The 7th International Conference on Microelectronics and Plasma Technology Joint International Conference on ICMAP 2018, APCPST 2018, and ISPB 2018 July 24–28, 2018 / Songdo ConvensiA, Incheon, Korea

Poster Session III		
Date / Time	July 27 (Fri.), 2018 / 17:30-19:00	
Place	Room F (#117~118)	

#### **FP-001**

Ti<sub>x</sub>Si<sub>1</sub>-xO<sub>2</sub> Deposited by Plasma-Enhanced Atomic Layer Deposition for Spacer Application

Sanghun Lee<sup>1</sup>, Woo-Jae Lee<sup>2</sup>, Wontae Noh<sup>3</sup>, Satoko Gatineau<sup>3</sup>, Se-Hun Kwon<sup>2</sup>, and Hyungjun Kim<sup>1</sup>

### **FP-002**

Tungsten Thin Films Deposited by Plasma-Enhanced Atomic Layer Deposition with Tungsten Chloride Precursor

Seunggi Seo<sup>1</sup>, Yujin Lee<sup>1</sup>, Il-Kwon Oh<sup>1</sup>, Bonggeun Shong<sup>2</sup>, and Hyungjun Kim<sup>1</sup> *Yonsei Univ., Korea*, <sup>2</sup>*Hongik Univ., Korea* 

#### **FP-003**

A Study on the Passivation Characteristics According to the RF-Power Variable of Tunnel Oxide Layer Using N<sub>2</sub>O Gas

Sehyeon Kim, Sanguk Han, Sooyoung Park, Geonju Yoon, Youngseok Lee, Sangho Kim, Seongho Jeon, Donggi Shin, and Junsin Yi Sungkyunkwan Univ., Korea

#### **FP-004**

Synthesis of MoS<sub>2</sub> by Plasma Enhanced Atomic Layer Deposition for Gas Sensor

Youngjun Kim, Minjoo Lee, Kyung Yong Ko, Jusang Park, and Hyungjun Kim Yonsei Univ., Korea

#### **FP-005**

The Role of Discharge in Plasma Assisted Atomic Layer Deposition Technique

Zhongwei Liu, Zhengduo Wang, Lijun Sang, and Qiang Chen Beijing Inst. of Graphic Communication, China

#### **FP-006**

High-Quality Cobalt Thin Film Deposited by Using Very High Frequency Plasma-Enhanced Atomic Layer Deposition

Won-kyun Yeom and Geun-Young Yeom Sungkyunkwan Univ., Korea

<sup>&</sup>lt;sup>1</sup>Yonsei Univ., Korea, <sup>2</sup>Pusan Nat'l Univ., Korea, <sup>3</sup>Air Liquide Lab., Korea

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## **FP-007**

On the Carrier Concentration of Nanocrystalline Si:H Films Made by Inductively Coupled Plasma with Low-Inductance Antenna

H.H. Yang and Jyh-Shiarn Cherng *Ming Chi Univ. of Tech., Taiwan* 

#### **FP-008**

Preparation of Diamond-Like Carbon Films Using a Cathode Localized Glow Discharge under Sub-Atmospheric Pressure Excited by a High-Repetition Nanosecond Pulsed Voltage Application

Yusuke Kikuchi<sup>1</sup>, Takuya Maegawa<sup>1</sup>, Ryo Hirano<sup>1</sup>, Akira Otsubo<sup>2</sup>, Yoshimi Nishimura<sup>2</sup>, Masayoshi Nagata<sup>1</sup>, and Mitsuyasu Yatsuzuka<sup>1</sup>

<sup>1</sup>Univ. of Hyogo, Japan, <sup>2</sup>Kurita Seisakusyo Co. Ltd., Japan

#### **FP-009**

Al<sub>2</sub>O<sub>3</sub>-CxHy Multilayer Thin Films Manufactured by Plasma-Enhanced Atomic Layer Deposition and Plasma Polymerization for Moisture Barrier Film

