

**P1. Poster Session I**

**Thursday, October 13, 2011 / 16:30 ~ 18:00**

- P1-1 Amorphous Oxide Thin-Film Transistors Based on Anodic Alumina Gate Dielectric**  
*Linfeng Lan (South China Univ. of Tech., China), Miao Xu (New Vision Opto-Electronic Tech. Co., Ltd., China), Lei Wang, Min Li, Hua Xu, Dongxiang Luo (South China Univ. of Tech., China), Jianhua Zou, Hong Tao (New Vision Opto-Electronic Tech. Co., Ltd., China), and Junbiao Peng (South China Univ. of Tech., China)*
- P1-2 Transparent Thin Film Transistor Based on TiO<sub>x</sub> Channel Layer Deposited by Radio Frequency Sputter Method**  
*Kyung-Chul Ok (Dankook Univ., Korea), Byung Du Ahn, Je-Hun Lee (Samsung Electronics Co., Ltd., Korea), Kwun Bum Chung, and Jin-Seong Park (Dankook Univ., Korea)*
- P1-3 Effect of Annealing Temperature on Solution Processed Zinc-Tin-Oxide Thin-films Transistor**  
*Jun Seok Lee, Young-Jin Kwack, and Woon-Seop Choi (Hoseo Univ., Korea)*
- P1-4 Chemical Bath Deposition of CdS Active Layer for Fabrication of Low Temperature-Processed Thin-Film-Transistors**  
*Ji-Hye Kwon, Joo-Seob Ahn, and Heesun Yang (Hongik Univ., Korea)*

**P1-5 Development of Oxide TFTs Array Using Solution Process for the Image Detecting Panel**

*Min Suk Oh, Sang Jun Oh, Young Min La, and Yong-Hoon Kim (KETI, Korea)*

**P1-6 Manufacturing process of 4 Mask a-Si TFT Panel by One Step Dry Etching on Mo/Al(Nd)/Mo Data Line for a-Si Remain Minimization**

*Seong Yeol Yoo, Young Suk Song, Zhan Feng Cao, Hee Cheol Kim, Qi Yao, Jian Yi Xue, Jai Il Ryu, and Jeong Yeol Lee (BOE Tech. Group Co., Ltd., China)*

**P1-7 Stability of Solution-Processed LaInZnO Thin-film Transistors**

*Si Joon Kim, Doo Na Kim, Dong Lim Kim, Doo Hyun Yoon, and Hyun Jae Kim (Yonsei Univ., Korea)*

**P1-8 Degradation of Integrated Gate Driver Circuits Using a-IGZO TFT**

*Yong Ho Jang, Seung Chan Choi, Woo Seok Choi, Jae Yong You, Tae Woong Moon, Ji Ha Kim, Hyung Nyuck Cho, Chul Kwon Lee, Sung Bin Ryu, Kwon-Shik Park, Chang-Dong Kim, Myungchul Jun, and Yong Kee Hwang (LG Display Co., Ltd., Korea)*

**P1-10 Composition and Oxygen Partial Pressure Effect on the Device Behaviors of Amorphous Al-In-Zn-O Transparent Thin-Film Transistors**

*Jun Yong Bak, Shin Hyuk Yang (Kyung Hee Univ., Korea), Sang-Hee Ko Park, Chi-Sun Hwang (ETRI, Korea), Sung Min Yoon (Kyung Hee Univ., Korea)*

**P1-11 Ambipolar Pentacene-Based Thin-Film Transistors with Polymeric Buffer Layers**

*Liang-Yun Chiu, Wei-Yang Chou, and Horng-Long Cheng (Nat'l Cheng Kung Univ., Taiwan)*

**P1-12 Investigation of Solution-Processed Nitrogen Doped In-Zn-O Thin-Film Transistor**

*Doo Hyun Yoon, Si Joon Kim, and Hyun Jae Kim (Yonsei Univ., Korea)*

**P1-13 Study of the Threshold Voltage Shift on Poly 4-vinyl Phenols (PVPs) as Organic Gate Dielectric in All Solution-Processed Organic Thin-Film Transistors**

