

Thin Film Processing and Devices (TF)

Oral Presentation

Nov. 7, 2011 (Mon.)

TF 1 (Thin Film Processing and Devices 1)

Ara

Chair: Prof. Migaku Takahashi (Tohoku University, Japan)

15:00-16:10

TFIS1

Biaxial Texturing of CeO₂ Buffer Layer on the MgO Substrates by Pulsed Laser Deposition

15:00-15:30

Invited Speech

Sang-Im Yoo

Seoul National University, Korea

TF1159

SiGe Synthesis by Ge Ion Implantation

15:30-15:50

Hyunng-Sang Yuk¹, Tom Tate¹, Kristel Fobelets¹, Jin-Heon Oh², Kee-Joe Lim²

¹Imperial College London, UK, ²Chungbuk National University, Korea

TF649

Electrical Properties of Nano-Floating Gate Memory with Bi Nanocrystals Embedded in Bi₂Mg_{2/3}Nb_{4/3}O₇ (BMN) Thin Films

15:50-16:10

Hyun-June Jung, Hyun-A Song, Seung-Dong Yang, Kwang-Seok Jeong, Ga-Won Lee, Soon-Gil Yoon

Chungnam National University, Korea

Nov. 7, 2011 (Mon.)

TF 2 (Thin Film Processing and Devices 2)

Ara

Chair: Prof. Migaku Takahashi (Tohoku University, Japan)

16:30-17:50

TF1599

Structural and Electrical Properties of Bi₂O₃-Nb₂O₅ Thin Film Grown on Pt/Ti/SiO₂/Si Substrate at Low Temperature for Embedded Capacitors

16:30-16:50

Jin-Seong Kim, Jong-Woo Sun, Sahn Nahm

Korea University, Korea

TF1294

Super-filling of High Aspect-Ratio Features with Copper by Catalyst Enhanced CVD Coupled with Plasma Treatment and its Modeling

16:50-17:10

Won-Jong Lee, Chang-Gyu Kim

KAIST, Korea

TF637

Nanocrystalline/Nanocolumnar Aluminum Thin Film Electrode for Li-ion Rechargeable Batteries

17:10-17:30

S K Sharma^{1,2}, Bo-Gyun Kim¹, Min-Sik Kim³, Jong-Sung Yu³, Chi Kyu Choi²

¹Cheju Halla College, Korea, ²Jeju National University, Korea, ³Korea University, Korea

TF513

Bandgap Alteration of Transparent Zinc Oxide Thin Film with Mg Dopant

17:30-17:50

Salina Muhamad, Suriani Abu Bakar, Rafidah Ahmad, Mohamad Hafiz Mamat, Mohamad Rusop Mahmood

Universiti Teknologi MARA, Malaysia

Nov. 8, 2011 (Tue.)

TF 3 (Thin Film Processing and Devices 3)

Ara

Chair: Dr. Cong Wang (Kwangwoon University, Korea)

09:10-10:20

TFIS2**Atomically Controlled Processing for Oxide Thin Films and Nanowires**

09:10-09:40 Tomoji Kawai

Invited Speech *Osaka University, Japan, Konkuk University, Korea***TF298****The Electrical Characterization of Post-annealed ZnO TFTs as a Function of Different Temperature Under O₂ Ambient**

09:40-10:00

Kwang Seok Jeong¹, Yu Mi Kim¹, Ho Jin Yun¹, Seung Dong Yang¹, Sang Youl Lee¹, Young Su Kim², Hi Deok Lee¹, Ga Won Lee¹¹Chungnam National University, Korea, ²National Nanofab Center, Korea**TF267****Indium Tin Oxide Thin Films Crystallized at a Low Temperature on Polymer Substrate by Off-axis RF Magnetron Sputtering**

10:00-10:20

Hyung-Jin Choi, Hyun-June Jung, Soon-Gil Yoon

Chungnam National University, Korea

Nov. 8, 2011 (Tue.)

TF 4 (Thin Film Processing and Devices 4)

Ara

Chair: Prof. Sang Im Yoo (Seoul National University, Korea)

10:40-12:00

TF582**The Impact of High-pressure Oxygen Annealing on Negative Bias Illumination Stress-induced Instability of ZnSnO Thin Film Transistors**

10:40-11:00

Kwang Hwan Ji¹, Ji-In Kim¹, Hong Yoon Jung¹, Se Yeob Park¹, Shinhyuk Yang², Un Ki Kim³, Cheol Seong Hwang³, Sang-Hee KoPark², Chi-Sun Hwang², Jae Kyeong Jeong¹¹Inha University, Korea, ²Electronics and Telecommunications Research Institute, Korea,³Seoul National University, Korea**TF572****High Performance ZnSnO Transistors by Inserting Ultra-thin InSnO Layer at the Gate Insulator/channel Interface**

11:00-11:20

Ji-In Kim, Kwang Hwan Ji, Hong Yoon Jung, Se Yeob Park, Jae Kyeong Jeong

*Inha University, Korea***TF904****Electrical Instabilities in a-InGaZnO Thin Film Transistors with Si₃N₄ and Si₃N₄/Al₂O₃ Gate Dielectrics**

