Session Title:	P2. Poster Session 2
Session Date:	August 25 (Thu.), 2022
Session Time:	14:00-15:30
Session Room:	Room 2A Hall

[P2-001] 14:00-15:30

Unidirectional Active Window Signage Display Using Dye-doped Water Droplets Which Enable to Make Transparent View from Back Side

Kunio Sakamoto, Hikaru Ikeda, and Takumi Tsukiji (Konan Univ., Japan)

[P2-002] 14:00-15:30

Unidirectional Window Signage Display Using Superabsorbent Polymer Which Enables to Make Invisible in Water and Images Transparent from Back Side

Kunio Sakamoto and Sousuke Takashima (Konan Univ., Japan)

[P2-003] 14:00-15:30

Unidirectional Aero Signage with Vivid Colors Using Optical Prisms Doped with Dye and Pigments Which Enable to Make Transparent View from Back Side

Kunio Sakamoto and Akihiro Iwai (Konan Univ., Japan)

[P2-004] 14:00-15:30

Multi Path Control System for AGV based on Reinforcement Learning in Display Module Process

Yonggu Kim (Samsung Display Co., Ltd., Korea)

[P2-005] 14:00-15:30

Ejection Optimization Simulation of OLED Inkjet Printing for Flexible Display

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

[P2-006] 14:00-15:30

A Study on Reliability Equipment Possible of Automatic Evaluation of Micro Crack in Rollable Display

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

[P2-007] 14:00-15:30

Self-Powered Flexible Full-Color Display via Dielectric Constant Tuned Hybrimer Triboelectric Nanogenerators

Seung-Mo Kang, Han Eol Lee, Keon Jae Lee, and Byeong-Soo Bae (KAIST, Korea)

[P2-008] 14:00-15:30

Study of High-K Material Atomic Layer Deposition Characteristic for Large Area Display

Seongryong Hwang, Seonuk Park, Myung Soo Huh, Woo Jin Kim, and Kong Kyun Ko (Samsung Display Co., Ltd., Korea)

[P2-009] 14:00-15:30

Optimization of Bank Components to Improve Color Uniformity of OLED Displays

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

[P2-010] 14:00-15:30

Towards Ultraviolet Solution Processed ZrOx/IZO Transistors with Top-Gate and Dual-Gate Operation: Selection of Solvents, Precursors, Stabilizers, and Additive Elements

Ji Sook Yang, Sung Hyeon Jung, and Hyung Koun Cho (Sungkyunkwan Univ., Korea)

[P2-011] 14:00-15:30

The Effect of In-Ga-Zn-O Sub-Layer Thickness Variation by Deposited Plasma-Enhanced Atomic Layer Deposition

Seong Hun Yoon, Jae Seok Hur, Cheol Hee Choi, Ho Young Lee Seung Hee Cha, and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P2-012] 14:00-15:30

Multiscale Modeling for Pattern Manufacturing in Photolithography

Hyungwoo Lee (Samsung Display Co., Ltd., Korea), Sungwoo Park, Muyoung Kim, Taegyeom Kim (Seoul Nat'l Univ., Korea), Byunghun Lee (Samsung Electronics Co., Ltd., Korea), and Maenghyo Cho (Seoul Nat'l Univ., Korea)

[P2-013] 14:00-15:30

High-Reliable GOA TFT-LCDs Development under High Intensity Illumination for Outdoor Display Applications

An-Thung Cho, Feng-Yun Yang, Hao Dong, Zhen Liu, He-Jing Zhang, James Hsu, and Wade Chen (ChuZhou HKC Optoelectronics Tech. Co., Ltd., China)

[P2-014] 14:00-15:30

Determining the Collision Model for Different Materials in Thermal Evaporation Process using Direct Simulation Monte Carlo

Dong Shin Choi, Seulhui Choi, Changrok Choi, Seokwoo Lee, Yong Min Ha, and Sooyoung Yoon (LG Display Co., Ltd., Korea)

[P2-015] 14:00-15:30

A Study on Hydraulic Silicone Pad for Window Glass Lamination with Four Curved Sides

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

[P2-016] 14:00-15:30

Analysis of Surface Leakage Current in Pixel Define Layer

Chanhee Han and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P2-017] 14:00-15:30

Correction of Screen Distortion during Mini-LED Panel Luminance Inspection

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

[P2-018] 14:00-15:30

Uniformity and Morphological Characterization of ZnO Droplets by the Drying Condition Using Inkjet Printing Process

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

[P2-019] 14:00-15:30

Uniformity Control of Organic Emittion-Layer by the Drying Process Using Inkjet Printing Technology

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

[P2-020] 14:00-15:30

Analysis of Thermal Induced Delamination for Adhesive Layer in Display Modules

Seongwon Yoo, Keonhee Beak, Byoungjin Jeon, Hanhee Kim, Seokwoo Lee, Yongmin Ha, and Sooyoung Yoon (LG Display Co., Ltd., Korea)

[P2-021] 14:00-15:30

The Inorganic-Organic Hybrid Thin-Film-Encapsulation Layer for Next Generation Form-Factor Display

Sukjin Jang, Choel min Jang, Heeyong Lee, Dongkyun Ko, and Myung soo Huh (Samsung Display Co., Ltd., Korea)

[P2-022] 14:00-15:30

Effect of Driving Waveform on Velocity and Volume of Nanoparticle Ink Droplets

Lae Ho Kim, Konta Yu, Hyunsun Jeong, Minwoo Lee, Jaihyuk Choi, and Myung Soo Huh (Samsung Display Co., Ltd., Korea)

