soo Kim (Seoul Nat'l Univ., Korea), Youngdo Kim (Samsung Display Co., Ltd., Korea), and Hyun-Joong Kim (Seoul Nat'l Univ., Korea),

[P9-21]

Organic-Inorganic Hybrid Transparent Conductive Electrode for Flexible Electronics

Minh Nhut Le (SungKyunKwan Univ., Korea), Byung-Doo Choi (Chung Ang Univ., Korea), and Myung-Gil Kim (SungKyunKwan Univ., Korea)

[P9-22]

Transparent Flexible Nanoline Field-Effect Transistor (NL-FET) Array with High-Integration in Large-Area

Dong Wook Kim and Unyong Jeong (POSTECH, Korea)

[P9-23]

The Effect of Pump Configuration in an Ink Circulation System on Jetting Quality in Inkjet Printer

Wooree Ko, Giwoon Sung, Futoshi Yoshida, Euna Ko, and Younggeun Cho (Samsung Display Co., Ltd., Korea)

[P9-24]

Laser Micro Patterning of Carbon Complex Materials for Lightweight and Robust Display

Junghwa You, Hyungsik Kim, Jeongho Kim, Joongsung Lee, Kyunghan Yoo, Alexander Voronov, Emil Aslanov, Jekil Ryu, SeongHo Jeong, and Cheol Lae Roh (Samsung Display Co., Ltd., Korea)

[P9-25]

Jetting Reliability Improvement for Pixel Printing of QD Display

Katsuyuki Hirato, Wooree Ko, and JaiHyuk Choi (Samsung Display Co., Ltd., Korea)

[P9-26]

Fine Organic Stripe Coating Using a Hydrophobic Needle for OLEDs

Jinyoung Lee, Gieun Kim, Songeun Hong, Jiho Choi, and Jongwoon Park (Korea Univ., Korea)

[P9-27]

Mechanism Study of Wide Color-Gamut TFT-LCD's Light-Caused Mura

Dong Wang, Dan Wang, Hongming Zhan, Xi Chen, and Xibin Shao (Beijing BOE Display Tech. Co., Ltd., China)

[P9-28]

A Study on Improvement and Diagnosis Method of Manufacturing in EtherCAT Communication

Tae Min Kim and Jae Wook Jeon (Sungkyunkwan Univ., Korea)

[P9-29]

Relation of the Intense Pulsed Light Energy to Characteristic of the Fabricated OLEDs Device by Sublimation Transfer Process

Jun Yeub Lee (KITECH, Korea), Byung Kwon Ju (Korea Univ., Korea), and Kwan Hyun Cho (KITECH, Korea)

[P9-30]

Particle Removal Prediction on Thin-Film Transistor through Mist-Based Cleaning Simulation

Yujin Seong, Hyojoon Gong, Changrok Choi, Ilho Kim, Seokwoo Lee, and Sooyoung Yoon (LG Display Co., Ltd., Korea)

[P9-31]

Effect of Ar Atmospheric Plasma Treatment Time on Al-Doped Zinc Oxide Thin Films Sputtered on Flexible Substrates

Haechang Lee, Younggon Choi, Kirak Kim, Yuanrui Qi, Minseok Song, Van Tuan Nguyen, DongWoon Lee, Sang Jik Kwon, and Eou-Sik Cho (Gachon Univ., Korea)

[P9-32]

Effect of Thermal Induced Degradation on the 8-Hydroxyquinolato-Lithium (Liq) Organic Material by Evaporation Process

Mi-Young Ha (Soonchunhyang Univ., Korea), Byeong-Doo Kang (SFA Engineering, Korea), Ye-Bin Eun, and Dae-Gyu Moon (Soonchunhyang Univ., Korea)

[P9-33]

Reinforcement Learning for One-Armed Transfer Robots in Display Manufacturing

Hwa-Jong Lee, Sihyeon Jo, and Seong-Woo Kim (Seoul Nat'l Univ., Korea)

[P9-34]

Mechanism Study of Wide Color-Gamut TFT-LCD's Light-Caused Mura

Dong Wang, Dan Wang, Hongming Zhan, Xi Chen, and Xibin Shao (Beijing BOE Display Tech. Co., Ltd., China)

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[P10-1]

Synthesis of Organolead Halide Perovskite Nanoparticles Without Quantum Confinement Effects and Their Applications to LEDs

Bong-Jun Choi and Jung-Yong Lee (KAIST, Korea)

[P10-2]

Effect of Single Structure on the Performance of Light-Emitting Electrochemical Cells

Woo Jin Jeong (Gyeongsang Nat'l Univ., Korea), Jong Ik Lee (Sogang Univ., Korea), Hee Jung Kwak, Jae Min Jeon (Gyeongsang Nat'l Univ., Korea), Moon Sung Kang (Sogang Univ., Korea), and Jun Young Kim (Gyeongsang Nat'l Univ., Korea)

[P10-3]

Electroluminescence of Inverted Perovskite Quantum Dot Light Emitting Diode based on $CsPbBr_3$

Hee Jung Kwak, Min-Sik Gong, Woo Jin Jeong, Jeong Ha Hwang, Donggu Lee, Gi-Hwan Kim, and Jun Young Kim (Gyeongsang Nat'l Univ., Korea)

[P10-4]

Unidirectional Window Signage Display Using Resin Printing Ink for Making Dye-Doped Thin Layer Which Enables to Make Images Invisible from Back Side

Kunio Sakamoto and Takeru Hasegawa (Konan Univ., Japan)

[P10-5]

Highly Efficient Double Gate Light Emitting Transistor based on Van der Waals Hetero Structure

June-Chul Shin (Seoul Nat'l Univ., Korea), Junyoung Kwon (Yonsei Univ., Korea), Yeon Ho Kim, Chul-Ho Lee (Korea Univ., Korea), and Gwan-Hyoung Lee (Seoul Nat'l Univ., Korea)