11:20-11:40

Yu-Mi Kim, Kwang-Seok Jeong, Ho-jin Yun, Seung-Dong Yang, Sang-Youl Lee, Hi-Deok Lee, Ga-won Lee

Chungnam National University, Korea

Thin Film Processing and Devices

TF895 **The Optimization of Photoconductors in the Fabrication of X-ray Conversion Materials by the Physical and Chemical Treatments for the Stability and Reproducibility of Digital X-ray Film**

11:40-12:00

Kyung-Min Oh¹, Jung-Wook Shin¹, Young-Gyu Lee¹, Yong-Gyun Song¹, Sung-Gwang Park², Sang-hee Nam¹

¹Inje University, Korea, ²Busan Paik Hospital, Korea

Nov. 8, 2011 (Tue.)

TF 5 (Thin Film Processing and Devices 5)

Ara

Chair: Prof. Tomoji Kawai (Osaka University, Japan)

15:30-16:40

TFIS3 **Iron-Nitride Compound as a New Candidate for Futured Permanent Magnetic Material**

15:30-16:00

Invited Speech

Migaku Takahashi

Tohoku University, Japan, Chungnam National University, Korea

TF271 **Tunable Magnetism by Magnetic Phase in Fe₃O₄/ZnO Multilayer**

16:00-16:20

Jong-Gu Yun¹, Chang-Yup Park², Soon-Gil Yoon¹

¹Chungnam National University, Korea, ²Korea Advanced Institute of Science and Technology, Korea

TF261 **Characterization of the Bi₂Mg_{2/3}Nb_{4/3}O₇(BMNO)-Bi Nanostructured Thin Films Grown at Room Temperature by RF-sputtering**

16:20-16:40

Hyun-A Song, Hyun-June Jung, Soon-Gil Yoon

Chungnam National University, Korea

Nov. 8, 2011 (Tue.)

TF 6 (Thin Film Processing and Devices 6)

Ara

Chair: Dr. Hyungsang Yuk (University of Texas at Dallas, USA)

17:00-18:20

TF1219 **Microwave Plasma Reactor for Diamond Thin Film Device Fabrication**

17:00-17:20

B. Paosawatyanong^{1,2}, N. Rujisamphan¹, W. Bhanthumnavin¹

¹Chulalongkorn University, Thailand, ²Commission on Higher Education, Thailand

TF149 **Epitaxy of Cu Thin Films on α -Al₂O₃ (0001) by Electron Beam Evaporation**

17:20-17:40

Sung-Jae Joo, Wook Bahng

Korea Electrotechnology Research Institute, Korea

TF109 **Effects of SU-8-based Thin Film for Various Microelectronic Applications**

17:40-18:00

Cong Wang, Won-Sang Lee, Nam-Young Kim

Kwangwoon University, Korea, Nano ENS Inc., Korea

TF305 Structural, Electrical and Optical Properties of γ -sprayed CuI Thin Films

18:00-18:20 M.N. Amalina, M.Rusop
Universiti Teknologi MARA (UiTM), Malaysia

Nov. 10, 2011 (Thu.)

TF 7 (Thin Film Processing and Devices 7)

Ara

Chair: Prof. Zonghoon Lee (Ulsan National Institute of Science and Technology, Korea) 09:10-10:20

TFIS4 Using Visible Light to Enhance the Photo-response Switching of Flexible CdS Films

09:10-09:40
Invited Speech Sung-Gi Hur¹, Hyung-Jin Choi¹, Jeong-Sun Kim², Geun-Hong Kim², Soon-Gil Yoon¹
¹Chungnam National University, Korea, ²Agency for Defense Development, Korea

TF422 The Influences of Gate-bias and Light Stresses on Device Characteristics of High-energy Electron Beam Irradiated IGZO-based TFTs

09:40-10:00
Kyeong Min Yu¹, Hye Ji Moon¹, Min Ki Ryu², Kyoung Ik Cho², Eui-Jung Yun¹, Byung Seong Bae¹
¹Hoseo University, Korea, ²ETRI, Korea

TF1323 High Benefit Performance via a Safety Mechanism of a Non-contact Module on Optical Device Surfaces

10:00-10:20
P.S. Pa
National Taipei University of Education, Taiwan

Nov. 10, 2011 (Thu.)

TF 8 (Thin Film Processing and Devices 8)

Ara

Chair: Prof. Soon-Gil Yoon (Chungnam National University, Korea) 10:40-12:10

TFIS5 Investigation on Grain Boundaries in Monolayer Graphene by Advanced TEM

10:40-11:10
Invited Speech Zonghoon Lee¹, Kwanpyo Kim², W. Regan², M. Crommie², A. Zettl²
¹UNIST, Korea, ²UC Berkeley, USA

TF234 Electrode Applications of the Transparent Capacitors Through an Optimal Patterning of the Graphene

11:10-11:30
Sin-Hye Na, Hyun-A Song, Sung-Gi Hur, Soon-Gil Yoon
Chungnam National University, Korea

TF795 Analytical Study on Femtosecond Laser Processing for Au Films

11:30-11:50
Ching-Yen Ho, Yu-Hsiang Tsai, Jing-Yi Lv, Mao-Yu Wen
Hwa-Hsia Institute of Technology, Taiwan

Thin Film Processing and Devices

- TF419** **Research on the Characteristics of Dielectric Barrier Discharge and Dielectric Barrier Corona Discharge**
11:50-12:10 Mi Zeng, Zhiyong Cui, Yan-zhou Sun
Henan Polytechnic University, China

Poster Presentation

Nov. 7, 2011 (Mon.)