Jin Young Lee<sup>1</sup>, Woo Seok Kang<sup>2</sup>, Dae Woong Kim<sup>2</sup>, Jae Ok Lee<sup>2</sup>, Min Hur<sup>2</sup>, and Gon Ho Kim<sup>1</sup>

<sup>1</sup>Seoul Nat'l Univ., Korea, <sup>2</sup>KIMM, Korea

#### **FP-010**

Low Dielectric Constant Plasma Polymerized SiCOH Film Deposited from Tetrakis(trimethylsilyoxy) Silane as a Flexible Insulator

Hyuna Lim<sup>1</sup>, Wonjin Ban<sup>1</sup>, Sungyool Kwon<sup>1</sup>, Yoonsoo Park<sup>1</sup>, Younghyun Kim<sup>1</sup>, Seonhee Jang<sup>2</sup>, and Donggeun Jung<sup>1</sup>

<sup>1</sup>Sungkyunkwan Univ., Korea, <sup>2</sup>Univ. of Louisiana at Lafayette, USA

#### FP-011

Plasma Copolymerization of Ultra-Low Dielectric Constant SiCOH Films Using Octamethylcyclotetrasiloxane and Tetraethyl Orthosilicate Precursors

Yoonsoo Park, Sungyool Kwon, Wonjin Ban, Hyuna Lim, and Donggeun Jung Sungkyunkwan Univ., Korea

#### **FP-012**

Characteristic Analysis of Optimized SiO<sub>2</sub> / SiONx Stack Passivation Layer and Study on Application of High Efficiency N-Type c-Si Solar Cell

Geonju Yoon, Sanguk Han, Sooyoung Park, Sehyeon Kim, Youngseok Lee, Sangho Kim, Seongho Jeon, Donggi Shin, and Junsin Yi

Sungkyunkwan Univ., Korea

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## FP-013

Improvement of Memory Characteristics of MIS-NVM Device Using Hydrogenated Gate Oxide

Sehyeon Kim, Geonju Yoon, Jungsoo Kim, Sangho Kim, Youngseok Lee, Seongho Jeon, and Donggi Shin

Sungkyunkwan Univ., Korea

#### **FP-014**

Development of the Virtual Metrology for the Nitride Thickness in Multi-Layer Plasma-Enhanced Chemical Vapor Deposition Using Plasma-Information Variables

Hyun-Joon Roh<sup>1</sup>, Sangwon Ryu<sup>1</sup>, Yunchang Jang<sup>1</sup>, Nam-Kyun Kim<sup>1</sup>, Younggil Jin<sup>2</sup>, Seolhye Park<sup>2</sup>, and Gon-Ho Kim<sup>1</sup>

<sup>1</sup>Seoul Nat'l Univ., Korea, <sup>2</sup>Samsung Display Co., Ltd., Korea

#### **FP-015**

Fluid Simulation on Plasma Characteristics of RF Capacitively Coupled Plasma Sustained in  $SiH_4/N_2/O_2$  and  $Ar/SiH_4/N_2O$ 

Wen-Zhu Jia, Yuan-Hong Song, and You-Nian Wang Dalian Univ. of Tech.. China

#### FP-016

Residual Gas Composition during Diamond Deposition with a New Developed Microwave Surface Wave Plasma Source

Hyun Jong You, Oleksii Girka, Seung Whan Lee, and Seung Pyo Hong NFRI, Korea

#### **FP-017**

Flexibility, Validity and Susceptibility of Cylindrical Langmuir Probes for CubeSat and Pico-Satellite to Characterize Ionosphere and Thermosphere Plasma

Shankar Bhattarai

Tribhuvan Univ., Nepal

#### FP-018

CubeSat with Cylindrical Langmuir Probes to Characterize Ionosphere and Thermosphere Plasma

Shankar Bhattarai

Tribhuvan Univ., Nepal

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## FP-019

Research and Patent Trend Analysis of Plasma Technology for Next-Generation Semiconductor Manufacturing Process and Manufacturing Equipment Development