[P2-023] 14:00-15:30

Overlay Improvement with Dynamic Sampling Techniques

Youngjin Song and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P2-024] 14:00-15:30

Curved Gamming Display Development with Dual PI and Vertical-Alignment Liquid Crystal Technology

An-Thung Cho, Gui-Qing Du, Chen-I Huang, He-Zhi Peng, James Hsu, and Wade Chen (ChuZhou HKC Optoelectronics Tech. Co., Ltd., China)

[P2-025] 14:00-15:30

A Study on Flexible Transparent Conductive Electrode for Flexible OLED

Seok Je Lee (Hoseo University, Korea), Myungchan An (GERI, Korea) , Jae Yun Kim (GERI, Korea), Hyeong Woo Bae (GERI, Korea), and Chul Gyu Jhun (Hoseo Univ., Korea)

[P2-026] 14:00-15:30

Dependence on PECVD Gas Flow Rate on the Interface Trap Density of Metal- Oxide-Semiconductor Capacitors

Ayeon Jang and Byoungdeog Choi (Sungkyunkwan Univ., Korea)

[P2-027] 14:00-15:30

Glass Self-Cleaving Effect by Elliptical Beam for Bezel-Less Display

Jeongho Kim, Hyungsik Kim, Konstantin Mishchik, Kyunghan You, Junghwa You, Jekil Ryu, Seongho Jeong, and Cheollae Roh (Samsung Display Co., Ltd., Korea)

[P2-028] 14:00-15:30

The Effect of AlN Reactive Sputtering on the Microstructure of Parylene-C

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

[P2-029] 14:00-15:30

Optimization of Waveform Design in Inkjet Printing by Machine Learning

Seongju Kim and Sungjune Jung (POSTECH, Korea)

[P2-030] 14:00-15:30

High-Reliable Micro-Crystalline Silicon Four-Mask TFTs Integrated GOA Circuit on G8.6 Large Size UHD LCD TVs

An-Thung Cho, Feng-Yun Yang, Hao Dong, Yu-Ming Xia, Zhen Liu, He-Jing Zhang, James Hsu, and Wade Chen (HKC Co., Ltd., Korea)

[P2-031] 14:00-15:30

Fabrication of Microlens Using Needle Coating for Light Extraction of OLEDs

Juan Kim, Youngkyun Shin, Jeongpil Na, and Jongwoon Park (KOREATECH, Korea)

[P2-032] 14:00-15:30

Fabrication of Anti-Moiré Filters Using Slot-Die Coating

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

[P2-033] 14:00-15:30

2822 PPI Line-Patterning of Organic Light Emitting Layer via Inkjet Printing and Sublimation Transfer Technology

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

[P2-034] 14:00-15:30

Effect of Annealing Temperature of NiO Nanoparticle under Vacuum Condition for Quantum-Dot Light-Emitting Diodes

Jun Ho Yu and Kwan Hyun Cho (KITECH, Korea)

[P2-035] 14:00-15:30

Sensing Refractive Index by Processing Optical Information from Metasurface Using Deep Learning

Seokho Lee, Trevon Badloe, and Junsuk Rho (POSTECH, Korea)

[P2-036] 14:00-15:30

Changes in Spectral Transmittance according to the Shape of Inkjet Printed Color-Filter through the Micro-Spot Transmittance Measurement

Kwon-Yong Shin, Kyung-Tae Kang, and Kwan Hyun Cho (KITECH, Korea)

[P2-037] 14:00-15:30

Determination of Isomers on the Surface by Fine Focused Laser Desorption Ionization Time of Flight Mass Spectrometry

Byunggwun Jin, Jooyeon Oh (ASTA Inc., Korea), Chanjae Lee (KETI, Korea), Dongjin Shin, and Yangsun Kim (ASTA Inc., Korea)

[P2-038] 14:00-15:30

Nanostructure-Based Flexible Anti-Reflective Film with Superior Optical Properties for Optoelectronic Device Application

Se-Phin Cho, Mac Kim, and Sang-Jin Lee (KRICT, Korea)

[P2-039] 14:00-15:30

Optical, Physical Chemistry, and Surface Properties of Hybrid ZnO-Plasma Polymer Fluorocarbon Nanocomposite Thin Films Fabricated Using a One Target via Mid-Range Frequency Sputtering

Aeran Song (KRICT, Korea), Eunmi Cho (KRICT, Korea), Min Jung Kim (Dongguk Univ., Korea), Kwun-Bum Chung (Dongguk Univ., Korea), Hyun-Suk Kim (Chungnam Nat'l Univ., Korea), and Sang-Jin Lee (KRICT, Korea)

[P2-040] 14:00-15:30

Highly Flexible and Durable Electrodes under Cyclic Bending Fatigue for Wearable and Transparent Heaters via CuAg Nanoporous Micromesh Structure

Suhyeon Han (KITECH, Korea), Byeong-Kwon Ju (Korea Univ., Korea), and Chanwoo Yang (KITECH, Korea)

[P2-041] 14:00-15:30

Highly Efficient and Durable Antireflection Coatings for Optoelectronic Devices

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

[P2-042] 14:00-15:30

Research on the Design Scheme of 65 Inch 0.4mm Frame TV

Xin Zhou, Qi Liu, Wei Zhang, Yinhu Huang, Byung Cheon Lim, Zhangtao Wang, and Xibin Shao (Hefei BOE Display Tech. Co., Ltd., China)

[P2-043] 14:00-15:30

Modeling of Optimal Facility Layout considering Stocker and Pillar Structure in the Display Industry

Taeyoung Kim, Dongwook Kim, and Ilkyeong Moon (Seoul Nat'l Univ., Korea)