TFP 1 (Thin Film Processing and Devices) Poster Presentation 1

Lobby 8F

Chair: Prof. Soon-Gil Yoon (Chungnam National University, Korea)

13:30-15:00

- TF1633** **Deposition of ZnO Thin Films by MOCVD using Ultrasonic Nebulization**
Choon-Ho Lee
Keimyung University, Korea
- TF1632** **Preparation of Al Doped ZnO Thin Films by MOCVD using Ultrasonic Nebulization**
Do-Woo Kim, Choon-Ho Lee
Keimyung University, Korea
- TF1613** **Effect of Electron Irradiation on the Electrical/Optical Properties in Nanostructured Oxide Thin Films**
Chan-Rok Park, Woo-Ri Do, Dai-Hui Cho, Da-Gam Bae, Jin-Ha Hwang
Hongik University, Korea
- TF1585** **The Effect of the Interfacial Properties between Channel Layer and Gate Insulator on the Electrical Performance of In-Ga-Zn Oxide Thin Film Transistor**
Bosul Kim^{1,2}, Do Hyung Kim^{1,3}, Sang Yeol Lee¹
¹Korea Institute of Science and Technology, Korea, ²University of Science & Technology, Korea, ³University of Dongguk, Korea
- TF1554** **The PL Characteristics of ZnO Thin Film on Flexible Polymer Substrate by Pulse Laser Deposition with Various Temperatures**
Cheon Lee, Young Jin Choi
Inha University, Korea
- TF1511** **Thermal Design and Annealing Effects on the VOx Device for Uncooled IR Microbolometer**
Myung-Soo Han¹, Il-Mong Park¹, Seok-Man Han¹, Hang-Ju Ko¹, Hyo-Jin Kim¹, Sung-Gap Lee²
¹Korea Photonics Technology Institute, Korea, ²Gyeongsang National University, Korea

- TF1503 High Mobility P-Channel Thin-film Transistors with Ultra-Large Grain Poly-Si Formed using Nickel Induced Crystallization**
Kyungsoo Jang, Wonbaek Lee, Kyunghyun Baek, Woojin Choi, Junsin Yi
Sungkyunkwan University, Korea
- TF1470 Pulsed DC Bias Effects on p-type Semiconductor SrCu₂O₂ Film Deposited by RF Magnetron Sputtering**
Hye-Won Seok^{1,2}, Sei-Ki Kim¹, Hyun-Seok Lee¹, Mi-Jae Lee¹, Byeong-Kwon Ju²
¹*Korea Institute of Ceramic Engineering and Technology (KICET), Korea, ²Korea University, Korea*
- TF1448 Investigation of Thin Metal Sheet via Continuous Strip Casting**
Changbum Lee¹, Jaewoo Lee¹, Bo-Yun Jang², Joonsoo Kim², Youngsoo Ahn²
¹*Korea University, Korea, ²Korea Institute of Energy Research, Korea*
- TF1433 Morphology Properties of SnO₂ Thin Films Fabricated by using E-beam Method**
Chang Hoon Sung¹, Geun Woo Kim¹, Keun Young Park¹, Yong Jun Seo¹, Sung Hun Lee², Eung Sun Byon², Nam Jin Lyu³, Bon Heun Koo¹
¹*Changwon National University, Korea, ²Korea Institute of Materials Science (KIMS), Korea, ³Kang Nam Co. Ltd, Korea*
- TF1425 Effect of Dopants(Tri-valent, Penta-valent) on the Electrical and Optical Properties of SnO₂ based Transparent Electrodes**
Bon Heun Koo¹, Yong Jun Seo¹, Geun Woo Kim¹, Chang Hoon Sung¹, Keun Young Park¹, Byung Hyun Ahn¹, Si Nae Heo¹, M. S. Anwar¹, Sung Hun Lee², Eung Sun Byon², Nam Jin Lyu³
¹*Changwon National University, Korea, ²Korea Institute of Materials Science (KIMS), Korea, ³Kang Nam Co. Ltd, Korea*
- TF1419 A Mask Aligner System Utilizing Photolithography for Applying Liquid Crystal Mask as a Photomask**
Min Sup Oh¹, Chang Kyo Kim¹, Jae Hong Lee², Chinsoo Hong¹
¹*Soonchunhyang University, Korea, ²NST Co. Ltd., Korea*
- TF1418 Transparent Properties of p-type Conducting Sb₂O₃ Doped SnO₂ Thin Films by Pulsed Laser Deposition**
Keun-Young Park, Geun-Woo Kim, Yong-Jun Seo, Chang-Hoon Sung, Si-Nae Heo, Bon Heun Koo
Changwon National University, Korea
- TF1413 Transparent p-type Conducting Al/SnO₂/Al Multilayer Thin Films Deposited by Sputtering**
Geun Woo Kim, Keun Young Park, Chang Hoon Sung, Yong Jun Seo, Tae Kwon Song, Bon Heun Koo
Changwon National University, Korea