Ki-hwan Cho NFRI, Korea

## FP-020

Experimental and Numerical Analysis of Nanoscale Particle Created during PECVD of Amorphous Carbon Layer

Dongbin Kim<sup>1</sup>, Seungki Chae<sup>1</sup>, Sang-Woo Kang<sup>2</sup>, and Taesung Kim<sup>1</sup> Sungkyunkwan Univ, Korea, <sup>2</sup>Univ. of Science and Tech., Korea

#### **FP-021**

Introduction of Thickness Monitoring Sensor, SR as Integrated Metrology in PECVD System

Chul Lee, Hyeju Hwang, Sangho Park, Kwangjung Son, Keunhyeok Lee, Hyuncheol Wang, and Nae II Lee

Wonik IPS, Korea

### **FP-022**

Use of Laser for Characterizing Ion Density and Sheath of N2 Plasma

Jinsu Jung and Byungwhan Kim Sejong Univ., Korea

#### **FP-023**

The Comparison of End-Point Detection between Optical Spectroscopy and Residual Gas Analysis in Silicon Etching in NF<sub>3</sub>/Ar Plasma

Heetae Kwon, Hwanhee Lee, Giwon Shin, Woojae Kim, and Gichung Kwon Kwangwoon Univ., Korea

#### FP-024

A Study on the Prediction of Density from OES(Optical Emission Spectroscopy) Data Using Machine Learning Algorithm

Jung Ho Song, Jong Sik Kim, Dae Chul Kim, Yong Hyun Kim, Duk Sun Han, and Young Woo Kim

NFRI, Korea

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#### FP-025

Incoherent Laser Thomson Scattering Diagnostic for Pulsed Streamer Discharge

Ryo Fujita<sup>1</sup>, Kyohei Eguchi<sup>1</sup>, Douyan Wang<sup>1</sup>, Kentaro Tomita<sup>2</sup>, and Takao Namihira<sup>1</sup> *Kumamoto Univ., Japan, <sup>2</sup>Kyushu Univ., Japan* 

#### **FP-026**

Plasma Diagnosis by Electrical Method

Gi-Chung Kwon, Gi Won Shin, Woo Jae Kim, Hee Tae Kwon, and Hwan Hee Lee *Kwangwoon Univ., Korea* 

#### **FP-027**

Experimental Study on Arcing Detection Technology in PECVD Process

Hye-Ju Hwang, Sang-Ho Park, Chul Lee, Kwang-Jung Son, KeunHyeok Lee, HyunCheol Wang, and Nae II Lee

Wonik IPS, Korea

#### **FP-028**

Model Predictive Control of Electron Density for Ar/SF<sub>6</sub> Etching Plasma

Sangwon Ryu, Hyun-Joon Roh, Yunchang Jang, Damdae Park, Junmo Koo, Jongmin Lee, and Gon-Ho Kim

Seoul Nat'l Univ., Korea

#### FP-029

In-Situ Monitoring Method of Plasma Process Equipment Condition: Deposition and Cleaning

Surin An, Geonji Kang, Kwangpyo Kim, and Sang Jeen Hong *Myongji Univ., Korea* 

#### **FP-030**

Plasma Diagnostic Method by Charging Capacitor in a Floating Langmuir Probe

Moo-Young Lee, Kyung-Hyun Kim, and Chin-Wook Chung Hanyang Univ., Korea

### **FP-031**

Measurement of Ion Energy Distribution According to Positive Voltage Applied to the Substrate

Dae Chul Kim, Jong-Bae Park, and Young-Woo Kim NFRI. Korea

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## FP-032

Optical Emission Spectroscopy at a Foreline for Monitoring Plasma Processes

Dae-Woong Kim, Min Hur, Jin Young Lee, Woo Seok Kang, and Jae-Ok Lee *KIMM, Korea* 

## FP-033

Investigation of Fluorine Actinometric Coefficient in Capacitively Coupled SF<sub>6</sub>/Ar Plasma