[P10-6]

Elucidating Chemical Origin of Photoluminescence of Cesium-Bismuth-Bromide Perovskite Nanocrystals and Improved Emissive Properties via Metal Chloride Additives

Joonyun Kim, Jinu Park, and Byungha Shin (KAIST, Korea)

[P10-7]

Highly Conductive Ionic Gel Polymer Electrolyte based on In-Planar Microsupercapacitors for Display Applications

Gaeun Park, Dawoon Lee, and Jaekyun Kim (Hanyang Univ., Korea)

[P10-8]

High Performance Micro-Supercapacitor Array Using Hybrid Ion-Gel Polymer Electrolyte (IGPE) as Next-Generation Energy Storage Device for Display Applications

Dawoon Lee (Hanyang Univ., Korea), U Hyeok Choi (Inha Univ., Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P10-9]

Highly Deformable Transparent Au Film Electrodes and Their Uses in Deformable Displays

Dong Wook Kim, Chae-Eun Shim, and Unyong Jeong (POSTECH, Korea)

[P10-10]

High Performance Piezoelectric Nanoparticle-Embedded Micro-Structure Triboelectric Nanogenerator(TENG) for Wearable and Human-Interactive Applications

Junsu Seong, Dakyung Yu, Minwoo Kim, and Jaekyun Kim (Hanyang Univ., Korea)

[P10-11]

Large-Scale Ultrathin IGZO/MoS_2 Heterostructure Device for Highly Sensitive Visible Photodetectors

Kumin Kang (Hanyang Univ., Korea), Sunkyung Kang (Chungbuk Nat'l Univ., Korea), Dongyun Lee (Hanyang Univ., Korea), Hyunseok Lee (Chungbuk Nat'l Univ., Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P10-12]

Highly Controllable Segregation in the Mixed-Halide Peovskite with Electrical in-situ Observations

SeungJae Lee and JungYong Lee (KAIST, Korea)

[P10-13]

The Design of Circular Polarization Dependent Dual Focusing Metalens

Yeseul Kim and Junsuk Rho (POSTECH, Korea)

[P10-14]

Enhancement of Luminous Intensity from LED Source at Detection Angle of 10° by Using Metalens

Hanlyun Cho, Heonyeong Jeong, and Junsuk Rho (POSTECH, Korea)

[P10-15]

Fabrication and Electrochromic Performance of Textile Electrochromic Devices

Yu Seon Eom, Raksha Pal, and Jong Seung Park (Pusan Nat'l Univ., Korea)

[P10-16]

Tunable Structural Color for Encryption Enhancement

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

[P10-17]

One-Step Fabrication of High Efficiency Hologram Using Particle Embedded Resin

Joohoon Kim, Dong-Kyo Oh, and Junsuk Rho (POSTECH, Korea)

[P10-18]

Near-Infrared Detectors Using Semiconducting Carbon Nanotubes with Narrow Band-Gap

Dongseob Ji, Haksoon Jung, and Yong-Young Noh (POSTECH, Korea)

[P10-19]

Stretchable Strain Sensor for Wearable Device by UV Curing Patterning Method

Yongjun Song, Dawoon Lee, and Jaekyun Kim (Hanyang Univ., Korea)

[P10-20]

Enhancement of Blue-Light Emitter $CsPbBr_3$ Nanoplatelets through Post-Treatment Surface Passivation

Jinu Park, Joonyun Kim, and Byungha Shin (KAIST, Korea)

[P10-21]

Full-Colored Polarization Colorfilter by Near-Zero Reflection with Triple-Nanofin Metasurfaces

Chunghwan Jung and Junsuk Rho (POSTECH, Korea)

[P10-22]

Highly Flexible, Large-Area MoS_2/Ion-Gel Composite Film for Photodetection

Soobin Lee, Seohyun Maeng, Dawoon Lee (Hanyang Univ., Korea), Hyunseok Lee (Chungbuk Nat'l Univ., Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P10-23]

Enhanced Photoluminescence of Two-Dimensional Van der Waals Heterostructures Fabricated by Layer-by-Layer Oxidation of MoS_2

Sojung Kang (Yonsei Univ., Korea), Yoon Seok Kim (KU-KIST Graduate School of Converging Science and Technology, Korea), Jae Hwan Jeong, Junyoung Kwon, Jong Hun Kim (Yonsei Univ., Korea), Yeonjoon Jung (Seoul Nat'l Univ., Korea), Jong Chan Kim (UNIST, Korea), Bumho Kim (Columbia Univ., USA), Sang Hyun Bae, Pinshane Y. Huang (Univ. of Illinois at Urbana-Champaign, USA), James C. Hone (Columbia Univ., USA), Hu Young Jeong (UNIST, Korea), Jin-Woo Park (Yonsei Univ., Korea), Chul-Ho Lee (KU-KIST Graduate School of Converging Science and Technology, Korea), and Gwan-Hyoung Lee (Seoul Nat'l Univ., Korea)

[P10-24]

High Conductivity Sodium Ionic Gel Polymer Electrolyte and Its Application on Excellent All-Solid-State Micro-Supercapacitor for Display

Nguyen Thi Huyen, Dawoon Lee (Hanyang Univ., Korea), U Hyeok Choi (Inha Univ., Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P10-25]

Highly Efficient Thermally-Deposited Perovskite Light-Emitting Diodes with a Polymer Passivation Layer

Nakyung Kim, Mingue Shin, Joonyun Kim, Jinu Park, Seongmoon Jun, Yong-Hoon Cho, and Byungha Shin (KAIST, Korea)

[P10-26]

Polarization-Insensitive Metasurface Hologram with Low-Noise Optimization

Changhyun Kim, Jangwoon Sung, and Byoungho Lee (Seoul Nat'l Univ., Korea)

[P10-27]

High Performance Blue Hyperfluorescence System by Prohibiting Dexter Energy Transfer of Triplet Exciton