Thin Film Processing and Devices

TF1325 Mn-doping Effect on Resistive Switching Characteristics of Zinc Oxysulfide Thin Films on Plastic Substrates

Yong Han, Kyoungah Cho, Sangsig Kim
Korea University, Korea

TF1319 Experimental Study on Discharge Characteristics of MgO Layer with MgO Single Crystal Powder in AC-PDPs

Jae Hyun Kim, Coon-Sang Park, Hyung-Dal Park, Heung-Sik Tae
Kyungpook National University, Korea

TF1317 Investigation of Discharge Characteristics and Efficiency by Thickness of Phosphor Layer in Plasma Display Panel

Hyung Dal Park, Jae Hyun Kim, Choon-Sang Park, Heung-Sik Tae
Kyungpook National University, Korea

TF1310 Influence of Surface and Plate-Gap Discharges on Panel-Aging Characteristics in AC Plasma Display Panel

Choon-Sang Park, Heung-Sik Tae
Kyungpook National University, Korea

TF1301 Investigation of the Addition of Vanadium into In-Ga-Zn Oxide Thin Film Transistor Fabricated by Solution Process

Jun Young Choi^{1,2}, Ki-Ho Park¹, Yun su Jun¹, Sang Sig Kim², Sang Yeol Lee¹
¹Korea Institute of Science and Technology, Korea, ²Korea University, Korea

TF1300 Characteristics of Indium-tin-oxide Thin Films Deposited by e-beam Evaporator at High Temperature

Su-Chang Ahn, Hyun-jun Choi, Sang-Muk Kim, Jin-Hong Lee
Korea Photonics Technology Institute, Korea

TF1252 The Effect of Magnesium Oxide Passivation on the Bias Instability of Amorphous HfInZnO Thin Film Transistors

Dong Youn Yoo^{1,2}, Do Hyung Kim¹, Byeong Kwon Ju², Sang Yeol Lee^{1,2}
¹Korea Institute of Science and Technology, Korea, ²Korea University, Korea

TF1250 Resistivity Tailoring of Non-stoichiometric Nickel Oxide Thin Films Deposited RF-magnetron Sputtering for Application to p-channel Thin Film Transistors

Seung-Jun Lee¹, Seongpil Chang¹, Jung Ho Park¹, Shin Woo Jeong¹, Kyoungchul Jo¹, Jong-Woo Kim¹, Tae-Yeon¹, Sarah Eunkyung Kim², Byeong-Kwon Ju¹
¹Korea University, Korea, ²Seoul National University of Science & Technology, Korea

TF1244 Fully Room Temperature Fabricated Pt/Y₂O₃/Pt Nonvolatile Memory

Jong-Woo Kim¹, Seongpil Chang¹, Jung Ho Park¹, Shin Woo Jeong¹, Kyoungchul Jo¹, Tae-Yeon Oh¹, Seung-Jun Lee¹, Jeon-Kook Lee², Byeong-Kwon Ju¹
¹Korea University, Korea, ²Korea Institute of Science and Technology (KIST), Korea