[P2-044] 14:00-15:30

High Deposition Rate Al_2O_3 Insulator Deposited by Atmospheric Pressure Spatial ALD

Kwang Su Yoo, Dong-Gyu Kim, Won-Bum Lee, and Jin-Seong Park (Hanyang Univ., Korea)

[P2-045] 14:00-15:30

Fabrication of OLED Devices through Dry Etching and Orthogonal Photolithography Process Using Fluorinated Positive-Tone Photoresist

Doo Hong Kim (Univ. of Seoul, Korea), Changjae Lee, Kayoung Kim (Inha Univ., Korea), Yu Ha Jang (Univ. of Seoul, Korea), Myungwoong Kim, Jin-Kyun Lee (Inha Univ., Korea), and Byung Jun Jung (Univ. of Seoul, Korea)

[P2-046] 14:00-15:30

Suitable Compositions to Decrease Swelling of a Polydimethylsiloxane Mold for Accurate Replication of Metasurfaces

Nara Jeon, Dong Kyo Oh, Chunghwan Jung, and Junsuk Rho (POSTECH, Korea)

[P2-047] 14:00-15:30

Flexible and Invisible Metal Grid Transparent Electrode Using Lift-Off Process

Chaewon Kim (KITECH, Korea), Byeong-Kwon Ju (Korea Univ., Korea), and Kyung-Tae Kang (KITECH, Korea)

[P2-048] 14:00-15:30

Low-Pressure Evaporation Monitoring System

Taejeong Kwak and Sungjune Jung (POSTECH, Korea)

[P2-049] 14:00-15:30

Facile Preparation of Parylene C Films for Flexible Optoelectronics

Jee Hoon Sim, Hyeonwook Chae, Su-Bon Kim, and Seunghyup Yoo (KAIST, Korea)

[P2-050] 14:00-15:30

Device Design for Ultra-Flexible OLEDs with External Light Extraction Structures

Junho Kim, Subon Kim (KAIST, Korea), Hanul Moon (Dong-A Univ., Korea), and Seunghyup Yoor (KAIST, Korea)

[P2-051] 14:00-15:30

Studies on Degradation of Electrical Properties due to Channel Surface Damage of InGaZnO Thin-film Transistors by Stripper

Taehyeon Kim, Changyong Oh, and Bo Sung Kim (Korea Univ., Korea)

[P2-052] 14:00-15:30

Improve the Charge Transfer Characteristics of OFET Devices by Controlling the Crystallinity of the Organic Semiconductor Layer

Seongjib Cho and Eunju Lim (Dankook Univ., Korea)

[P2-053] 14:00-15:30

Poly(methyl methacrylate) Doping Effect On Solution-Processed Indium-Gallium-Zinc-Oxide Thin-Film Transistors Having Thin Active Lay

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

[P2-054] 14:00-15:30

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

Donghoon Kim (Korea Univ., Korea), Jin-Nyoung Jang (APS Research Corporation, Korea), Sangheon Lee, and Munpyo Hong (Korea Univ., Korea)

[P2-055] 14:00-15:30

2D Material-Based Debonding Layer for Production Process of Flexible Displays

Ha Young Lee, Chan-Soo Kim, and Dongwook Lee (Hongik Univ., Korea)

[P2-056] 14:00-15:30

Intuitive Two Dimensional Representation of Display Color Gamut Volume

Jae Sung Park, Se Hyeok Park, Younghoon Jeong, and Young Su Moon (Samsung Electronics Co., Ltd., Korea)

[P2-057] 14:00-15:30

Unidirectional Vivid Color Window Signage Using Resin Layer Doped with Dyestuff and Pigments Which Enables to Make Images Invisible from Back Side

Kunio Sakamoto, Miyabi Hayakawa, and Kazuho Tsuji (Konan Univ., Japan)

[P2-058] 14:00-15:30

Chromodot II: Non-Electrical Color Changeable Pixel Dots for Board/Window Signage Display Using Light Control and Vivid Color Generating Technologies

Kunio Sakamoto, Akira Matsukawa, and Jumpei Ito (Konan Univ., Japan)

[P2-059] 14:00-15:30

Systematic Control of Negative Transconductance in Organic Heterojunction Transistor for High-Performance, Low-Power Flexible Ternary Logic Circuits

Chungryeol Lee, Junhwan Choi (KAIST, Korea), Hocheon Yoo (Gachon Univ., Korea), and Sung Gap Im (KAIST, Korea)

[P2-060] 14:00-15:30

Effect of Surface Modified ZnO Nanoparticles on Quantum Dots Light-Emitting Diodes as Electron Transport Layer

Byoungho Kang, Jaesung Lee, Sanghoon Jung, Saehyuk Yeom, and Wanghoon Lee (GERI, Korea)

[P2-062] 14:00-15:30

Anion Vacancy Defect Passivation of 2D-layered Tin-Based Perovskite Thin-Film Transistor

Jae-Hyeok Cho, Tan Tan Bui, and Myung-Gil Kim (Sungkyunkwan Univ., Korea)

[P2-063] 14:00-15:30

On Demand Disposable Yet Highly Stable-Structured Substrate for Paper OLED Security Device

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

[P2-064] 14:00-15:30

Enhanced Electro-Actuating Deflection Using Piezoelectric Nanocomposite

Ji Yoon Park, Jun Hyuk Shin, and Su Seok Choi (POSTECH, Korea)

[P2-065] 14:00-15:30

Hybrid Transparent Electrodes with Nanomesh Structures Made by Silver Nanowires

So Hyun Jo, Yun Ah Kim, and Byungkwon Lim (Sungkyunkwan Univ., Korea)