*DongWoo Kim, HyoungJin Kim, HyunWook So, and MunPyo Hong (Korea Univ., Korea)*

**P1-14 Organic Thin Film Transistors with Sputtered Gate Electrodes for Electrochromic Display**

*JungEun Lee, Hyungil Na, ChangBum Park, JongUk Bae, ChangDong Kim, Myungchul Jun, and YongKee Hwang (LG Display Co., Ltd., Korea)*

**P1-15 p-Channel Thin-Film Transistors Using Copper Oxide Active Layers for Electronic and Optoelectronic Display**

*Kwang-Min Jo, Sang-Yun Sung, Se-Yun Kim, Joon-Hyung Lee, Jeong-Joo Kim, Young-Woo Heo (Kyungpook Nat'l Univ., Korea)*

**P1-16 Effect of Li<sub>2</sub>O Doping in Zinc-Tin-Oxide Thin Film Transistors**

*Hong Yoon Jung, Se Yeob Park, Ji-In Kim, Kwang Hwan Ji, and Jae Kyeong Jeong (Inha Univ., Korea)*

**P1-17 Enhanced Performance of All-Solution-Processed n-type Organic Thin Film Transistor by Employing Self-Assembled Monolayer**

*Jeongkyun Roh, Myeongjin Park, Chan-mo Kang, Hyunduck Cho, and Changhee Lee (Seoul Nat'l Univ., Korea)*

**P1-18 Photo-Response Characteristics of Amorphous Indium Gallium Zinc Oxide Thin Film Transistor for Photodetector Applications**

*Seongpil Chang, Byeong-Kwon Ju (Korea Univ., Korea), and Fahrettin Yakuphanoglu (Firat Univ., Turkey)*

**P1-19 Optically Transparent Conducting Glues for Fabrication of OLEDs**

*Tsuyoshi Muto, Kuniyisa Kato, Koichi Nagamoto, and Takeshi Kondo (Lintec Corp., Japan)*

**P1-20 Blue to White Color-Tunable OLEDs with Spin-Coated Small Molecule Host**

*Si-Yeon Seong, Min-Ji Jo, Yu-Seok Seo, and Dae-Gyu Moon (Soonchunhyang Univ., Korea)*

**P1-21 Enhanced Performance of QD/Polymer Based Hybrid LED by Förster Energy Transfer**

*Tae-Yang You, Byoung-Ho Kang, Sang-Won Lee (Kyungpook Nat'l Univ., Korea), Dae-Hyuk Kwon (Kyungil Univ., Korea), and Shin-Won Kang (Kyungpook Nat'l Univ., Korea)*

**P1-22 Improved Performances of Organic Light-Emitting Devices Doped with BDAT-P Using Co-Doping Method**

*Na Rae Park, Gweon Young Ryu, Dong Hwan Lim, Seok Jae Lee, Young Kwan Kim, and Dong Myung Shinr (Hongik Univ., Korea)*

**P1-23 Deep Blue Light-Emitting Devices Using a Solution Processible Molecule Consisting of Fluorene and Pyrene Units**

*Ji-hoon Kim (Pusan Nat'l Univ., Korea), Sunyoung Lee (Kumoh Nat'l Inst. of Tech., Korea), Jonghee Lee (ETRI, Korea), and Do-Hoon Hwang (Pusan Nat'l Univ., Korea)*

**P1-24 Selective Deposition Process Development with Electrospray for Organic Light-Emitting Diodes**

*Wontae Hwang, Minjun Cho (Sungkyunkwan Univ., Korea), Sunghwan Cho (Samsung Mobile Display Co., Ltd., Korea), and Heeyeop Chae (Sungkyunkwan Univ., Korea)*

**P1-25 Solution Electrospray Process Development for Small Molecule Organic Light Emitting Diode Fabrication**

*Minjun Jo, Wontae Hwang, and Heeyeop Chae (Sungkyunkwan Univ., Korea)*

**P1-26 Fabrication of Micro-Lens Array (MLA) Pattern on OLED for Enhancement of Light Extraction**

*Jong Min Lee, Hyun Bin Lim, Hyung Jin Lee, and Lee Soon Park (Kyungpook Nat'l Univ., Korea)*

**P1-27 Solution Processed Low Driving Voltage Blue Phosphorescent Organic Light-Emitting Using Small Molecule Host System**