Ji-Won Kwon, Yunchang Jang, Sangwon Ryu, and Gon-Ho Kim Seoul Nat'l Univ., Korea

#### **FP-034**

Withdrawn

## FP-035

Experimental Observation of Charging Potentials in a Deep Trench Structure Using an Anodic Aluminum Oxide Template

Jihwan Park and Chinwook Chung Hanyang Univ., Korea

#### FP-036

Microscopic Stress-Induced Retardation between Amorphous SiNx and IZO

Nakcho Choi<sup>1</sup>, Taekyung Yim<sup>2</sup>, Yeogeon Yoon<sup>2</sup>, Namsuk Roh<sup>2</sup>, Byoungho Cheong<sup>1</sup>, and MunPyo Hong<sup>1</sup>

<sup>1</sup>Korea Univ., Korea, <sup>2</sup>Samsung Display Co., Ltd., Korea

#### **FP-037**

Development of Plasma Information Based Virtual Metrology (PI-VM) for Predicting Fine Variation of SiO<sub>2</sub> Etching Depth

Yunchang Jang, Hyun-Joon Roh, Sangwon Ryu, Ji-Won Kwon, and Gon-Ho Kim <sup>1</sup>Seoul Nat'l Univ., Korea

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#### FP-038

Physicochemical Characteristic Study on the He/H<sub>2</sub>O Plasma Jet

Jingjing Liu, Dong Chen, and Guangzhen Du Guangzhou Univ., China

## FP-039

Study of Various Cross Sections of Fluorocarbons for Plasma Modeling Applications

Dhanoj Gupta, Heechol Choi, Deuk-Chul Kwon, Mi-Young Song, and Jung-Sik Yoon NFRI. Korea

#### **FP-040**

Measurement of Electron Scattering Cross Sections of Molecules Using Magnetized

Haeuk Pyun, Dae Chul Kim, Young Rock Choi, Yonghyun Kim, Young-Woo Kim, Yeunsoo Park, Mi-Young Song, Jung-Sik Yoon, and Hyuck Cho *NFRI, Korea* 

#### **FP-041**

Plasma Surface Kinetic Studies of Etch Process in Fluorocarbon Plasmas

Chang Won-Seok<sup>1</sup>, Kwon Deuk-Chul<sup>1</sup>, Mi-young Song<sup>1</sup>, Dea-Chul Kim<sup>1</sup>, Jong-Sik Kim<sup>1</sup>, Young-woo Kim<sup>1</sup>, Jung-Sik Yoon<sup>1</sup>, Dong-Hun Yu<sup>2</sup>, Yeong-Geun Yook<sup>3</sup>, and Yeon-Ho Im<sup>3</sup>

<sup>1</sup>NFRI, Korea, <sup>2</sup>Kyungwon Tech Inc., Korea, <sup>3</sup>Chonbuk Nat'l Univ., Korea

## FP-042

The Plasma & Chemical Property Data Management System for Plasma Modeling and Simulation

Jun-Hyoung Park, Heechul Choi, Won-Seok Chang, Deuk-Chul Kwon, and Mi-Young Song NFRI. Korea

#### **FP-043**

Numerical Optimization of Rate Coefficients of Chemical Reactions in C<sub>4</sub>F<sub>8</sub> Plasma

Sang-Young Chung, Deuk-Chul Kwon, and Mi-Young Song NFRI. Korea

### **FP-044**

Study on the Hysteresis during E to H Mode Transition at Low Pressure Inductively Coupled Plasma

Hyun-Ju Kang, Young-Hun Hong, and Chin-Wook Chung Hanyang Univ., Korea

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Withdrawn

#### **FP-046**

Withdrawn

## FP-047

Studies of Interfacial Microstructures and Series Resistance on Electroplated and Hot-Dipped Sn- x Cu Photovoltaic Modules