[P2-066] 14:00-15:30

Molecular Tailored Ionic Liquid-Based Ultra-Stable and High-Performance Microscupercapacior for Operation of Micro LED Display

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

[P2-067] 14:00-15:30

3-Dimensional Micro-Cliff Graphene Electrode for High Energy Density and Ultra-Stable Wearable Energy Application

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

[P2-068] 14:00-15:30

Effects of Annealing Conditions on the Electrical Characteristics of ITZO TFTs

Shibo Zhang, Jidong Jin, and Jaekyun Kim (Hanyang Univ., Korea)

[P2-069] 14:00-15:30

Synergistic Integration of $BaTiO_3$/PDMS Pyramidal Structured Film for Tribo-Piezoelectric Energy Harvester for Battery-Free Display Applications

Junsu Seong, Youngkyun Kim, and Jaekyun Kim (Hanyang Univ., Korea)

[P2-070] 14:00-15:30

Bandwidth Enhanced Graphene–Organic Hybrid Photoconductor by Utilizing Organic Donor–Acceptor System

Yongmoon Lee, Sukgyun Cha, and Changsoon Kim (Seoul Nat'l Univ., Korea)

[P2-071] 14:00-15:30

Organic Photovoltaic (OPV)/ITZO Heterojunction Phototransistors for Broad Wavelength Light Sensing

Gi-Sang Choi (Hanyang Univ., Korea), Jun Yeub Lee, Kwan Hyun Cho (KITECH, Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P2-072] 14:00-15:30

Highly Performance Flexible Carbon-Based Electrode for Large-Area Screen Printing Energy Device

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

[P2-073] 14:00-15:30

A Study on Low-Resistance Conductive Balls through Optimization of Cu Surface Treatment

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

[P2-074] 14:00-15:30

High-Performance Micro-Supercapacitor Embedded with VOC Sensing and Micro LEDs Display Capability

Nguyen Thi Huyen, Jeongho Lee, Dawoon Lee, Yongjun Song, Gaeun Park (Hanyang Univ., Korea), U Hyeok Choi (Inha Univ., Korea), and Jaekyun Kim (Hanyang Univ., Korea)

[P2-075] 14:00-15:30

Highly Conductive, Adhesive, and Flexible Epoxy Acrylate-Based Ionic Gel Polymer Electrolyte for Large-Area Patterned Wearable Device Application

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

[P2-076] 14:00-15:30

A Single-Unit Top-Emission White OLED with High Color Stability for Micro-Display Applications

Liang Gao, Huiqing Pang, Ray Kwong, and Sean Xia (Beijing Summer Sprout Tech. Co., Ltd., China)

[P2-077] 14:00-15:30

Large-Area and Free-Standing MoS_2/Ion-Gel Transistors for High-Sensitivity Low-Power Photodetection

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

[P2-078] 14:00-15:30

Facile Synthesis Route for Halide Perovskite Nanoparticles Using Ultrasonic Spray

Dong-Jun Kim, Bongjun Choi, and Jung-Yong Lee (KAIST, Korea)

[P2-079] 14:00-15:30

Influencing Factors of Photosensitive Polyimide on QD Display: High Mass Resolution GC/Orbitrap MS Analysis

Yeonjoo Seo, Aeran Jung, Hyun sook Kim, Jaehan Lee, and Chang woo Lee (Samsung Display Co., Ltd., Korea)

[P2-080] 14:00-15:30

Reliability Performance of Low-Voltage Amorphous Metal Thin-Film Transistors

Sean Muir (Amorphyx Inc., USA)

[P2-081] 14:00-15:30

Photocured Hybrid Elastomeric Substrate by Using Inorganic-Organic Hybrid Polymer for Stretchable Display

Falguni Ahmed, SeungMin Shin, Joonho Song (Korea Univ., Korea), Gerhard Domann, Daniela Collin (Fraunhofer Inst. für Silicatforschung, Germany), and Munpyo Hong (Korea Univ., Korea)

[P2-083] 14:00-15:30

Photonic Encryption Platform Using UV-Transparent Silicon Nitride and Vectorial Hologram

Dongmin Jeon, Joohoon Kim, and Junsuk Rho (POSTECH, Korea)

[P2-084] 14:00-15:30

Stackable, Solid-Electrolyte-Gated Carbon Nanotube Thin Film Transistors

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

[P2-085] 14:00-15:30

Unravelling the Impact of Inter-Tube Junctions on Conductivity of Carbon Nanotubes/Conjugated Polymer Composites for Flexible Conductors

Seong Hyeon Kim and Kilwon Cho (POSTECH, Korea)

[P2-086] 14:00-15:30

The Effects of the Oxygen Content in Ti_3AlC_2 MAX Precursor on the Electrical and Physical Characteristics of Ti_3C_2TX MXene Nanosheets

Su Bin Choi, Hyun Sik Shin, Duc Khanh Tran, Jun Sang Choi, Jagan Singh Meena, and Jong-Woong Kim (Jeonbuk Nat'l Univ., Korea)

[P2-087] 14:00-15:30

Interdisciplinary Study on the Photovoltaic Characteristics of Next-Generation Light-Emitting Diodes for Revealing the Degradation Mechanism

Jaehoon Kim (Dong-A Univ., Korea)

[P2-088] 14:00-15:30

Efficient InP Quantum Dots Using $P(DEA)_3$ as P Precursor

Suhyeon Kim, Jungho Kim, and Jiwan Kim (Kyonggi Univ., Korea)

[P2-089] 14:00-15:30

Transparent Elastomer Composites with Programmed Auxetic Mechanical Metamaterial for Stretchable Display Applications