Hyuna Lee, Ki joon Yang, Soon Jae Hwang, Kenkera Rayappa Naveen, and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

[P10-28]

Organic Thin-Film Transistors with a Water-Processable Solid Electrolyte as a Gating Element

Solin Lee and Felix Sunjoo Kim (Chung-Ang Univ., Korea)

[P10-29]

Understanding the Origin of Sub-Bandgap Emission from Zero-Dimensional Perovskite Cs_4PbBr_6

Mingue Shin (KAIST, Korea), Sung-Wook Nam (Kyungpook Nat'l Univ., Korea), Aditya Sadhanala, Ravichandran Shivanna, Miguel Anaya (Univ. of Cambridge, UK), Alberto Jiménez-Solano (Max Planck Institute for Solid State Research, Germany), Hyewon Yoon, Seokwoo Jeon (KAIST, Korea), Samuel D. Stranks, Robert L. Z. Hoye (Univ. of Cambridge, UK), and Byungha Shin (KAIST, Korea)

[P10-30]

Facile Synthesis of $CsPbBr_3$ Nanorods Using Stripping Method for High Performance Light-Emitting Diodes

Myeonggeun Han and Yong-Young Noh (POSTECH, Korea)

[P10-31]

Electrical Modulation of Exciton Complexes in Light Emitting Tunnel Transistors of Van der Waals Heterostructure

Huije Ryu (Seoul Nat'l Univ., Korea), Junyoung Kwon (Yonsei Univ., Korea), Seunghoon Yang (Korea Univ., Korea), Young Duck Kim (Kyung Hee Univ., Korea), Chul-Ho Lee (Korea Univ., Korea), and Gwan-Hyoung Lee (Seoul Nat'l Univ., Korea)

[P10-32]

Large-Scale Synthesis of Two-Dimensional Rhenium Disulfide for High-Performance Photodetectors

Bo Hyeon Kim, Da Som Song, Sunyoung Shin, Wooseok Song (KRICT, Korea), Sang Don Bu (Jeonbuk Nat'l Univ., Korea), and Jongsun Lim (KRICT, Korea)

[P10-33]

The Effect of Thermal Annealing to Radiatively Recombination of Interlayer Exciton in $MoSe_2/WSe_2$ Heterobilayer

Ji-Hwan Baek, Huije Ryu (Seoul Nat'l Univ., Korea), Soo Yeon Lim, Jung Cheol Kim, Hyeonsik Cheong (Sogang Univ., Korea), and Gwan-Hyoung Lee (Seoul Nat'l Univ., Korea), Hyoung Kyun Kim (Seoul National University, Republic of Korea), Miyoung Kim (Seoul National University, Republic of Korea)

[P10-34]

Self-Controlled Electroactive Tunable Liquid Lens for Stabilized Focal Length Change

Jong Hyeon Ka, Im Bo Gong, and Wook Sung Kim (POSTECH, Korea)

[P10-35]

High Efficiency, High NA, Large-Area Metalens in Near-Infrared for LiDAR

Seong-Won Moon, Younghwan Yang, and Junsuk Rho (POSTECH, Korea)

[P10-36]

Electrical and Optical Characterization of Visible Parylene C Films

Ye-Seul Lee, Ji-Hyeon Yoon, Akpeko Gasonoo, Yoonseuk Choi, Jonghee Lee, and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

[P10-37]

Application of Multi-Layer Visible Parylene Films in Advance Optical Systems

Seung-Yo Baek, Ye-Seul Lee, Akpeko Gasonoo, Jonghee Lee, and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

[P10-38]

Wavelength Dependent Light Induced Degradation of Inverted Perovskite Solar Cells

BeomHee Yoon (Kwangwoon Univ., Korea), Jeonghun Kwak (Seoul Nat'l Univ., Korea), and Hyunho Lee (Kwangwoon Univ., Korea)

[P10-39]

Polarization-Selective Metasurface Structural Color Display via Deep Neural Network

Hyunwoo Son, Jangwoon Sung, and Byoungho Lee (Seoul Nat'l Univ., Korea)

[P10-40]

Inverse Design for Multi-Wavelength Meta-Holograms

Junhyeok Jang, Hyunwoo Son, Chulsoo Choi, and Byoungho Lee (Seoul Nat'l Univ., Korea)

[P10-41]

3D Printed Highly Conductive Stretchable Electrodes for Deformable Display Applications

Hyunjoo Cho, Youngpyo Ko, Heesuk Kim (KIST, Korea), Jaewook Jeong (Chungbuk Nat'l Univ., Korea), Byeongmoon Lee, and Seungjun Chung (KIST, Korea)

[P10-42]

Active Metafilm for Enhanced Amplitude Modulation of Visible Light

Kyuho Kim (Seoul Nat'l Univ., Korea), Sun-Je Kim (Myongji Univ., Korea), and Byoungho Lee (Seoul Nat'l Univ., Korea)

[P10-43]

Analysis of the Oxygen Assisted Defect Control Effect at Metal-MoS_2 Junction

Woonggi Hong, Cheol Min Park, Gi Woong Shim, Sang Yoon Yang, and Sung-Yool Choi (KAIST, Korea)

[P10-44]

Performance Enhancement of Nonvolatile Organic Floating-Gate Phototransistor Memory for Image Sensor Applications

Reitaro Hattori, Takashi Nagase, Naoyuki Nishida, Takashi Kobayashi, and Hiroyoshi Naito (Osaka Prefecture Univ., Japan)

[P10-45]

Control of Domain Structure in Catalyst-Assisted Growth of Single-Layer MoS_2

Min-Yeong Choi, Chang-Won Choi, Seong-Jun Yang, Hojeong Lee, Jinho Lee, Shinyoung Choi, Jun-Ho Park, Jong Heo, Si-Young Choi, and Cheol-Joo Kim (POSTECH, Korea)

[P10-46]