- TF1242 Epitaxial Recrystallization and Luminescence of $\text{CaAl}_2\text{O}_4:\text{Eu}^{2+}$ Thin Films Prepared on Sapphire Substrates**
Dai-Hong Kim¹, Choong Ki Lee², Jun Seong Lee², Seong-Hyeon Hong¹, Young Jin Kim²
¹Seoul National University, Korea, ²Kyonggi University, Korea
- TF1233 Electrical, Structural, and Optical Properties of Ta-In-Zn-O Thin Films Fabricated using Combinatorial Sputtering System**
Jae-Cheol Park, Gi-Seok Heo, Jong-Ho Lee, Ho-Sung Kim, Tae-Won Kim
Korea Institute of Industrial Technology, Korea
- TF1226 Efficiency Improvement of Organic Photovoltaic with Nanopatterned Electrode by Laser Interference Lithography**
Tae-Yeon Oh, Shin-Woo Jeong, Jung-Ho Park, Byeong-Kwon Ju
Korea University, Korea
- TF1221 Effect of Photo-Illumination on Electrical Response of Diamond Diode**
B. Paosawatyanong^{1,2}, N. Rujisamphan¹, W. Bhanthumnavin¹
¹Chulalongkorn University, Thailand, ²Commission on Higher Education, Thailand
- TF1192 Threshold Voltage Properties of OFET with CuPc Active Material**
Ho-Shik Lee, Min-Woo Cheon, Yong-Pil Park
Dongshin University, Korea
- TF1169 Fabrication of All-transparent $\text{Li}_{0.15}\text{Ni}_{0.85}\text{O}/\text{In-Mg}_{0.5}\text{Zn}_{0.5}\text{O}$ Heterojunction Thin Film Diodes with Cubic Epitaxial Structures**
L. Zhuang^{1,2}, C. H. Lau², K. H. Wong², B. J. Li¹, X. G. Tang³
¹Sun Yat-Sen University, China, ²The Hong Kong Polytechnic University, China, ³Guangdong University of Technology, China
- TF1163 Structural and Electrical Properties of Ni-germanosilicides Formed using Pulsed KrF Laser Annealing**
Woong-Ki Hong, Min-Woo Seo, Kyu-Hwan Shim, Jin-Sung Kim, Chel-Jong Choi
Chonbuk National University, Korea
- TF1156 Epitaxial Growth and Properties of $\text{Al}_x\text{Ga}_{1-x}\text{N}$ Layers Grown by HVPE**
Ji Sun Lee^{1,2}, Dongjin Byun¹, Hae-Kon Oh³, Young Jun Choi³, Hae-Yong Lee³, Jin-Ho Kim², Tae-Young Lim², Jonghee Hwang²
¹Korea University, Korea, ²Korea Institute of Ceramic Engineering & Technology, Korea, ³LumiGNtech Co., Korea
- TF1111 Influence of He-Ne Laser ($\lambda=632.8$ nm) Power on Doping Profile of Indium Into Cadmium Sulfide (CdS) Thin Film and Its Characteristics**
Kuk Do Myung, Nam-Hoon Kim, Woo-Sun Lee
Chosun University, Korea
- TF1060 Interactions between Dimethylaluminum Isopropoxide Molecules and Their Effect on Dimethylaluminum Isopropoxide Reaction with a Fully Hydrogen-terminated Si (001) Surface**
Dae-Hee Kim, Yeong-Cheol Kim
Korea University of Technology and Education, Korea

Thin Film Processing and Devices

- TF1058** **Structure and Properties of the Mg Doped CuCrO₂ Transparent Conducting Thin Films Deposited by Pulsed Laser Deposition**
Chul-Ho Bae¹, Dong-Kyun Shin¹, Hee-Young Lee¹, Se-Jong Lee², Jai-Yeoul Lee¹
¹Yeungnam University, Korea, ²Kyungsung University, Korea
- TF1042** **Electrical Properties of TaInZnO Thin-film Transistor Fabricated by RF Magnetron Sputtering**
Byeong-Yun Oh¹, Young-Jun Lee^{1,2}, Chang-Woo Hong^{1,3}, Jae-Cheol Park¹, Joo-Hyung Kim², Yong-Sung Choi³, Gi-Seok Heo¹, Tae-Won Kim¹, Kwang-Young Kim¹
¹Korea Institute of Industrial Technology (KITECH), Korea, ²Chosun University, Korea, ³Dongshin University, Korea
- TF1038** **Effect of Ar/O₂ Ratio on Properties of Thin Yttrium-Indium-Zinc-Oxide (YZIO) Films**
Young-Jun Lee^{1,2}, Byeong-Yun Oh¹, Jae-Cheol Park¹, Kwang-Young Kim¹, Joo-Hyung Kim²
¹Korea Institute of Industrial Technology, Korea, ²Chosun University, Korea
- TF1034** **The Effect of Annealing Treatment on Thermal Stability of AGZO Thin Films Deposited by DC Moving Magnetron Sputtering**
Jong-Ho Kang^{1,2}, Myung-Hyun Lee¹, Young Soo Lim¹, Won-Seon Seo¹, Mun Gi Park³, Heon-Jin Choi²
¹Korea Institute of Ceramic Engineering and Technology, Korea, ²Yonsei University, Korea, ³LG Display Co., Ltd, Korea
- TF988** **Effects of Wavelengths on Diffraction Efficiency of As₂Se₃ Glass Films**
Ki-Hyun Nam, Jang-Han Kim, Hong-Bay Chung
Kwangwoon University, Korea
- TF986** **Sb-doped Effect of Ag/Ge-Se-Te Thin Films Application for PRAM**
Ki-Hyun Nam, Hong-Bay Chung
Kwangwoon University, Korea
- TF984** **Characteristics of an Ag-inserted Amorphous InGaO₃(ZnO)₁₅ Multilayer Films for Transparent Electrode**
Do Yun Hwang, Jeong Hwan Lee, Han Jae Shin, Dong Cheul Han, Do Kyung Lee
Gumi Electronics and Information Technology Research Institute, Korea
- TF979** **Field Effect Characteristics in an Amorphous Ge-Se based Thin Film Transistor**
Jang-Han Kim, Ki-Hyun Nam, Won-Ju Cho, Hong-Bay Chung
Kwangwoon University, Korea
- TF977** **Electrical Characteristics of Ag-doped Ge_xSe_{100-x} Multi-layer Cells for ReRAM Applications**
Jang-Han Kim, Ki-Hyun Nam, Hong-Bay Chung
Kwangwoon University, Korea