Jun-Chan Choi, Jae-Hong Sun (KIST, Korea), Seunghyun Lee (Seoul Nat'l Univ. of Science and Tech., Korea), and Seungjun Chung (KIST, Korea)

[P2-092] 14:00-15:30

Enhancing the Robustness of Metasurfaces via Versatile Encapsulation Coating

Junhwa Seong, Younghwan Yang, and Junsuk Rho (POSTECH, Korea)

[P2-093] 14:00-15:30

Demonstration the Effect of Quantum Barrier Thickness on Optoelectronic Performances in InGaN/AlGaN-Based Near Ultraviolet Light-Emitting Diodes

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

[P2-094] 14:00-15:30

Electrochromic Device Using Graphene Transparent Flexible Electrode

Ju Hyun Park (Korea Univ., Korea), Doo-Hee Cho, SangKyu Lee, Chil Seong Ah, Sanghoon Cheon (ETRI, Korea), Byeong-Kwon Ju (Korea Univ., Korea), and Tae Youb Kim (ETRI, Korea)

[P2-095] 14:00-15:30

Experimental Parameters for the Drop-on-demand Jetting Performance of High Viscosity Ink Formulation

Eun Young Lee, Min Young Kim, Robert Bail, Chil Won Lee, and Byung Doo Chin (Dankook Univ., Korea)

[P2-096] 14:00-15:30

Resistive Switching Behaviors in Ta_2O_5 Layer at Low Temperature: Towards Flexible, Invisible, Cryo-Electronic Applications in Aerospace

Ajit Kumar, Mokurala Krishnaiah, Dhananjay Mishra, Sung Hun Jin (Incheon Nat'l Univ., Korea)

[P2-097] 14:00-15:30

Transmittance Variable Flexible Electrochromic Device in Wideband (Visible & Near-Infrared)

Sangkyu Lee, Chil Seong Ah, Juhyun Park, Doohee Cho, Sangkoon Cheon, and Tae-Youb Kim (ETRI, Korea)

[P2-098] 14:00-15:30

Dual Functionality of Earth-Abundant Quaternary Flexible Cu_2CoSnS_4 Films for Next-Generation Wearable Electronics

Mokurala Krishnaiah, Ajit Kumar, Dhananjay Mishra, Hyunbin Cho, and Jin Sung Hun (Incheon Nat'l Univ., Korea)

[P2-099] 14:00-15:30

Role of Nickel Sulfide Over-Coating via SILAR on Hydrothermally Grown Cobalt Oxide Scaffolds and Evolution of Electrochemical Performance in Supercapacitor Electrodes

Dhananjay Mishra, Niraj Kumar, and Sung Hun Jin (Incheon Nat'l Univ., Korea)

[P2-100] 14:00-15:30

Effect of Fabrication Imperfections on Optical Efficiency of Metasurfaces

Junkyeong Park, Yeseul Kim, Seong-Won Moon, and Junsuk Rho (POSTECH, Korea)

[P2-101] 14:00-15:30

Electromagnetic Shielding Film Prepared by Low-Temperature Sintering of Silver Paste for Flexible Displays

Sun Hong Yoon (KETI, Korea)

[P2-102] 14:00-15:30

Micro-Encapsulation of Magnetochromic & Electrochromic Photonic Inks for Flexible Display

Jungmin Kim (KETI, Korea), Wonmok Lee (Sejong Univ., Korea), and Young-Seok Kim (KETI, Korea)

[P2-103] 14:00-15:30

Novel Silicone Adhesive Development with Enhanced Interfacial Adhesion to Polycarbonate in Display Assembling

Seung-A Lee (WACKER Chemical Korea, Korea)

[P2-104] 14:00-15:30

Mechanical Su-Schrieffer-Heeger Chain with Multi-Mode Local Resonance

Yeongtae Jang (POSTECH, Korea), Eunho Kim (Jeonbuk Nat'l univ., Korea), Junsuk Rho (POSTECH, Korea)

[P2-105] 14:00-15:30

Flexible and Transparent Electrode of Hybrid $Ti_3C_2T_X$ MXene-Silver Nanowires for High Performance Quantum Dot Light-Emitting Diodes

Wei Jiang, Kaiying Zhao, and Cheolmin Park (Yonsei Univ., Korea)

[P2-106] 14:00-15:30

Ti_3C_2Tx MXene Electrodes with Highly Environmetal Stability for Transparent and Flexible Field-Induced Display

Yeonji Kim, Seokyeong Lee, Jihye Jang, Jin Woo Oh, and Cheolmin Park (Yonsei Univ., Korea)

[P2-107] 14:00-15:30

Wireless and Stand-Alone Sensing Display Enabled by Direct Capacitive Coupling

Jihye Jang, Seokyeong Lee, Jin Woo Oh, Yeonji Kim, and Cheolmin Park (Yonsei Univ., Korea)

[P2-108] 14:00-15:30

Highly Stable Dual-Mode Image Sensing Display with Metal–Organic Framework-Assisted Metal-Ion Doped All-Inorganic Perovskite Film

Jin Woo Oh, Seokyeong Lee, Jihye Jang, Yeonji Kim, and Cheolmin Park (Yonsei Univ., Korea)

[P2-109] 14:00-15:30

Stroboscopic Effect of Metasurface in UV Regime

Seokwoo Kim and Junsuk Rho (POSTECH, Korea)

[P2-110] 14:00-15:30

Molecular Displays with Full Darkfield Color and Dynamic Plasmon Resonant Energy Transfer

Hongyoon Kim and Junsuk Rho (POSTECH, Korea)