Graphene Multi-via Contacts for 3D Integration of 2D Devices

Yongjun Shin (Seoul Nat'l Univ., Korea), Junyoung Kwon (Yonsei Univ., Korea), and Gwan-Hyoung Lee (Seoul Nat'l Univ., Korea)

[P10-47]

Photocatalytic Layer on IGZO for Nonvolatile Visible Light Photomemory

Jong Bin An, Byung Ha Kang, Kunho Moon, Sujin Jung, I Sak Lee, Jong Hyuk Ahn, and Hyun Jae Kim (Yonsei Univ., Korea)

[P10-48]

$MoSe_2$ Transistor with Improved P-type Characteristics through Low Temperature Annealin

Seongjae Kim (Gachon Univ., Korea), Seongin Hong (The Univ. of Texas at Austin, USA), and Hocheon Yoo (Gachon Univ., Korea)

[P10-49]

Development of Low-Temperature Sintered Silver Paste for Flexible Displays

Sun Hong Yoon (KETI, Korea)

[P10-50]

a-IGZO TFTs with Transparent Ultrathin Metal Source and Drain Electrodes Fabricated on Flexible Glass Substrates for Transparent and Flexible Electronics Application

Yujin Hwang, Sujin Heo, and Hongki Kang (DGIST, Korea)

[P10-51]

Pressure Effects on Structural and Electrical Properties of Spray Coated, Stretchable Silver Nanowire Electrode on PDMS Substrate

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

[P10-52]

Highly Transparent and Wide Viewing Optical Films Using Hierarchical Double-Shell Layered Nanoparticle with Gradient Refractive Index Surface

Jin-Wook Choi, Seung-Rak Son, Jongil An, Soyern Kim, Jisung Park, Chan Beom Park, and Jun Hyup Lee (Soongsil Univ., Korea)

[P10-53]

Effect of Anode-Interface Adhesion on Stress Stability of Organic Light-Emitting Diodes

Byung Min Jeon and Sung Min Cho (Sungkyunkwan Univ., Korea)

[P10-54]

Photoalignment Properties of Photopolymer based on Chalcone Groups for Optical Retarder Film

Yeong Rang Kim, Jeong Ju Baek, Youn-Jung Heo, Ki Cheol Chang, Sung Man Park, Young Hun Kim, Geun Yeol Bae, Hyo Sun Lee, Kyung Ho Choi, and Gyo Jic Shin (KITECH, Korea)

[P10-55]

Effectice Conversion of Perhydropolysilazne to Silicon Oxide by UV Processes with Addition of Photobase Generator

Sung-Man Park, Jeong-Ju Baek, Youn-Jung Heo, Ki-Cheol Chang, Young-Hum Kim, Yeong-Rang Kim, Geun-Yeol Bae, Hyo-Sun Lee, Kyung-Ho Choi, and Gyo-Jic Shin (KITECH, Korea)

[P10-56]

Preparation of Fluorinated Silica-Zirconia Thin Layers Derived from Perhydropolysilazane and Their Properties

Jeong Ju Baek, Sung Man Park, Yeong Rang Kim, Young Hun Kim, Ki Cheol Chang, Youn-Jung Heo, Geun Yeol Bae, Hyo Sun Lee, Kyung Ho Choi, and Gyo Jic Shin (KITECH, Korea)

[P10-57]

Ambipolar Charge Transport Behavior of Poly(9,9-di-n-octylfluorenyl-2,7-diyl)-Molybdenum Disulfide Heterojunction Phototransistors

Dong Hyun Lee (Gachon Univ., Korea), Hyung Joong Yun (KBSI, Korea), Seongin Hong (The Univ. of Texas at Austin, USA), and Hocheon Yoo (Gachon Univ., Korea)

[P10-58]

Gold-Welded Silver Nanowire Network-Based Stretchable Electrodes for Wearable Applications

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

[P10-59]

Charge Trapping and Hysteresis Behavior in Carbon Nanotube Thin-Film Transistor with Ferroelectric Dielectric Layer

Hyunjun Yoo, Jiseok Seo, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[P10-60]

Augmented Phase Correction for Improving the Sensing Image Quality of the Ultrasonic Fingerprint Sensor Integrated OLED System

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

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[P11-1]

Touchless User Interactive High-Resolution Light Field Display System Using a Three-Dimensional Tracking Camera

Md. Shahinur Alam, Joon Hyun Kim, Jin Kyu Jung, Young-Tae Lim, Md. Biddut Hossain (Chungbuk Nat'l Univ., Korea), Kwon-Yeon Lee (Sunchon Nat'l Univ., Korea), Yong-Joo Yoo, and Nam Kim (Chungbuk Nat'l Univ., Korea)

[P11-2]

Stretchable Capacitance Sensor against Strain Deformation

Sang Gyeong Nam, Jun Hyuk Shin, Su An Lee, and Su Seok Choi (POSTECH, Korea)

[P11-3]

Polarization Induced Deformation Sensing in Thin Film Transistor

Jae Wook Lee, Jun Hyuk Shin, and Su Seok Choi (POSTECH, Korea)

[P11-4]

Low Cost, Highly Efficient Silicon Microwires Based FET Gas Sensor

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

[P11-5]

Ion-Gel Gated Organic Synaptic Tactile Transistor based on Piezo-Modulated Ion Dynamics

Chi Hoon In, Yunah Kim, Joo Sung Kim, Hyukmin Kweon, Hanbin Choi, and Do Hwan Kim (Hanyang Univ., Korea)

[P11-6]

Effects of Edge Passivation and Intense Pulsed Light (IPL) Treatment on Organic Photodiode for Image Sensor Array

Yoon-Su Kim, Soryeong Jeong, Byungwook Yoo, Chul Jong Han (KETI, Korea), Byeong-Kwon Ju (Korea Univ., Korea), and Min Suk Oh (KETI, Korea)

[P11-7]