Kuan-Jen Chen, Fei-Yi Hung, Truan-Sheng Lui, and Hsu Lin Nat'l Cheng Kung Univ., Taiwan

## FP-048

Numerical Simulation and Defect Analysis of CIGS Thin Film Solar Cells Using TCAD

Sangah Lee, Jaesung Lee, Jeonghoo Jo, Ganghoo Lee, Yoojeong Lee, and Myunghun Shin Korea Aerospace Univ., Korea

### FP-049

Withdrawn

#### **FP-050**

The Effect of TICL<sub>4</sub> Treatment on the Interface Roughness to the Electron Transport Layer of Perovskite Solar Cell and Their Performance.

Hai Truyen Dang, Thi Nguyen Nguyen, Sang Mo Kim, and Chung Wung Bark *Gachon Univ., Korea* 

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## FP-051

Study of Crystalline Siliconsolar Cells Texturing Process with SF<sub>6</sub> Atmospheric Pressure Plasma

Woo Jae Kim<sup>1</sup>, Hwan Hee Lee<sup>1</sup>, Hee Tae Kwon<sup>1</sup>, Gi Won Shin<sup>1</sup>, Chang Sil Yang<sup>2</sup>, and Gi-Chung Kwon<sup>1</sup>

<sup>1</sup>Kwangwoon Univ., Korea, <sup>2</sup>Y.I. TECH, Korea

#### FP-052

A Study on Crystalline Solar Cell Phosphorous Doping Using Atmospheric Pressure Plasma

Hwan Hee Lee<sup>1</sup>, Hee Tae Kwon<sup>1</sup>, Gi Won Shin<sup>1</sup>, Woo Jae Kim<sup>1</sup>, Chang Sil Yang<sup>2</sup>, and Gi Chung Kwon<sup>1</sup>

<sup>1</sup>Kwangwoon Univ., Korea, <sup>2</sup>Y.I. TECH Co.,Ltd, Korea

### FP-053

Fabrications of Copper Oxide Based Heterojunction Thin Film Solar Cell by Using Sputtering

Dae San Lee<sup>1</sup>, Yu Jin Kim<sup>1</sup>, Yu sup Jung<sup>2</sup>, and Kyung Hwan Kim<sup>1</sup> <sup>1</sup>Gachon Univ., Korea, <sup>2</sup>CNI Tech., Korea

### FP-054

Characteristics of Perovskite Solar Cells (PSCs) Prepared with Chemical Mechanical Polished Tansparent Electrode

Sangmo Kim, He Rui, Ma Ro Kim, Dang Hai Truyen, Jeongseo Kim, Haram Lee, Seong Gwan Shin, Hyung Wook Choi, and Chung Wung Bark *Gachon Univ., Korea* 

### FP-055

Characteristics of TCO-Less Dye-Sensitized Solar Celss Using ZnO Nanorods Grown by Hydrothermal Method

Nam-Hoon Kim<sup>1</sup>, Seok-Jae Kim<sup>2</sup>, and Yong Seob Park<sup>3</sup>

<sup>1</sup>Chosun Univ., Korea, <sup>2</sup>Medical Microrobot Center, Korea, <sup>3</sup>Chosun College of Science and Tech., Korea

#### **FP-056**

Fabrication of Si Thin-Film Tandem Solar Cell on Multi-Surface Textures of Periodic Honeycomb Glass

Hyeongsik Park<sup>1</sup>, Myunghun Shin<sup>2</sup>, Anh Huy Tuan Le<sup>1</sup>, Jaehyun Cho<sup>1</sup>, Junhee Jung<sup>1</sup>, Jaesung Lee<sup>2</sup>, Jaehyung Lee<sup>1</sup>, and Junsin Yi<sup>1</sup>

<sup>1</sup>Sungkyunkwan Univ., Korea, <sup>2</sup>Korea Aerospace Univ., Korea

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#### FP-057

Development of Phosphorus Doped Highly Conducting N-Type Nano Crystalline Silicon Film for High Efficiency Thin Film Solar Cells