*Yoo Jin Doh, Jung Soo Park, Woo Sik Jeon, Young Hoon Son, and Jang Hyuk Kwon (Kyung Hee Univ., Korea)*

**P1-28 Top-Emitting Fluorescent Green Organic Light Emitting Devices with Low Voltage Driving Characteristics**

*Sang Hee Cho and Min Chul Suh (Kyung Hee Univ., Korea)*

- P1-29 Moisture Barrier Property of Multilayer Structures for Thin Film Encapsulation of Flexible OLED Lightings**  
*Seung Woo Seo, Eun Jung, Lyong Sun Bu, Ho Kyun Chung, and Sung Min Cho (Sungkyunkwan Univ., Korea)*
- P1-30 Fabrication of Flexible OLED Lighting on Transparent Metal-Grid Substrate**  
*Eun Jun, Hak Soo Lee, Seung Woo Seo, Hyun Chul An, Hee Yeop Chea, and Sung Min Cho (Sungkyunkwan Univ., Korea)*
- P1-31 Synthesis and Characterization of Ortho-Twisted Asymmetric Anthracene Derivatives for Blue Organic Light Emitting Diodes**  
*Min-Gi Shin, Sul Ong Kim, Hyun Tae Park (Gyeongsang Nat'l Univ., Korea), Sung Jin Park, Han Sung Yu (Duksan Hi-Metal Co., Ltd., Korea), Yun-Hi Kim, and Soon-Ki Kwon (Gyeongsang Nat'l Univ., Korea)*
- P1-32 High Efficient and High Color Pure Blue Light Emitting Materials: New Asymmetrically Highly Twisted Host and Guest Based on Anthracene**  
*Il Kang, Ran Kim, Yun-Hi Kim, and Soon-Ki Kwon (Gyeongsang Nat'l Univ., Korea)*
- P1-33 Green Phosphorescent OLEDs Using Iridium(III) Complexes with Trimethylsilyl Xylene Group**  
*So-Hee Kang, Chul Young Kim, K. Thangaraju, Soon-Ki Kwon, and Yun-Hi Kim (Gyeongsang Nat'l Univ., Korea)*
- P1-34 Function of CS<sub>2</sub>CO<sub>3</sub> in Electron Transport Layer of OLED**  
*Ka Man Fung and Kok Wai Cheah (Hong Kong Baptist Univ., Hong Kong)*

- P1-35 A Study on Single-Layered White Organic Light-Emitting Diodes Based on Co-Host System Using Solution Process**  
*Beomjin Kim, Youngil Park, and Jongwook Park (The Catholic Univ. of Korea, Korea)*
- P1-36 Highly Efficient New Hole Injection Materials for OLEDs Based on Dimeric Phenothiazine and Phenoxazine Derivatives**  
*Youngil Park, Beomjin Kim, and Jongwook Park (The Catholic Univ. of Korea, Korea)*
- P1-37 Transparent Nanoclay/Polymer Gas Barrier Film and Contact Printing Encapsulation for Flexible OLEDs**  
*Jin-Hwan Choi, Young-Wook Park, Tae-Hyun Park, Hyun-Ju Choi, Eun-Ho Song, Hakkoo Kim, Se-Joong Shin, Hyun-Jun Lee (Korea Univ., Korea), O-Young Jeong, Chang-Gyu Im (Cheil Industries Inc., Korea), and Byeong-Kwon Ju (Korea Univ., Korea)*
- P1-38 Amorphous Silicon Coated CNTs for Stable High Emission Current Devices**  
*Young Ju Eom, Su Woong Lee, Eun Hye Lee, An Na Ha, Woo Mi Bae, Hee Chul Woo, Jing Jang, and Kyu Chang Park (Kyung Hee Univ., Korea)*
- P1-39 Field Emission Properties of CNT Film on a Graphite Tip by Electrophoretic Deposition**  
*Gui Sob Byun, Yang Doo Lee, Kyong Soo Lee, Jinnil Chol (Korea Univ., Korea), Sun-Woo Park (Univ. of Seoul, Korea), and Byeong Kwon Ju (Korea Univ., Korea)*
- P1-40 Simulation of Edge Emission Effect for CNT Field Emitters Dependent on Diode Configuration**  
*Yenan Song, Dong Hoon Shin, Yuning Sun, Ji Hong Shin, and Cheol Jin Lee (Korea Univ., Korea)*