Flexible Pressure Sensors based on Heterogeneous Graphene Oxide

Sung Chan Jo and Tae Hoon Lee (Kwangwoon Univ., Korea)

[P11-8]

Inkjet Printed Cellulose Nanofiber/Carbon Nanotube-Based Flexible Pressure Sensor

Dong Keon Lee, Daesik Kim, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[P11-9]

Facile Adhesive Patterning of 3-D Curved PDMS for Various Human-Interactive Sensors

Jinsu Yoon, Geonhee Kim, Jongho Park, Hayun Kim, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[P11-10]

Stretchable Pressure Sensor Using Conductive Silicone Elastomer Composite with Rigid Island Structure

Jiseok Seo, Seongdae Choi, Hanul Kim, Daesik Kim, Hyungsoo Yoon, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

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[P12-1]

Edge-Illuminated Connectable Modular-Pixel Aero Signage Display Whose Pixel Elements Enable to Joint Light Guides and Change Colors for Spatial Imaging

Kunio Sakamoto and Daiki Honda (Konan Univ., Japan)

[P12-2]

A Study on the Performance Improvement of High-Power White LED Lightings Depending on the Arrangement of the Red Quantum Dot Caps

Gi Jung Lee, Jung Gyun Lee, Seung Chan Hong (Hallym Univ., Korea), Taehee Park, Young Wook Ko (GLVISION Co., Ltd., Korea), and Jae-Hyeon Ko (Hallym Univ., Korea)

[P12-3]

Realization of High Color Rendering Index of Conventional White Lighting by Using Red Quantum Dot Films

Seung Chan Hong, Gi Jung Lee, Se Ri Park, Sung Tae Gwak (Hallym Univ., Korea), Young Wook Ko (Cheorwon Plasma Research Inst., Korea), Young Duk Kim (GLVISION Co., Ltd., Korea), and Jae Hyeon Ko (Hallym Univ., Korea)

[P12-4]

Methacrylate-Functionalized Perovskite Nanocrystals Encapsulated by Siloxane Hybrid for Stable Color-Converting Materials in Display

Yongmin Shin, Junho Jang, Hyungshin Kweon, and Byeong-Soo Bae (KAIST, Korea)

[P12-5]

Microfluidic Strain Sensor Using Electroluminescent ZnS:Cu Particles

Hong-Sik Eom and Suk Tai Chang (Chung-Ang Univ., Korea)

[P12-6]

Efficiency Variation Analysis Depending on Hosts in ν-DABNA TADF Devices

Kijoon Yang, Hyuna Lee, Soon Jae Hwang, Kenkera Rayappa Naveen, and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

[P12-7]

Analysis of Recombination Zones Using Sensing Layer Method with Aging in Phosphorescent Organic Light Emitting Diodes

Hojung Shin, Yoonkyoo Lee, Jin Won Sun, and Changwoong Chu (Samsung Display Co., Ltd., Korea)

[P12-8]

Metal-Free and Pure Organic Phosphorescent Green Emitters for Non-Doped OLEDs by Using Secondary Interaction Effect

Taehyun Kim, Hae Un Kim, and Taiho Park (POSTECH, Korea)

[P12-9]

Investigation of Substituent Effects on Cyclometalating Ligand Ir(III) Complexes for Solution-Processable Red-NIR Organic Light-Emitting Diodes

Chanhyeok Kim, Hae Un Kim, and Taiho Park (POSTECH, Korea)

[P12-10]

Introducing Rigid Ancillary Ligand for Structural Robustness towards Highly Efficient Red to NIR Emissive OLEDs

Jeongsu Kim, Chanhyeok Kim, and Taiho Park (POSTECH, Korea)

[P12-11]

Laser Desorption/Ionization Time of Flight Mass Spectrometry for OLED Materials and Devices

Yoonseok Oh, Min Gee Kim, Jooyeon Oh, Dongjin Shin (ASTA Inc., Korea), KyoungHee Sung, and SeokRyoul Lee (LG Display Co., Ltd., Korea)

[P12-12]

Ideality Factor of InGaN-Based Light-Emitting Diodes Investigated by Photovoltaic Parameters

SangJin Min, Gyeong Won Lee, Jong-In Shim, and Dong-Soo Shin (Hanyang Univ., Korea)

[P12-13]

Lifetime Improvement in DABNA Type Blue Emitter Devices

Sang Min Cho, Hye In Yang, Seung Hyun Lee, and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

[P12-14]

Merits of Narrow FWHM Blue Emitter in Top Emission OELD

Hye In Yang, Sang Min Cho, Seung Hyun Lee, and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

[P12-15]

Ortho-Terphenyl Core Based High Triplet Energy Bipolar Host Materials for Stable and Efficient Blue TADF Device

Seung Hyun Lee, Hyuna Lee (Kyung Hee Univ., Korea), Jun Hyuk Park, Chil Won Lee (Dankook Univ., Korea), and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

[P12-16]

InGaN Based Core-Shell Nanowire Photonic Crystals for Display Applications

Sung-Un Kim, Hye-Young Kwon (KICET, Korea), Dong-Wook Shin (Hanyang Univ., Korea), and Yong-Ho Ra (KICET, Korea)

[P12-17]

Fabrication of Highly Efficient and Flexibility NIR $LaMgGa_{11-x}O_{19}:xCr^{3+}$ Phosphor Film for Wearable PBM Bio-OLED

Thi My Linh Dang, Thien Tri Tran, Ho Kyoon Chung, Sung Min Cho, and Deok Su Jo (Sungkyunkwan Univ., Korea)

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[P13-1]

Siloxane Encapsulated Upconversion Nanoparticle and Flexible Near Infrared Detectable MoS_2 Phototransistors

Injun Lee, Minsoo Kang, Tae Soo Kim, Kibum Kang (KAIST, Korea), Wonryung Lee (KIST, Korea), and Byeong-Soo Bae (KAIST, Korea)

[P13-2]