[P2-111] 14:00-15:30

Efficient Oxygen Vacancy Suppression and Electrical Stabilization of Solution Processed In2O3:Q (Q = S, Se) Thin-Film Transistor with Chalcogen Alloying

Paul Lee, Minh Nhut Le, Gahye Kim (Sungkyunkwan Univ., Korea), Sung Min Kwon (Chung-Ang Univ., Korea), Jeong-Wan Jo (Univ. of Cambridge, UK), Jaehyun Kim (Northwestern Univ., USA), Yong-Hoon Kim (Sungkyunkwan Univ., Korea), Sung kyu Park (Chung-Ang Univ., Korea), Kyunghan Ahn, and Myung-Gil Kim (Sungkyunkwan Univ., Korea)

[P2-112] 14:00-15:30

Non-Destructive Analysis of the Deterioration of TTA-Based Fluorescence Organic Light-Emitting Diodes

Ki Ju Kim, Seong Hwan Hong, Young Kwan Kim, Taekyung Kim (Hongik Univ., Korea)

[P2-113] 14:00-15:30

Double-Layer Nano-Structure on Silicon Nitride for Top-Emitting OLED

D.-H. Cho, Y.-S. Park, S. Choi, H. Cho, B.-H. Kwon, J.-W. Shin, and N.-S. Cho (ETRI, Korea)

[P2-114] 14:00-15:30

Enhanced Hole Injection Property of Organic Light-Emitting Diodes by Partially Doping Ndp-9 in Hole Transport Layer

Kanghoon Kim, Wonhyeok Park, Sang Soo Kim, and Jang-Kun Song (Sungkyunkwan Univ., Korea)

[P2-115] 14:00-15:30

Efficient Green Phosphorescent Organic Light Emitting Diodes with Narrow Emission Bandwidth and Low Efficiency Roll-Off Using a Rigid Ligand

Kiun Cheong, Seung Chan Kim, and Jun Yeob Lee (Sungkyunkwan Univ., Korea)

[P2-116] 14:00-15:30

Application of Porous Pyramid Film on Top-Emitting OLEDs for Enhanced Light-Emitting Performance

Baeksang Sung (Hanbat Nat'l Univ., Korea), Chul Woong Joo (ETRI, Korea), Jun Chang Yang (KAIST, Korea), Seungwan Woo, Jae-Hyun Lee (Hanbat Nat'l Univ., Korea), Steve Park (KAIST, Korea), and Jonghee Lee (Hanbat Nat'l Univ., Korea)

[P2-117] 14:00-15:30

Stable and Efficient Red Hyperfluorescence Organic Light-Emitting Diodes Using Fast Reverse Intersystem Crossing Assistant Dopant

Chae Yeon Jeon, Hyun Seung Lee, Bo Kyung Seo (Kyung Hee Univ., Korea), Dong Jin Shin, Jun Seop Lim, Jun Yeob Lee (Sungkyunkwan Univ., Korea), and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

[P2-118] 14:00-15:30

Molecularly Engineered Hole Transport Network for High Efficient Micro-OLEDs

Borina Ha, Hyukmin Kweon (Hanyang Univ., Korea), Seonkwon Kim (Yonsei Univ., Korea), Ukjin Jeong (Hanyang Univ., Korea), Seunghan Lee, Moon Sung Kang (Sogang Univ., Korea), Jeong Ho Cho (Yonsei Univ., Korea), and Do Hwan Kim (Hanyang Univ., Korea)

[P2-119] 14:00-15:30

A Comprehensive Study on the Early Stage Degradation of Blue Fluorescent OLED

Hakjun Lee, Yeonju Jung, Young Kwan Kim, and Taekyung Kim (Hongik Univ., Korea)

[P2-120] 14:00-15:30

Highly Efficient Yellow Fluorescent OLED over 15% of EQE Using Localized Surface Plasmon Resonance (LSPR) Effect

Hyewon Nam, Hakjun Lee, Kyo Min Hwang, Young Kwan Kim, and Taekyung Kim (Hongik Univ., Korea)

[P2-121] 14:00-15:30

Fabrication of Efficient Organic Light-Emitting Diodes Using Fully Vacuum-Free Lamination Method

Yejin Kim, Hyuckjin Nam, Yu Seong Lee, Inwoo Lee, and Changhun Yun (Chonnam Nat'l Univ., Korea)

[P2-122] 14:00-15:30

Effective Suppressing of Exciton Quenching with Lithium Doped Bphen as an Additional Electron-Injection Layer

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

[P2-123] 14:00-15:30

Magnetic Field Effects on Emitting Layer Structure of Electroplex System Organic Light Emitting Diode

Seong Hwan Hong, Bum Joon Park, Young Kwan Kim, and Taekyung Kim (Hongik Univ., Korea)

[P2-124] 14:00-15:30

Enhanced Lifetime of Blue Fluorescent Organic Light-Emitting Diodes (OLEDs) by Introducing Electron Leakage Current Pathway in Electron Blocking Layer

You Na Song, Bu Bae Park, Jaesung Kim, Young Kwan Kim, and Taekyung Kim (Hongik Univ., Korea)

[P2-125] 14:00-15:30

Effect of Host Polarity on Triplet Exciton Harvesting for Development of High-Performance Thermally Activated Delayed Fluorescence Based Organic Light Emitting Diodes

Chang Woo Koh, Jinhyo Hwang, Hyoseong Lee, Min Ju Cho, Dong Hoon Choi, and Sungnam Park (Korea Univ., Korea)

[P2-126] 14:00-15:30

Deep Blue MR-TADF Emitters through Suppression of Triplet Exciton Quenching

Ezhakudiyan Ravindran, Hee Won Son, Jimin Kim, and Min Chul Suh (Kyung Hee Univ., Korea)