TF967 The Properties of Transparent Conductive Indium Zinc Tin Oxide Thin Films for Dye-sensitized Solar Cell Application

Hong-Chan Ma, Damisih, Jong-Hun Cheon, Jae-Hong Kim, Hee-Young Lee
Yeungnam University, Korea

TF964 Fabrication and Characterization of Sol-gel Processed InSnGeO Thin Film Transistor

Jun Hyuk Choi, Soo Min Hwang, Seung Muk Lee, Guen Chul Park, Ji Cheol Kim, Jinho Joo
Sungkyunkwan University, Korea

TF946 Mg-doped ZnO Thin Film Transistors by a Solution-based Process

Ji-young Oh¹, Musarrat Hasan², Sang Chul Lim¹, Seung-Youl Kang¹, Chul-Am Kim¹, Jonghyurk Park¹, Sang Seok Lee¹, Hongki Cha¹, Kyoung Soo Suh¹, Kyoung Ik Cho¹, Seong Deok Ahn¹

¹ETRI, Korea, ²Inha university, Korea

TF907 Properties of IZTO Transparent Conducting Thin Films Fabricated by Magnetron Sputtering Equipped with Ion Beam System

Se-Jong Lee¹, Jai -Youl Lee², Nam-In Cho³

¹KyungSung University, Korea, ²Yeungnam University, Korea, ³Sunmoon University, Korea

TF879 Flexible Thin Film Transistor with Organic Gate Insulator and IGZO as the Active Layer

Heeok Kim, Hongki Cha, Seungyoul Kang, Sangchul Lim, Seongdeok Ahn, Kyoungik Cho
ETRI, Korea

TF1676 Fabrication of IZO Thin Films for Flexible Organic Light-emitting Diodes by RF Magnetron Sputtering

Dae-guen Jun, Hyun-hong Cho, Dam-bi Jo, Kyu-Mann Lee
Korea University of Technology and Education, Korea

Nov. 10, 2011 (Thu.)

TFP 2 (Thin Film Processing and Devices) Poster Presentation 2

Lobby 8F

Chair: Prof. Zonghoon Lee (Ulsan National Institute of Science and Technology, Korea) 13:30-15:00

TF347 Effect of Processing Parameters on Properties of ZnO Film Deposited by DC Reactive Magnetron Sputtering Method

Chan-Soo Baek¹, Do Hyung Kim², Sang Yeol Lee², Hyun-Hoo Kim³, Kee-Joe Lim¹

¹Chungbuk National University, Korea, ²Korea Institute of Science and Technology, Korea, ³Doowon Technical College, Korea

TF1146 Fabrication and Electrical Characteristics of Graphene Coated Copper Substrate by Electro Spray Coating Method

Jungsoo Kim, Hyung-Ho Jo, Dae-Guen Nam
Korea Institute of Industrial Technology, Korea

Thin Film Processing and Devices

- TF877** **The Electrical Properties of Fabricated Hybrid Structure for using Digital X-ray Detector**
Jung-Wook Shin, Kyung-Min Oh, Hye-Jin Park, Ji-Yun Lee, Kyoung-Jun Yoon, Sang-Hee Nam
Inje University, Korea
- TF855** **Study on Microstructure and Dielectric Properties of Sol-gel-processed ZrO₂ Films with Different Heat Treatment Time**
Seung Muk Lee, Soo Min Hwang, Jun Hyuk Choi, Geun Chul Park, Ji Cheol Kim, Jinho Joo
Sungkyunkwan University, Korea
- TF851** **Microstructural Change of Solution-Processed ZrO₂/Si Films by Thermal Annealing**
Soo Min Hwang, Jun Hyuk Choi, Seung Muk Lee, Geun Chul Park, Ji Cheol Kim, Jinho Joo
Sungkyunkwan University, Korea
- TF842** **Wet Chemical Etching Properties of Transparent Zn and Sn Co-doped In₂O₃ Electrode for Flexible Electronics Applications**
Han Jae Shin, Dong Cheul Han, Do Kyung Lee
Gumi Electronics and Information Technology Research Institute, Korea
- TF833** **The Feasibility Study of Avalanche Photoconductor in Digital Radiography**
Jung-Wook Shin, Kyung-Min Oh, Sung-Hun Kim, Yoon-Jin Lee, Kyu-Hong Lee, Sang-Hee Nam
Inje University, Korea
- TF818** **UV-shielding and Hydrophilic Protective Films Containing TiO₂@SiO₂ Nanoparticles**
Hyeong Seok Lee^{1,2}, Se Mi Im^{1,3}, Jung Whan Yoo¹
¹Korea Institute of Ceramic Engineering and Technology, Korea, ²Hanyang University, Korea, ³Inha University, Korea
- TF796** **Fabrication and Characteristics of ZnO Nanorods Grown on Zinc Foil by Chemical Bath Deposition**
Ji Hye Sung^{1,2}, Jin-Ho Kim¹, Jonghee Hwang¹, Tae-Young Lim¹, Yong Soo Cho²
¹Korea Institute of Ceramic Engineering and Technology, Korea, ²Yonsei University, Korea
- TF792** **Schottky Diode with Ag, Au, Pd, and Ni on ZnO/MgZnO Heterostructure**
Jong-Hoon Lee¹, Chang-Hoi Kim¹, Ah-Ra Kim¹, Hong-Seung Kim¹, Nak-Won Jang¹, Young Yun¹, Min-Wook Pin², Won-Jae Lee²
¹Korea Maritime University, Korea, ²Dong-Eui University, Korea
- TF767** **Effect of Bottom Layer Thickness on Crystalline Quality and Surface Roughness of ZnO Film Prepared by Multi-step Deposition Process**
Du-Han Bae, Won-Jae Lee, Geun-Hyoung Lee
Dong-Eui University, Korea