Chonghoon Shin, S. M. Iftiquar, Jinjoo Park, Sangho Kim, Junhee Jung, Sungjae Bong, and Junsin Yi

Sungkyunkwan Univ., Korea

#### **FP-058**

Withdrawn

#### FP-059

Study on the ITO Work Function and Hole Injection Barrier in Silicon Heterojunction Solar Cells

Seongho Jeon, Woong-Kyo Oh, Youngseok Lee, Donggi Shin, Geonju Yoon, Sehyeon Kim, and Junsin Yi

Sungkyunkwan Univ., Korea

#### **FP-060**

IR-Reflective Colored Solar Cells with Transparent MgF<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub>/Ag/Al<sub>2</sub>O<sub>3</sub> Multilayer Thin Films

Jang-Hsing Hsieh and Yi-Jin Wei

<sup>1</sup>Ming Chi Univ. of Tech., Taiwan

#### **FP-061**

Effect Of Sb Mole Concentration on the Electrochemical Characteristics of Electrodeposited Cuprous Oxide Thin Film

Young Dae Yun, Young been Kim, Joo Sung Kim, and Hyung koun Cho Sungkyunkwan Univ., Korea

#### **FP-062**

Surface Plasma Treatment of PEDOT-TiO<sub>2</sub> Composite Materials and Its Applying to Electrode in Various Devices

Sang-Hun Nam, Dong In Kim, Ji Won Lee, Jung-Honn Yu, Hyeon Jin Seo, and Jin-Hyo Boo Sungkyunkwan Univ., Korea

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## FP-063

Synthesis of Nitrogen-Doped Carbon Nanowalls as Direct Methanol Fuel Cell Electrode Using Plasma Enhanced Chemical Vapor Deposition

Radwan Metwaly Elzoheiry<sup>1,2</sup>, Shinsuke Mori<sup>1</sup>, Fatemeh Bohlooli<sup>1</sup>, Hiroki Shinkawa<sup>1</sup>, Sho Kaneda<sup>1</sup>, and Mahmoud Ahmed<sup>2</sup>

<sup>1</sup>Tokyo Inst. of Tech., Japan, <sup>2</sup>E-JUST, Egypt

#### **FP-064**

Effect of Sb Mole Concentration on the Electrochemical Characteristics of Electrodeposited Cuprous Oxide Thin Film

Young Dae Yun, Sung Hyeon Jung, Young Been Kim, Joo Sung Kim, and Hyoung Koun Cho Sungkyunkwan Univ., Korea

## FP-065

Characterization of Ablation Properties of Carbon Fiber Reinforced Composites with High Enthalpy Plasma Wind Tunnel

Philyong Oh, Jung Chul Choi, Ho Seok Kim, Bo Ram Kang, Seong Man Choi, and Bong Guen Hong

Chungbuk Nat'l Univ., Korea

#### **FP-066**

Steam-Methane Reforming in a Steam Plasma Using 2.45 GHz Microwave System

Daehyun Choi, Changhyun Cho, Hyunjae Park, Jihun Kim, and Taehyup Lho NFRI, Korea

#### **FP-067**

Withdrawn

#### **FP-068**

Improving the Efficiency of Upconversion Material with Slot Modes in Silicon Nanoblock Arrays

Youngsoo Kim, Kihwan Moon, Young Jin Lee, Seokhyeon Hong, and Soon-Hong Kwon Chung-Ang Univ., Korea

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#### **FP-069**

Improvement of Upconversion Process Using Metamaterial Mirror

Young Jin Lee, Kihwan Moon, and Soon-Hong Kwon Chung-Ang Univ., Korea

#### **FP-070**

The Uniformity Optimization of La-Doped BaSnO<sub>3</sub> Film via Multistep Spin Coating

Yi Zhang and Jaehyeong Lee Sungkyunkwan Univ., Korea

#### FP-071

Surface Fluorination of MCMB and Conductive Agent by Reactive Gas in Atmospheric Pressure Plasma and Their Applications

Seungryul Yoo, Dong Chan Seok, and Yong Ho Jung NFRI, Korea

#### **FP-072**

A Study on the Carbon Dioxide Dry Reforming with Methane Using Atmospheric 915MHz Microwave Plasma.