**P1-41 Opto-Electrical Characteristics of Hybrid Powder-LED with PVK HIL**

*Won Hee Lee, Wan Kyu Kim (Korea Polytechnic Univ., Korea), Sung Il Ahn (Silla Univ., Korea), and Seong Eui Lee (Korea Polytechnic Univ., Korea)*

**P1-42 Investigation of GaInP Quantum Dots according to the Growth Thickness for the 700 nm Light Emitting Devices**

*Hwa Sub Oh, Sang Mook Kim, Kwang Cheol Lee, June Mo Park, Ho Sung Ryu (KOPTI, Korea), Hyung Joo Lee, Young Jin Kim, In Kyu Jang, Ji Hoon Park (AUK Inc., Korea), and Jong Hyeob Baek (KOPTI, Korea)*

**P1-43 Solution Processed Small Molecule Organic Bi-layer Light Emitting Diodes**

*DaeJin Shim (Sungkyunkwan Univ., Korea), Wataru Mizutani (AIST, Japan), and Heeyeop Chae (Sungkyunkwan Univ., Korea)*

**P1-44 Formation of Aluminum Nitride Ceramic Film on Metal-substrate Using Aerosol Deposition Method**

*Min-Sun Kim and Hyun Min Cho (KETI, Korea)*

**P1-45 Effect of Packaging Materials and Process on the Performance of Light Emitting Diodes**

*Seong Kwon Kwak, Tae Wook Yoo, Eun Ji Lee, Bo-Sung Kim (Kyungpook Nat'l Univ. Korea), Dong Wook Lee (Phoenix pde Co. Ltd, Korea), Sang Mun Lee, and Lee Soon Park (Kyungpook Nat'l Univ., Korea)*

**P1-46 The Influence of Phosphor Sedimentation Factors on White Light-Emitting Diode with Different Structure Chip**

*Kwang-Cheol Lee, Deok Gi Kim (KOPTI, Korea), Soojin Lee (Protec Co., Ltd., Korea), and Jong Hyeob Baek (KOPTI, Korea)*



- P1-47 High Efficiency UV Nano-Pillars Light Emitting Diodes Using Ni Nano-Masks**  
*Dae-Woo Jeon, Lee-Woon Jang, Myoung Kim, Ju-Won Jeon, Jae-Woo Park (Chonbuk Nat'l Univ. Korea), Seong-Ran Jeon, Seung-Jae Lee, Jin-Woo Ju, Jong Hyeob Baek (KOPTI, Korea), and In-Hwan Lee (Chonbuk Nat'l Univ., Korea)*
- P1-48 Optimization of Epitaxial Structure for Nonpolar a-plane InGaN/GaN LEDs**  
*Su Jin Kim, Dong Ho Kim, Jae In Sim, Dong Yoon Kim, Sung Hun Son, Hwan Jun Sung, Ki Seob Shin, and Tae Geun Kim (Korea Univ., Korea)*
- P1-49 The Effect of n-GaN Patterning on the Light Extraction of InGaN/GaN Vertical Light-Emitting Diodes**  
*Ki Seob Shin, Jae In Sim, Ho Myoung An (Korea Univ., Korea), Sejong Oh, Woo Seok Lee, Michael Yoo (Verticle Corp., Korea), and Tae Geun Kim (Korea Univ., Korea)*
- P1-50 Effect of SiN<sub>x</sub> Interlayer Inserted in A-plane GaN on R-plane Sapphire Grown by Metal-Organic Chemical Vapor Deposition**  
*Ji-Hoon Kim (Korea Univ., Korea), Kwang Hyeon Baik (KETI, Korea), Jung Ho Park (Korea Univ., Korea), and Sung-Min Hwang (KETI, Korea)*
- P1-51 Enhancement of Deflective Effect in InGaN/GaN Light Emitting Diodes with Ellipsoidal Air Tunnel**  
*Hyun Kyu Kim, Jae Hyoung Ryu, Hee Yun Kim, Ji Hye Kang, Nam Han, Young Jae Park, Beo Deul Ryu, Kang-Bok Ko, S. Chandramohan, Volodymyr-V. Lysak, Chang-Hee Hong (Chonbuk Nat'l Univ., Korea), Hyung Gu Kim (LG Electronics Inst. of Tech.,*