[P2-127] 14:00-15:30

Boron and Carbazole Embedded Deep Blue MR-TADF Emitter for Efficient Hyper Fluorescence

Ezhakudiyan Ravindran, Jimin Kim, Hee Won Son, and Min Chul Suh (Kyung Hee Univ., Korea)

[P2-128] 14:00-15:30

Study on Reliability Enhancement of Flexible Transparent Electrodes based on PEDOT:PSS

Inwoo Lee, Jaehwan Cha, Yu Seong Lee, Yejin Kim, and Changhun Yun (Chonnam Nat'l Univ., Korea)

[P2-129] 14:00-15:30

High Mobility and Perfect Crosslinkable Hole Transport Copolymer for Highly Efficient Solution-Processed OLED

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

[P2-130] 14:00-15:30

Highly Efficient Red and Green Solution-Processed OLEDs Utilizing a Small Molecular Host Material with High Triplet Energy

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

[P2-131] 14:00-15:30

Development of Highly Sensitive Low Energy Inverse Photoemission Spectroscopy for the Transport Gap Measurement of Organic Materials

Jong-Am Hong, Kyu-Myung Lee, Beom-Su Kim, Ji-Woong Choi, and Yongsup Park (Kyung Hee Univ., Korea)

[P2-132] 14:00-15:30

Analysis of Conduction Mechanisms and Optical Characteristics of Blue OLEDs by Temperature-Dependent Measurements

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

[P2-133] 14:00-15:30

Analysis of the Effect of the Interlayer on the Doped Organic P-N Heterojunction Charge Generation Layers Using Impedance Spectroscopy

Somi Park, So-Young Boo, Eun-Jeong Jang, Akeem Raji (Hanbat Nat'l Univ., Korea), Akpeko Gasonoo (Univ. of Calgary, Canada), and Jae-Hyun Lee (Hanbat Nat'l Univ., Korea)

[P2-134] 14:00-15:30

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

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

[P2-135] 14:00-15:30

Improved Flexibility and Light Extraction for Organic Light Emitting Diodes via 1D Periodic Nano-Grating Structure

Ju Sung Lee, Jungjin Yang, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-136] 14:00-15:30

Efficient Charge Generation Materials for Tandem OLEDs

Dong Kwang Kim, Keshavananda Prabhu C P, Hye In Yang, Jin Young Kim, Kenkera Rayappa Naveen, Hee Tae Yang, and Jang Hyuk Kwon (Kyung Hee Univ., Korea)

[P2-137] 14:00-15:30

Effects of Solar Radiation on Organic Light-Emitting Diodes and Their Solutions

Jungjin Yang, Jinwoo Park, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-138] 14:00-15:30

Mechanisms of the Charge Injection and Transportation in Blue Fluorescent Organic Light-Emitting Diodes

Jongin Lim, Jungjin Yang, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-139] 14:00-15:30

Improvements of Lifetime of Organic Light-Emitting Diodes with a Liq Doped Layer

Boobae Kim, Jungjin Yang, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-140] 14:00-15:30

Synthesis and Characterization of Boron-Based Multi-Resonance TADF Materials for Efficient Pure Blue OLEDs

Hyung Jin Cheon (Gyeongsang Nat'l Univ., Korea), Youn-Seob Shin, Noh-Hwal Park, Jeong-Hwan Lee (Inha Univ., Korea), and Yun-Hi Kim (Gyeongsang Nat'l Univ.)

[P2-141] 14:00-15:30

New Hole Transport Polymers: Orthogonal Solvent System for Solution Processable Organic Light-Emitting Diodes

Hyeon Doo Je, Seunguk Cho, Na Yeon Kwon, Su Hong Park, Min Ju Cho, and Dong Hoon Choi (Korea Univ., Korea)

[P2-142] 14:00-15:30

Dendritic D-σ-A Type HLCT Blue Emitters for Solution-Processed OLEDs

Sung Hoon Jung, Na Yeon Kwon, Hyeon Doo Je, Min Ju Cho, and Dong Hoon Choi (Korea Univ., Korea)

[P2-143] 14:00-15:30

Novel Materials and Structures for High Efficiency and Long Lifetime Green Phosphorescent OLEDs

Soojung Youn, Jungjin Yang, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-144] 14:00-15:30

Achieving High Efficiency by Using ZnO Nanoparticles as Electron Injection Layer in Inverted OLEDs

Se-Jin Lim, Da-Young Park, Hyun Kim, Go-Eun Kim, Sang-Uk Byun, and Dae-Gyu Moon (Soonchunhyang Univ., Korea)

[P2-145] 14:00-15:30

Effect of Moth-Eye-Shaped Anti-Reflection Structure on the Light Efficiency of Organic Light-Emitting Diodes Studied by Optical Simulation

Sung-Woo Choi, Jung-Gyun Lee, and Jae-Hyeon Ko (Hallym Univ., Korea)

[P2-146] 14:00-15:30

Improvement of Efficiency and Lifetime of Blue Fluorescent Organic Light-Emitting Diodes with a Buffer Layer

Changpyo Hong, Jungjin Yang, and Hyein Jeong (Samsung Display Co., Ltd., Korea)

[P2-147] 14:00-15:30

Dual Fabry-Perot Effect for Blue Top-Emitting Organic Light-Emitting Diodes

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

[P2-148] 14:00-15:30

A Novel Technology for Efficient Quantum Dot Organic Light-Emitting Diodes Using Functional Light-Emitting Encapsulation Structure