Optogenetic Brain Stimulation by Self-Powered Flexible Micro Light-Emitting Diodes

Han Eol Lee (Jeonbuk Nat'l Univ., Korea)

[P13-3]

Highly Mechanosensitive, Biocompatible Ionogel with Trap and Release Ion Dynamics for Implantable Bioelectronics

Junjae Park, Joo Sung Kim, Yunah Kim, and Do Hwan Kim (Hanyang Univ., Korea)

[P13-4]

Design of Ethylene Oxide Based Interpenetrating Conducting Polymer Network for Highly Efficient Bio-signal Transduction

Sangjun Park, Hyukmin Kweon, Chaeyoung Lee, Junjae Park, and Do Hwan Kim (Hanyang Univ., Korea)

[P13-5]

Medifoam-Based Biocompatible Resistive Random-Access Memory for Skin-Wearable Healthcare Devices

Min Seong Kim, Sujin Jung, Dong Hyun Choi, Hyung Tae Kim, Jusung Chung, and Hyun Jae Kim (Yonsei Univ., Korea)

[P13-6]

Mussel Protein-Based Flexible Resistive Random Access Memory for Wearable Electronic Applications

Sung Min Rho, Kunho Moon, Min Seong Kim, and Hyun Jae Kim (Yonsei Univ., Korea)

[P13-7]

Fucoidan-Based Resistive Random-Access Memory for Edible Electronics

Kyungmoon Kwak, Hyung Tae Kim, Kyungho Park, I Sak Lee, and Hyun Jae Kim (Yonsei Univ., Korea)

[P13-8]

Optical Design Considerations for Safe Ultraviolet Wearable Light Therapeutic Devices

Jaehyeok Park (KAIST, Korea), Hyuk Joo Lee (Seoul Nat'l Univ. Bundang Hospital, Korea), Sunhyoung Koo (KAIST, Korea), In-Young Yoon (Seoul Nat'l Univ. Bundang Hospital, Korea), and Seunghyup Yoo (KAIST, Korea)

[P13-9]

A Comprehensive Strategy for Reducing the Dark Current in Organic Photodiodes

SangIn Hahn, Ramakant Sharma, and Seunghyup Yoo (KAIST, Korea)

[P13-10]

High-Efficiency Solution-Processed Near-Infrared Organic Photodiodes

Jeoungmin Ji, Hyung Suk Kim, Ramakant Sharma, Woochan Lee, Carmela Michelle Esteban, and Seunghyup Yoo (KAIST, Korea)

[P13-11]

Application of UV-Filtering Down-Conversion Layer on Flexible Organic Solar Cells

Carmela Michelle Esteban, Ramakant Sharma, Woochan Lee, and Seunghyup Yoo (KAIST, Korea)

[P13-12]

Study on Tuning Red Emission Spectra for Biological OLED Application

Thien Tri Tran, Thi My Linh Dang, Ho Kyoon Chung, Deok Su Jo, and Sung Min Cho (Sungkyunkwan Univ., Korea)

[P13-13]

Optoelectrical Determination of Blood Components by Tin Oxide Quantum Dots-Fluorene Copolymer Heterojunction Self-powered Photodetectors

Taehyun Park and Hocheon Yoo (Gachon Univ., Korea)

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[P13-14]

Dependency of Current Compliance Level on Electrical Characteristics of a Peptide-Based Memristor

Jeong Hyun Yoon, Min-Kyu Song, and Jang-Yeon Kwon (Yonsei Univ., Korea)

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[P14-1]

Identifying the Role of the Sidewall Defects for GaN-Based Micro Light-Emitting Diodes by Comparative Analysis

Jinwoo Park, Gyeong Won Lee, Jun-Seok Hwang, and Jaekyun Kim (Hanyang Univ., Korea)

[P14-2]

Effect of Size-Dependent Leakage Current from Sidewall Defects of InGaN-Based Green Micro Light-Emitting Diodes

Youngwook Shin (Hanyang Univ., Korea), Jun-Beom Park, Sangjin Min (KOPTI, Korea), Dong-Soo Shin, Jong-In Shim (Hanyang Univ., Korea), Tak Jeong (KOPTI, Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P14-3]

Optimization of Dielectrophoretic Assembly of Micro Light-Emitting Diodes by Numerical Analysis

Byeong-u Bak and Jaekyun Kim (Hanyang Univ., Korea)

[P14-4]

Change in Optoelectronic Performances of InGaN-Based Flip-Chip Blue Micro Light-Emitting Diodes under Continuous Current Stress

Abu Bashar Mohammad Hamidul Islam (Korea Institute of Energy Technology, Korea), Tae Kyoung Kim, Yu-Jung Cha (Sunchon Nat'l Univ., Korea), Dong-Soo Shin, Jong-In Shim (Hanyang Univ., Korea), and Joon Seop Kwak (Korea Institute of Energy Technology, Korea)

[P14-5]

Thermal Stability and Adhesion Improvement of InGaN-Based Flip-Chip Blue Micro Light-Emitting Diodes with Sputtered Silver Alloy Reflective Contacts

Yu-Jung Cha, Xuan Zhang, Tae Kyong Kim (Sunchon Nat'l Univ., Korea), Abu Bashar Mohammad Hamidul Isla, and Joon Seop Kwak (Korea Inst. of Energy Tech., Korea)

[P14-6]

Realization of RGB Full-Color LED Array by Selective Area Growth and Adhesive Bonding

Soo-Young Choi, Hoe-Min Kwak, Seung-Hyun Mun, Je-Sung Lee, and Dong-Seon Lee (GIST, Korea)

[P14-7]

Acoustic Manipulation of LED Chips on the Fine Metal Mask for LED Display Application

Seong Hyeon Noh, Je Jun Ryu, Chang Wan Park (Chung-Ang Univ., Korea), Dong Young Sung (APS Holdings, Korea), and Jae Soo Yoo (Chung-Ang Univ., Korea)