ChangHyun Cho, DaeHyun Choi, HyunJae Park, and JiHun Kim NFRI, Korea

## FP-073

Intense Red-Emitting Upconversion Nanophosphors with Core/Shell/Shell Structure

A-Ra Hong<sup>1</sup>, Kwangyeol Lee<sup>2</sup>, and Ho Seong Jang<sup>1</sup> \*\*IST, Korea, \*\*2Korea Univ., Korea

### FP-074

Optimization of UV-LED Sintering in Best Conditions of Silver Nanoparticles Ink

WonJe Oh, Donguk Kim, Soohyun Hwang, JiSu Park, Jeongin Park, and Jaehyeong Lee Sungkyunkwan Univ., Korea

### FP-075

Exploring the Correlation between  $MoS_2$  Nanosheets and 3D Graphene-Based Nano Structures for Reversible Lithium Storage

Yoonkook Son and Jae Bok Kwak Chosun Univ., Korea

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#### **FP-076**

Withdrawn

#### **FP-077**

Numerical Studies on the Performance of the Percolation Network for Flexible Transparent Conducting Electrodes under External Deformation

Jinyoung Hwang<sup>1</sup>, HyunA Jung<sup>1</sup>, Sang Hyun Lee<sup>2</sup>, and Hiesang Sohn<sup>3</sup>

<sup>1</sup>Korea Aerospace Univ., Korea, <sup>2</sup>Korea Univ., Korea, <sup>3</sup>Kwangwoon Nat'l Univ., Korea

## FP-078

Withdrawn

## FP-079

Mechanical Stretchability of Screen Printed Ag Nanoparticles Electrode on Polyurethane Substrate

Jieun Lim<sup>1</sup>, Dockyoung Lee<sup>2</sup>, and Hanki Kim<sup>1</sup> <sup>1</sup>Sungkyunkwan Univ., Korea, <sup>2</sup>ELK, Korea

## FP-080

Withdrawn

## FP-081

DC-Driven Stretchable Light-Emitting Devices Based on Perovskite Nanocomposites

Huanyu Zhou, Yeongjun Lee, Jinwoo Park, Seung Heyon Jo, Young-Hoon Kim, and Tae-Woo Lee

Seoul Nat'l Univ., Korea

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#### FP-082

Heterostructured Semiconductor Single-Walled Carbon Nanotube Films for Solution-Processed High-Performance Thin Film Transistors

Noh-Hwal Park and Yong-Young Noh Dongguk Univ., Korea

## FP-083

Solution-Processed Amorphous Indium-Gallium-Zinc-Oxide Thin-Film Transistors on a Flexible Plastic Substrate

Jaewook Jeong and Ikjun Jang Chungbuk Nat'l Univ., Korea

#### **FP-084**

Low Temperature Fabricated Organic-Inorganic Hybrid Insulator for Thin Film Transistors

JeongOh Kim, JaeSeok Hur, HyeonA Kim, and JaeKyeong Jeong Hanyang Univ., Korea

#### **FP-085**

Applying Mixed Host with Newly Synthesized P-Typehost to Phosphorescent Organic Light-Emitting Diodes for High External Quantum Efficiency and Low Efficiency Roll-Off

Jun Yeob Lee, Ha Lim Lee, and HoJung Lee Sungkyunkwan Univ., Korea

#### **FP-086**

Highly Stretchable and Ultrasmooth Silver Nanowire Embedded Electrode for Stretchable Organic Light-Emitting Diodes (SOLEDs)

Jeongho Min and Chang Su Kim KIMS, Korea

#### **FP-087**

Reaction between Metal and Oxides

Sang Min Lee, Sang Ho Hwang, Yeong Jo Baek, In Hye Kang, Min Su Kang, Seok Jun Kang, Ye Lin Han, and Byung Seong Bae