*Korea)*

**P1-52 Growth and Characteristic of InGaN/GaN Light Emitting Diodes with Micro Polygon Column Shaped Transparent**

*Sung Min Kim and Chang-Hee Hong (Chonbuk Nat'l Univ., Korea)*

**P1-53 High Transmittance Fringe-Field Switching Liquid Crystal Display and Its Manufacturing Method**

*Young Suk Song, Seong Yeol Yoo, Guan Bao Hui, Feng Zhang, Seung Jin Choi, Han Jun Park, Xiao Ling Xu, Jian She Xue, Jai Il Ryu and Jung Yeol Lee (BOE Tech. Group Co., Ltd., China)*

**P1-54 Wide-Viewing Vertically-Aligned Liquid Crystal Displays with Surface Microstructure Formation Using Colloidal Particles**

*Seung Chul Park, Jun-Hee Na, and Sin-Doo Lee (Seoul Nat'l Univ., Korea)*

**P1-55 High Efficiency Fresnel Lens via Axially Symmetric Photoalignment Method**

*Yau-Han Huang, Shih-Wei Ko, Andy Ying-Guey Fuh (Nat'l Cheng Kung Univ., Taiwan), and Tsung-Hsien Lin (Nat'l Sun Yat-Sen Univ., Taiwan)*

**P1-56 Improved Off-Axis Gamma Curve in Vertically Aligned Liquid Crystal Cell with Single Domain**

*Dong-Eon Lim, Wan Seok Kang, Byung-June Mun, Seung-Yeol Hur, and Gi-Dong Lee (Dong-A Univ., Korea)*

**P1-57 LCD Switchable between Reflective and Transmissive Modes Using an Active Absorber**

*Huilian Jin, Ki-Han Kim, and Tae-Hoon Yoon (Pusan Nat'l Univ., Korea)*

- P1-58 Novel Electrodes for Low Voltage and High Transmittance Blue-Phase Liquid Crystal Displays**  
*Yu-Cheng Lai, Yuan-Chang Liao, Jyh-Wen Shiu, Chun-Ming Wu, Shih-Hsien Liu, Pao-Ju Hsieh (ITRI, Taiwan), Linghui Rao, Yan Li, and Kuan-Ming Chen (Univ. of Central Florida, USA)*
- P1-59 Study on Advanced Pixel Structure for Electro-Optic Characteristics in Polymer Stabilization (PS-VA) Mode**  
*Se Hyun Lim, Sun Woo Park, Dae Hyun Kim, Seung Hee Lee (Chonbuk Nat'l Univ., Korea), Youn Hak Jeong, Hee Seop Kim, and Kyeong Hyeon Kim (Samsung Electronics Co., Ltd., Korea)*
- P1-60 Carbon Nanotube-Dispersed Alignment Layer for Fast Response Time of Liquid Crystal Display**  
*Chuhyun Cho, You-Jin Lee, Chang-Jae Yu, and Jae-Hoon Kim (Hanyang Univ., Korea)*
- P1-61 Cost Effective Multi-Domain Vertical Alignment Liquid Crystal Display Using Ink-Jet Printed Protrusions**  
*Sun Woo Park, Se Hyun Lim, Sang Hoon Oh, Dae Hyun Kim, Kwang Un Jeong, and Seung Hee Lee (Chonbuk Nat'l Univ., Korea)*
- P1-62 Chiral Hybrid In-Plane Switching Liquid Crystal Mode with Stable Domain by the Stacked Alignment Layers**  
*Young Eun Kang, Kwang-Soo Bae, You-Jin Lee, Jae-Hoon Kim, and Chang-Jae Yu (Hanyang Univ., Korea)*
- P1-63 Synthesis and Characterizations of Liquid Crystalline Epoxy Monomers**  
*Jin Oh, Young Kuk Kim, Heon Seok Kang, Hyeon Jun Seong, and Myong-Hoon Lee (Chonbuk Nat'l Univ., Korea)*