- TF766 Dielectric Properties of the Sol-gel-deposited Ultra-thin Gd₂O₃ Films with Different Sintering Temperatures**
Myung Soo Lee, Hyoungsub Kim
Sungkyunkwan University, Korea
- TF765 Gas Permeability of Carbon/SiO₂/Al₂O₃ Membrane Fabricated by Plasma-enhanced Chemical Vapor Deposition**
Jin-Soo Jeong¹, Churl-Hee Cho², Jong-Oh Kim¹, Won Youl Choi¹
¹*Gangneung-Wonju National University, Korea*, ²*Korea Institute of Energy Research, Korea*
- TF690 Microstructure Analysis of DLC Thin Film Fabricated by Filtered Arc Ion Plating Method**
Min-Woo Cheon¹, Tae-Gon Kim², Ho-Shik Lee¹, Yong-Pil Park¹
¹*Dongshin University, Korea*, ²*Dongshin University Graduate School, Korea*
- TF686 Characteristics of Rhenium-Iridium Coating Thin Film on Tungsten Carbide by Multi-target Sputter**
Min-Woo Cheon¹, Tae-Gon Kim², Ho-Shik Lee¹, Yong-Pil Park¹
¹*Dongshin University, Korea*, ²*Dongshin University Graduate School, Korea*
- TF676 Au/Ti Ohmic Contacts to Pulsed-laser Deposited ZnO Layer on p-type SiC**
Ji-Chul Jung¹, Min-Seok Kang¹, Ji-Hong Kim², Kang-Min Do², Byung-Moo Moon², Sung-Jae Joo³, Wook Bahng³, Sang-Cheol Kim³, Nam-Kyun Kim³, Ji-Hoon Lee¹, Sang-Mo Koo¹
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- TF660 Feasibility Study of Multi-layered Flexible ITO Electrode Substrate Fabricated by Roll-to-roll Sputtering System to Apply for Medical Image Sensor**
Sung-Hun Kim, Jung-Wook Shin, Kyung-Min Oh, Ji-Na Kim, Seung-Uk Heo, Sang-Hee Nam
Inje University, Korea
- TF635 Effects of Liquid Crystal Alignment on Molybdenum Oxide (MoO₃) via Ion Beam Irradiation Angle**
Jong-Jin Lee, Hyung-Jun Kim, Gun-Young Lee, Hong-Gyu Park, Byoung-Yong Kim, Dae-Shik Seo
Yonsei University, Korea
- TF632 Transparent Conductive Carbon Nanotube Network Films for Liquid Crystal Displays**
Hong-Gyu Park¹, Min-Ji Lee^{1,2}, Dae-Shik Seo¹
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- TF611 Comparative Study between ENIG and ENEPIG Soldering with Low Ag Content Sn-Ag Solder**
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- TF602** **Contact-dimension-dependent Electrical Conductivity of Graphite Powders, Carbon Nanotubes, and Exfoliated Carbon Nanosheets Under Physical Pressures**
Sung-Ho Choi, Hye-Mi Ju, Kwang Yeon Cho, Jihoon Kim, Seung Hun Huh
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- TF597** **Novel Partially Depleted SOI MOSFETs for Reducing the Floating-body Effect**
Abdollah Abbasi, Ali A. Orouji
Semnan University, Iran
- TF592** **Structural and Electrical Characterizations of n-Type β -FeSi₂/p-Type Si Heterojunctions Fabricated by Facing-Targets Direct-Current Sputtering**
Nathaporn Promros, Kyohei Yamashita, Shota Izumi, Tsuyoshi Yoshitake
Kyushu Univ., Japan
- TF591** **Evaluation of n-Type Nanocrystalline FeSi₂/p-type Si Heterojunctions Prepared by Pulsed Laser Deposition as Near-infrared Photodetectors**
Nathaporn Promros, Li Chen, Tsuyoshi Yoshitake
Kyushu Univ., Japan
- TF590** **Effects of Carbon-doping on Electrical Properties of n-type Nanocrystalline FeSi₂/p-type Si Heterojunction Photodiodes Prepared by Pulsed Laser Deposition**
Nathaporn Promros, Chen Li, Tsuyoshi Yoshitake
Kyushu Univ., Japan
- TF589** **Improved Breakdown Voltage of SOI MESFET with 4H-SiC Layer**
Ali. A. Orouji, Masoomeh Ghasemian, Amirhossein Aminbeidokhti, Soude Rahmaninezhad
Semnan University, Iran
- TF570** **Synthesis and Optical Properties of Thermochromic Vanadium Oxide Thin Films by RF Magnetron Sputtering**
Seung Ho Han¹, Hyun Bin Kim², Dong-gun Moon², Hyeung-Gyu Lee¹, Woo Seok Yang¹
¹*Korea Electronics Technology Institute, Korea*, ²*Samsung Corning Precision Materials, Korea*
- TF528** **Electrochemical Characteristics of Electrochromic Devices with Fluorine Doped Tin Oxide as Transparent Electrode**
Jihun Park^{1,2}, Chairul Hudaya^{1,3}, Dongjin Byun², Joong Kee Lee¹
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- TF492** **Improved Characteristics SOI MOSFETs with Two New Structures: Raised Buried Oxide and Recessed Buried Oxide**
Ali A. Orouji, Soude Rahmaninezhad, Amirhossein Aminbeidokhti, Masoomeh Ghasemian
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- TF475 Novel Structure of Polycrystalline Silicon Thin-Films Transistor with Controlled Crystal Orientation**
Min-Sun Kim¹, Hyun Min Cho¹, Seung Ki Joo²
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- TF428 Fabrication of Multi-color Photochromic Thin-film**
Bonghoon Kang¹, Dongsoo Choi¹, Gi-Tae Joo²
¹Far East University, Korea, ²Seoul National University of Technology, Korea
- TF424 Effect of Optimized Ti/Al/Ta/Au Ohmic Contact Resistance and Surface Morphology in AlGaIn/GaN HEMTs**
S.J. Cho, C. Wang, N.Y. Kim
Kwangwoon University, Korea
- TF411 Development and Post Annealing Influence on Chemical and Physical Properties of Cost Effective Nanostructure ZIO Thin Films**
Vipin Kumar Jain¹, Praveen Kumar², Subodh Srivastav³, Y.K. Vijay³
¹JK Lakshmiapat University, India, ²National Physical Laboratory, India, ³University of Rajasthan, India
- TF388 Contribution of Oxygen Working Pressures Investigated Over a Narrow Range to TiO₂ Thin-film Properties in Pulsed Laser Deposition**
Min-Wook Pin¹, Geun-Hyoung Lee¹, Won-Jae Lee¹, Eun-Ho Choi², Young-Zo Yoo²
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- TF385 The Effects of High-energy Electron Beam Irradiation on the Properties of IGZO Thin Films Prepared by rf Magnetron Sputtering**
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- TF374 Alternative Indium-Free Material for Electric Vehicle Window Transparent Heater**
Chairul Hudaya^{1,2}, Ji Hun Park^{1,3}, Joong Kee Lee¹
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- TF264 A Direct Monitoring of Four-bit/Cell Operation using Two-step Pulse Program Method**
Ho-Myoung An¹, Byungcheul Kim², Tea Geun Kim¹
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- TF233 Characterization and Optimization of P-type Gallium Tin Oxide (GTO) Thin Films Prepared by RF Magnetron Sputtering**
Ferdyano Finanda, Damisih, Hong Chan Ma, Hee Young Lee
Yeungnam University, Korea
- TF211 Effect of Oxygen Concentration on Electrical and Physical Characteristics of Sodium Potassium Niobates Ferroelectric Thin Films**
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TF209 Fabrication and Electrical Characterizations of CuO Thin Films for Applications in Resistive Random Access Memory Devices