Hoseo Univ., Korea

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#### FP-088

A Solution Processed Hybrid Gate Dielectric Prepared with Cross-Linkable Metal Ligand

HyeonA Kim, JeongOh Kim, JaeSeok Hur, and JaeKyeong Jeong Hanyang Univ., Korea

#### **FP-089**

Study on Back Channel Etching of IGZO Transistor with New Titanium Alloy Source/Drain

Jinwon Bae, Jeonghyun Kim, Jaehong Jeon, Heehwan Choe, and Jong Hyun Seo Korea Aerospace Univ., Korea

#### FP-090

Solution-Processed Gate Insulator for Complementary Thin Film Transistor Applications on Flexible Substrate

Hyeong Jun Cho<sup>1</sup>, Dong-Hoon Lee<sup>1</sup>, Eung-Kyu Park<sup>1</sup>, Min Su Kim<sup>1</sup>, So Young Lee<sup>1</sup>, Kee Chan Park<sup>2</sup>, Heehwan Choe<sup>3</sup>, Jae-Hong Jeon<sup>3</sup>, and Yong-Sang Kim<sup>1</sup>

<sup>1</sup>Sungkyunkwan Univ., Korea, <sup>2</sup>Konkuk Univ., Korea, <sup>3</sup>Korea Aerospace Univ., Korea

#### **FP-091**

Improved Contact Property IZO Thin-Film Transistors via Ultrathin Al<sup>2</sup>O<sup>3</sup> Layer in Low Temperature Process

Hyung Koun Cho, Sung Hyeon Jung, and Cheol Hyoun Ahn Sungkyunkwan Univ., Korea

#### FP-092

Promotion of Adhesion between Metal Electrodes and Stretchable Substrates Using Organic Primer

Yong Hee Kim, Eun Kwang Lee, and Joon Hak Oh POSTECH, Korea

#### FP-093

Charge Mobility and Stretchability of Field-Effect Transistors Based on Semiconducting Polymers with Non-Conjugated Backbone Segments

Mingyuan Pei, Min Ju Cho², Donghoon Choi², and Hoichang Yang¹ Inha Univ., Korea, ²Korea Univ., Korea

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#### FP-094

Neutral Beam Assisted Sputtering Gas Barrier for Stretchable Display

SeungMin Shin, YunSung Jang, Seungjun Yi, and MunPyo Hong Korea Univ., Korea

#### FP-095

Study on Wet Etching Behavior of Amorphous CuZr Thin Film in Hydrogen Peroxide Solution for Stretchable Display

Jinwon Bae, Myeongsik Im, and JongHyun Seo Korea Aerospace Univ., Korea

#### **FP-096**

Self-Alignment of Conductive Micro-Spherefor Stretchable Micro LED

Ho Won Yoon, Jae Byung Park, and MunPyo Hong Korea Univ., Korea

#### **FP-097**

Enhanced Electrical and Physical Properties of Metal Nanowire Networks Using Inductive Coil System

Jisoo Oh and Geunyoung Yeom Sungkyunkwan Univ., Korea

## FP-098

Free-Standing Stretchable Sensor Array Using Stiffness Design of Interconnectors

Jongho Lee and Namyun Kim GIST, Korea

#### **FP-099**

Fabrication of Flexible Ag Circuit at Low Temperature Using Intense Pulsed Light Energy

SangWoo Kim<sup>1</sup>, JongWoong Kim<sup>2</sup>, Dong-Gun Kam<sup>3</sup>, and SeungBoo Jung<sup>1</sup>

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#### **FP-100**

Large-Scale Etching of Silicon Nitride Using a Linear ECR Plasma Source with Reciprocating Substrate Motion

SeongYong Kwon, HoWon Yoon, YunSung Jang, SeungMin Shin, Seungjun Yi, and MunPyo Hong

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