- P1-64 Syntheses and Structural Analysis of Helical Porous Liquid Crystals Based on Hydrogen-Bonded Dipeptides**  
*Jin Oh, Kwang-Un Jeong, Shin Woong Kang, and Myong-Hoon Lee (Chonbuk Nat'l Univ., Korea)*
- P1-65 Polarized FTIR Spectroscopic Analysis of Liquid Crystal Orientations**  
*Mongryong Lee, Dong Jun Cho, and Kigook Song (Kyung Hee Univ., Korea)*
- P1-66 Novel Axially Symmetric Optical Device and Applications Based on Axial Symmetric Photoalignment Method**  
*Shih-Wei Ko, Yan-Yu Chen, Shu-Hao Huang, Andy Ying-Guey Fuh (Nat'l Cheng Kung Univ., Taiwan), and Tsung-Hsien Lin (Nat'l Sun Yat-Sen Univ, Taiwan)*
- P1-67 Reduced Ionic Screening Effect in Carbon Nanotube-Doped Nematic Liquid Crystals**  
*Ji Hyun Park and Giusy Scalia (Seoul Na'l Univ., Korea)*
- P1-68 Thermal Stability of Blue Phase I Doped with Bent-core Molecules**  
*Sung-Taek Hur and Suk-Won Choi (Kyung Hee Univ., Korea)*
- P1-69 Dependence of the Switching Behavior in a Bistable TN Cell on the Rubbing Angle**  
*Min-Gyeong Jo, Dong Han Song, Ji-Hoon Lee, and Tae-Hoon Yoon (Pusan Nat'l Univ., Korea)*
- P1-70 Pretilt Angle Control of Liquid Crystal Using Liquid Crystalline Polymer**  
*Eun-Young Jeon, Ki-Han Kim, and Tae-Hoon Yoon (Pusan Nat'l Univ., Korea)*

**P1-71 High Efficient Vertical Aligned Nematic Mode with Lens-Shape Surface Relief**

*Min Soo Park, Jonghoon Yi, Jin Hyuk Kwon, and Jin Seog Gwag (Yeungnam Univ., Korea)*

**P1-72 Two-mode Photo-Switchable LCD on the Base of Liquid Crystals with a Minute Amount of Carbon Nanotubes**

*Sergiy Tomylo, Igor Gvozдовskyy, Oleg Yaroshchuk (NAS of Ukraine, Ukraine), and Rumiko Yamaguchi (Akita Univ., Japan)*

**P1-73 Study of Liquid Crystal Bistable/Multi-Domain Alignment by Spontaneously-Formed Dual Groove Structures**

*Min-Kyu Park, Chang-sub Park, Kyung-Il Joo, Hee Yeon Noh, Shin-Won Kang, and Hak-Rin Kim (Kyungpook Nat'l Univ., Korea)*

**P1-74 Effect of Graphene Layers on the Homeotropically Aligned Nematic Liquid Crystal**

*Jeong Seon Yu, Ji Eun Yun, and Jong-Hyun Kim (Chungnam Nat'l Univ., Korea)*

**P1-75 Solution-Processed Copper Zinc Tin Sulfide Absorber for Thin-Film Solar Cells**

*Kyoohee Woo, Youngwoo Kim, and Jooho Moon (Yonsei Univ., Korea)*

**P1-76 Optimization of Short Circuit Current in Tandem Solar Cell Employing Microcavity Structure**

*Yang-Eun Lee, Sei-Yong Kim, Won-Ik Jeong, and Jang-Joo Kim (Seoul Nat'l Univ., Korea)*

**P1-77 Characteristic of Organic Solar Cells Using the Electron Transport Material as Water-soluble Conjugated Polymer**

*Seong-Hwan Choi, Hee-Dae Kim, Chung-Gi Kim, Min-Sik Koo,*

*Dong-Hun Lee, Jhin-Yeong Yoon, Taek Ahn, Tae-Woo Kwon, and Dong-Kyu Park (Kyungsung Univ., Korea)*

**P1-78 Efficient Semitransparent Bulk-heterojunction Organic Photovoltaics Employing Transparent Ag/Ca/Ag Cathode Layer**

*Yong-Hoon Kim, Jun-Ki Park (KETI, Korea), Jeong-In Han (Dongguk Univ., Korea), and Sung Kyu Park (Chonbuk Nat'l Univ., Korea)*