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TF200 Double Step Insulator Fin Field Effect Transistor

Mahsa Mehrad, Ali A. Orouji

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TF186 Investigation of CuInS₂ Absorber Layer Prospered by Sulfurization of Cu-In Precursor used by DC/RF Magnetron Sputtering

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TF168 A Novel Structure for Leakage Current Improvement: A Triple Gate Poly Silicon Thin Film Transistor with Non Uniform Doping Channel

Ali A. Orouji, Robabeh Esmailnezhad

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TF118 Investigation of Cu-Ag Film Electrodeposited in Cyanide-based Electrolyte

Sang Heon Yong¹, Myung Jun Kim², Jae Jeong Kim², Jun Young Park¹, Oh Joong Kwon¹

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TF105 Optical and Electrical Properties of Two-Step Grown Naturally Textured AZO Transparent Conducting Oxide Layer

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TF103 Thermal Stability of 3 nm Thick Ir Layer Prepared by Hybrid Atomic Layer Deposition

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TF95 Structural and Electrical Properties of Chemical Solution Deposited NiFe₂O₄ Thin Films

H. J. Kim, J. W. Kim, S. S. Kim, G. H. Kim, Y. R. Bae, E. S. Kim, C. M. Raghavan, D. Do, M. H. Lee, Tae Kwon Song, Y. S. Sung, M. H. Kim

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TF903 A Study of Stacked Buffer Layer for the Epitaxial Growth of Zn_{0.5}Mg_{0.5}O Films on c-sapphire by Pulsed Laser Deposition

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