[P14-8]

PWM Controlled Micro LED Display With Double-Gate Thin-Film Transistors

Taesoo Kim and Jaehong Jeon (Korea Aerospace Univ., Korea)

[P14-9]

Reduced Power Consumption in Blue Micro-LED Display with P-Type LTPS TFT Using Short-Emission-Time Pulse Amplitude Modulation(PAM)

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

[P14-10]

The Effect of Dry Etching Condition on the Micro-LED

Jeong-Hwan Park, Heajeong Cheong, Yasuhisa Ushida, Wentao Cai, Yuta Furusawa, and Hiroshi Amano (Nagoya Univ., Japan)

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[P15-1]

Anticounterfeiting Using Mosaics of Pixelated Wrinkles of Liquid Crystalline Polymer

Kitae Kim (Chungnam Nat'l Univ., Korea), Subi Choi, Suk-kyun Ahn (Pusan Nat'l Univ., Korea), and Jun-Hee Na (Chungnam Nat'l Univ., Korea)

[P15-2]

Comparision of Figure-of-Merit Efficiency in Liquid Crystal Phase Shifter Operating Modes: Electrically Controlled Birefringence vs. In-Plane Switching

Jinyoung Choi and Wooksung Kim (POSTECH, Korea)

[P15-3]

Analytical Study of Bi-Layered Chiral Liquid Crystal Photonic Band Filter

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

[P15-4]

Optical Characteristics of Stretchable Chiral Photonic Film based on Chiral Liquid Crystals via in situ Photopolymerization

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

[P15-5]

Programmable Liquid Crystal Defect Arrays via Electric Field Modulation for Mechanically Functional Liquid Crystal Networks

Ra You, Changjae Lee, and Dong Ki Yoon (KAIST, Korea)

[P15-6]

Liquid Crystal Elastomers with Slide-Ring Cross-Links: Mechanical Properties, Actuation, and Self-Healing

Subi Choi (Pusan Nat'l Univ., Korea), Bit Ga Ram Kim, Ji-hun Seo (Korea Univ., Korea), and Suk-kyun Ahn (Pusan Nat'l Univ., Korea)

[P15-7]

Shape Reprogrammble and Reprocessable Liquid Crystal Elastomers with Poly(Ether-Thiourea) Dynamic Crosslinker

Jin-Hyeong Lee (Pusan Nat'l Univ., Korea), Dong-Gyun Kim, Yong Seok Kim (KRICT, Korea), and Suk-kyun Ahn (Pusan Nat'l Univ., Korea)

[P15-8]

Resolution-Improved Autostereoscopic 3D Display by Using Virtual-Moving Lenticular Lens Array

Min-Kyu Park (KOPTI, Korea), Tae-Hyun Lee (Kyungpook Nat'l Univ., Korea), Seon Kyu Yoon, Kwang-Hoon Lee (KOPTI, Korea), and Hak-Rin Kim (Kyungpook Nat'l Univ., Korea)

[P15-9]

High-Responsivity Phototransistor based on Large-Grain Boundary Perovskite/IGZO Hybrid Structures

Gi-Sang Choi, Seohyun Maeng (Hanyang Univ., Korea), Hansol Kim, Ki-Ha Hong (Hanbat Nat'l Univ., Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P15-10]

Multi-Directional Orientation Control of Lyotropic Chromonic Liquid Crystals via Capillary Bridge

Hee Seong Yun, Geonhyeong Park, and Dong Ki Yoon (KAIST, Korea)

[P15-11]

Engineering Optical Rotation in Chiral Photonic Film for Configurable Color Filter

Wongi Park, Yun-Seok Choi, Hyewon Park, and Dong Ki Yoon (KAIST, Korea)

[P15-12]

4D Printing of Hygroscopic Liquid Crystal Elastomers

Keumbee Kim, Yuanhang Guo, Jaehee Bae, Subi Choi, and Suk-kyun Ahn (Pusan Nat'l Univ., Korea)

[P15-13]

Advanced Bistable Cholesteric Light Shutter

Gwan Yong Lee, Eun Ji Kim, Young Jin Lim, Min Su Kim, and Seung Hee Lee (Jeonbuk Nat'l Univ., Korea)

[P15-14]

Tunable Optic Axis of Optically Isotropic Liquid Crystals between Negative C and Positive C

Hyoung Soo Park, Da Yeon Lee, Min Su Kim, Young Jin Lim, and Seung Hee Lee (Jeonbuk Nat'l Univ., Korea)

[P15-15]

Polymer Stabilized Optical Vortex Generation of the Standing Wave Mediated Defects in the Nematic Liquid Crystals

Vijay Kumar Baliyan, Doyeon Lee, and Jang-Kun Song (Syungkyunkwan Univ., Korea)

[P15-16]

Electro-Optical Properties of Hockey-Stick-Shaped and Nematic Liquid Crystals Mixture for Fast Response Time

Phuc Toan Dang (Jeonbuk Nat'l Univ., Korea), Anoop Kumar Srivastava (Dr. R.M.L. Avadh Univ., India), E-Joon Choi (KIT, Korea), and Ji-Hoon Lee (Jeonbuk Nat'l Univ., Korea)

[P15-17]

Color Glass by Layered Nitride Films for Building Integrated Photovoltaic System

Akpeko Gasonoo, Hyeon-Sik Ahn, Seongmin Lim, Jae-Hyun Lee, and Yoonseuk Choi (Hanbat Nat'l Univ., Korea)

[P15-18]

Analysis of Hole-Transporting Organic Molecules by Time-Drive Electrochemical and Optical Spectroscopic Methods

Hye-Ri Joe, Seo-Yoon Lee, Akpeko Gasonoo, Jonghee Lee, and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

[P15-19]

PI-Less Normally Transparent Polymer Networked Liquid Crystal Light Shutter with Two-Step Exposure Method