**P1-79 Wavelength Dependent Photo-Degradation of Organic Planar Heterojunction Solar Cells**

*Tae-Min Kim, Won-Ik Jeong, and Jang-Joo Kim (Seoul Nat'l Univ., Korea)*

**P1-80 Improved Efficiency of Spray Deposited Organic Photovoltaics Using the Modified PEDOT:PSS by Substrate-Heated Method.**

*Yoon-Sik Seo, Jin-Ju Bae, Kyu-Jin Kim, Byoung-Ho Kang, Se-Hyuk Yeom, and Shin-Won Kang (Kyungpook Nat'l Univ., Korea)*

**P1-81 Solution-Processed CuAlO<sub>2</sub> as an Anode Buffer Layer for Organic Solar Cells**

*Jeong Suk Yang, Sang Hoon Oh, You Seung Rim, Doo Hyun Yoon, and Hyun Jae Kim (Yonsei Univ., Korea)*

**P1-82 Metal Oxide Nanoparticles as an Electron Extraction Layer for Inverted Polymer Solar Cells**

*Seunguk Noh, Jun Young Kim, Donggu Lee, and Changhee Lee (Seoul Nat'l Univ., Korea)*

**P1-83 Hole-Extraction Materials for High Open-Circuit Voltage in Planar Heterojunction Organic Solar Cells**

*Gyeong Woo Kim, Jeong-kyu Kim, Chandramouli Kulshreshtha, Woo Sik Jeon, Min Chul Suh, and Jang Hyuk Kwon (Kyung Hee*

*Univ., Korea)*

**P1-84 Transient Analysis of the Dynamic Stress Degradation in a-IGZO TFTs**

*Mami Fujii, Yasuaki Ishikawa, Masahiro Horita, and Yukiharu Uraoka (Nara Inst. of Science and Tech., Japan)*

**P1-85 A Low Voltage Driven Flexible LCD with High Mechanical Stability**

*Zhe Hong, Yan Jin (Hoseo Univ., Korea), Hee-Suck Cho (NIS Corp., Korea), Un-Sung Jung, and Soon-Bum Kwon (Hoseo Univ., Korea)*

**P1-86 Development of High Transparent Active Matrix TBL**

*Hyo Sik Song, Dae Kyu Kim, Hong Youl Lim, Min Kyung Lee, Dae Hyun Kim, Sung bong Ha, Kyoung Ho Park, Joun Ho Lee, and Byeong Koo Kim (LG Display Co., Ltd., Korea)*

**P1-87 A New Driving Method for the Active Transparent Bistable Liquid Crystal Display**

*Min Kyung Lee, Hong Youl Lim, Hyo Sik Song, Dae Hyun Kim, Dae Kyu Kim, Sung Bong Ha, Kyoung Ho Park, Joun Ho Lee, and Byeong Koo Kim (LG Display Co., Ltd., Korea)*

**P1-88 Polarized Invisible 2D Code Display Overlaid on LCD Panel for Image Viewing**

*Yuuki Kodama and Kunio Sakamoto (Konan Univ., Japan)*

**P1-89 Work Function Modulation of ITO Electrodes for High Efficiency of Solution-Based Single-Layer OLEDs**

*Tae Hyun Park, Young Wook Park, Jin Hwan Choi, Se Joong Shin, Hyun Jun Lee, Eun Ho Song, Hak Koo Kim (Korea Univ., Korea), Kyung Cheol Choi (KAIST, Korea), and Byeong-Kwon Ju (Korea Univ., Korea)*

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**P1-90 QD-LED with TiO<sub>2</sub> Inorganic Electron Transport Layer**

*Sungnam Choi (KETI, Korea), Taeyoon Lee (Yonsei Univ., Korea),  
Jiwan Kim, and Chul Jong Han (KETI, Korea)*

**P1-91 A New Optical Configuration for the AH-IPS LCD with Touch  
Screen Panel**

*Hyoun Sung Son, Ji Yun Jang, Jeong Hoon Ko, Hyun Suk Jin, Joun  
Ho Lee and Byeong Koo Kim (LG Display Co., Ltd., Korea)*