Yoonsung Yoo, Chul Woong Joo, Hyunsu Cho, Chan-mo Kang, Sukyung Choi, Jin-Wook Shin, Nam Sung Cho, Hyungwoo Suh (ETRI, Korea), Jonghee Lee (Hanbat Nat'l Univ.), and Byoung-Hwa Kwon (ETRI, Korea)

[P2-149] 14:00-15:30

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

Hye-Ri Joe, Tae-Ho Yang, Akeem Raji, Seo-Yoon Lee, and Jae- Hyun Lee (Hanbat Nat'l Univ., Korea)

[P2-150] 14:00-15:30

Analysis on Recombination Mechanisms of Organic Light-Emitting Diodes by Differential Carrier Lifetime Method

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

[P2-151] 14:00-15:30

Ultra-High Resolution Organic Light-Emitting Diodes based on Plasmonic Patterned Nanograting Array

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

[P2-152] 14:00-15:30

Design Strategy of Organic Light-Emitting Diode Structure for High Resolution Microdiaplay with High Color Gamut and Efficiency

Hyunsu Cho, Chan-mo Kang, Sukyung Choi, Chul Woong Joo, Byoung-Hwa Kwon, Jin-Wook Shin, Kukjoo Kim, Dae Hyun Ahn, and Nam Sung Cho (ETRI, Korea)

[P2-153] 14:00-15:30

Control of Hydrogen Concentration in InGaZnO Thin Film Using Cryopumping System

Se-yeon Jung, Taehoon Sung, Sein Lee, and Jang-Yeon Kwon (Yonsei Univ., Korea)

[P2-154] 14:00-15:30

Inter-Layer Crosslinking for Enhancing Operational Stability of Inverted QD-EL Devices

Dong Gil Kwak and Moon Sung Kang (Sogang Univ., Korea)

[P2-155] 14:00-15:30

Extremely Effective Piezoelectric Energy Harvesting Using Gradient-Index Lens with Elastic Bragg Mirror

Geon Lee, Jeonghoon Park, Dongwoo Lee, and Junsuk Rho (POSTECH, Korea)

[P2-156] 14:00-15:30

Enhancing Photoluminescence Performance of Halide Perovskite with High Electron-Donating Power Solvent

Yunna Kim, Nakyung Kim, and Byungha Shin (KAIST, Korea)

[P2-157] 14:00-15:30

Efficient Green Perovskite Light-Emitting Diodes Deposited via Thermal Evaporation with a Polymer Passivation Layer

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

[P2-158] 14:00-15:30

Pure Blue Light Emitting Diodes based on Stoichiometrically Engineered Quasi 2D Halide Perovskite

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

[P2-159] 14:00-15:30

Phosphonate-Passivated $CsPbBr_3$ Nanoplatelets for Efficient Pure-Blue Light Emitting Diodes

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

[P2-160] 14:00-15:30

Fabrication of Meniscus-Free Stretchable Vertical Interconnect Access

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

[P2-161] 14:00-15:30

The Effect of Solvent Engineering on the Morphology and Performance of Perovskite Solar Cells

Syed Hamad Ullah Shah, Chang Min Lee, Dong Hyun Kim, Geon-Woo Jeong, Dong Hyun Choi, Tae Wook Kim, Yeong Beom Kim, Hyun Woo Cho, Min Jae Park, Amjad Islam, and Seung Yoon Ryu (Korea Univ., Korea)

[P2-162] 14:00-15:30

Tailored Density Modulation of Carbon Nanotube Random Networks at the Channel for High-Performance Thin-Film Transistors

Hayun Kim, Hyunuk Oh, Byeongmoon Lee, Hyunjun Yoo, and Yongtaek Hong (Seoul Nat'l Univ., Korea)

[P2-163] 14:00-15:30

Electrical Characteristics of Short Length Peptide Memristor Device due to Inserted Thin SiO_2 Layer Thickness

Jun Seo Lee, Jeong Hyun Yoon, and Jang-Yeon Kwon (Yonsei Univ., Korea)

[P2-164] 14:00-15:30

Lift-Off Patterning of OLED Active Layer

Seunghan Lee (Sogang Univ., Korea), Hyobin Ham (UNIST, Korea), Chang Hyeok Lim (Sogang Univ., Korea), Hyukmin Kweon (Hanyang Univ., Korea), Dongheon Han (Sogang Univ., Korea), Do Hwan Kim (Hanyang Univ., Korea), BongSoo Kim (UNIST, Korea), and Moon Sung Kang (Sogang Univ., Korea)

[P2-165] 14:00-15:30

Ion Impurity Measurements in Organic Thin Films on High Voltage Application

Masaru Inoue (TOYOTech LLC, USA), Noriaki Oyabu (TOYO Corp., Japan), Takuro Iwata, Keisuke Ohdaira, and Hideyuki Murata (JAIST, Japan)

[P2-166] 14:00-15:30

Optical and Electrical Approaches for the Recombination Zone in FIrpic Based Blue Phosphorescent Organic Light Emitting Diodes

Yeong Beom Kim, Dong Hyun Kim, Chang Min Lee, Geon-Woo Jeong, Dong Hyun Choi, Tae Wook Kim, Syed Hamad Ullah Shah, Hyun Woo Cho, Min Jae Park, Amjad Islam, and Seung Yoon Ryu (Korea Univ., Korea)

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[P2-167] 14:00-15:30

Low-Frequency Noise Analysis on Solution-Processed and Vacuum-Deposited Organic Light-Emitting Diodes

Jaekwon Kim, Wonjun Shin, Suhyeon Lee, Jong-Ho Lee, and Jeonghun Kwak (Seoul Nat'l Univ., Korea)