Mira Jo, Minji Kang, Young Jin Lim, and Seung Hee Lee (Jeonbuk Nat'l Univ., Korea)

[P15-20]

Chiral Detection by Mesogenic Luminophore with Orthogonally Polarized Emission

Myoung-Jin Han, Jae-Hoon Kim, and Chang-Jae Yu (Hanyang Univ., Korea)

[P15-21]

Time-Dependent Degradation of Circular Polarization Ratio in Chiral Mesogenic Luminophore

Cheong-Min Shin, Yanqiu Chen (Hanyang Univ., Korea), E-Joon Choi (KIT, Korea), Chang-Jae Yu, and Jae-Hoon Kim (Hanyang Univ., Korea)

[P15-22]

Bidirectional Orientation Control of Elongated Particle Using Symmetry Breaking in Nematic Liquid Crystals

Jun-Yong Lee, Jeong-Seon Yu, and Jong-Hyun Kim (Chungnam Nat'l Univ., Korea)

[P15-23]

Control of Surface Anchoring Energy of Nematic Liquid Crystals via Nano-Spikes of Reactive Mesogen

Eunsu Cho, Jun-Hyung Im, and Young-Ki Kim (POSTECH, Korea)

[P15-24]

Design of Liquid Crystalline Sensor for Carbon Nanotube Agglomerations

Jin-Kang Choi, Won-Sik Kim, and Young-Ki Kim (POSTECH, Korea)

[P15-25]

Molecular Reorientation of Nematic Liquid Crystals by Diarylethene-Based Molecular Switch

Hyein Kim, Kwang-Suk Oh, and Young-Ki Kim (POSTECH, Korea)

[P15-26]

Optical Conditions of α-ZrP Colloid for Electro-Optical Reflectance

Ju-Young Park, PANS. Priyadharshana, Asela Perera, Seung-Ho Hong, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P15-27]

Window Shutter with Low Driving Voltage

Jeong Won Ryu, Hui Su Shin, Hyeon Jong Choi, Gyu Jin Choi, and Jin Seog Gwag (Yeungnam Univ., Korea)

[P15-28]

Hybrid-Aligned Polymer Network Liquid Crystal for Window Shutter

Huisu Shin, Hyeon Jong Choi, Jeong Won Ryu, and Jin Seog Gwag (Yeungnam Univ., Korea)

[P15-29]

Optically Tunable PEDOT:PSS Coated Liquid Crystal Elastomer Optical Devices

Sung-Min Jang, Young-Woo Park, Sung-Chum Kang, Doyeon Lee, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P15-30]

Light Driven Artificial Joint for Soft Robotics Using Azo Dye Doped Liquid Crystal Elastomers

Sung-Cheon Kang, Doyeon Lee, Seong-Min Jang, Yong-Woo Park, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P15-31]

Colorful Perovskite Solar Cells with Cholesteric-Based Reflective Filters

Sangwok Bae and Suk-Won Choi (Kyung Hee Univ., Korea)

[P15-32]

Circularly Polarized Luminescence from Nano-Segregated Phases

Jae-Jin Lee and Suk-Won Choi (Kyung Hee Univ., Korea)

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[P16-1]

Highly Efficient Blue Fluorescent OLED Using Localized Surface Plasmonic Resonance by Ag-Au Nanoparticles

Hakjun Lee, Hye Won Nam, Ki Ju Kim, Sun-kyo Kim, Heesun Yang, Young Kwan Kim, and Taekyung Kim (Hongik Univ., Korea)

[P16-2]

Electro-Optical Characteristics and Lifetime Study of Green Phosphorescent Organic Light-Emitting Diode Using Mixed Host

Nuri Oh, Ho-jin Jang, and Jun-Yeob Lee (Sungkyunkwan Univ., Korea)

[P16-3]

Influence of the Position of the Defects on the Degradation of Blue Organic Light-Emitting Didoes Under Constant-Current Operation

Gyeong Won Lee, Jun-Seok Hwang (Hanyang Univ., Korea), Junggeun Jhin (Advanced View Tech., Korea), Jaekyun Kim, Jong-In Shim, and Dong-Soo Shin (Hanyang Univ., Korea)

[P16-4]

Doping Effect of the Polymer Hole Injection Layer on the Performance of Solution Processed Organic Light-Emitting Diodes

Seung Wan Woo, Gunel Huseynova, Jae-Min Yoo, Baeksang Sung, Jangwon Lee, Seung-Hoon Lee, Jinhwa Kim (Hanbat Nat'l Univ., Korea), Yong Hyun Kim (Pukyong Nat'l Univ., Korea), Jae-Hyun Lee, and Jonghee Lee (Hanbat Nat'l Univ., Korea)

[P16-5]

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Inorganic Polysilazane-Based Solution-Processable Thin-Film Encapsulation for Flexible Polymer Light-Emitting Diodes

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Hye-Jin Oh, Yoon-Seo Kim, Hyun-Jun Jeong, Seungki Shin, Hyun-Mo Lee, Nuri Oh, and Jin-Seong Park (Hanyang Univ., Korea)

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Jeong Ha Hwang (Gyeongsang Nat'l Univ., Korea), Junmo Kim (Kumoh Nat'l Inst. of Tech., Korea), Byong Jae Kim (Sungkyunkwan Univ., Korea), Jun Young Kim (Gyeongsang Nat'l Univ., Korea), Wonho Lee (Kumoh Nat'l Inst. of Tech., Korea), Jaehoon Lim (Sungkyunkwan Univ., Korea), and Donggu Lee (Gyeongsang Nat'l Univ., Korea)

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Realizing High Coverage Ratio for BT.2020 Using Cadmium-Free Red, Green, and Blue Quantum Dot Light-Emitting Diodes with Emitting Layer Combined with Organic Electron-Transporting Materials

Yukiko Iwasaki, Genichi Motomura, and Toshimitsu Tsuzuki (NHK Science & Tech. Research Lab. Japan)

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