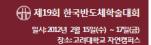
The 19th Korean Conference on Semiconductors



Room I

하나스퀘어 (아뜨리움)

일 시: 2월 17일(금) 13:40-16:45

세션명: [FP2] Poster 표

B. Patterning 분과

FP2-1 13:40-16:45 Hydrogen Plasma Characteristics by Cylindrical Inductively Coupled

Plasma for Photoresist Strip Process

저자: 양승국, 강정현, 조주형, 이성욱, 조정희, 채희선

소속: 피에스케이㈜ 연구소

FP2-2 13:40-16:45 AlGaInP기반 LED에서 공기 층 Hybrid DBR구조 삽입을 통한 발광 효율

향상에 관한 연구

저자: 류호성^{1,2} 박준모^{1,3}, 백종협¹, 곽준섭, 오화섭¹

소속: ¹한국광기술원 LED소자센터, ²순천대학교 WCU인쇄전자공학과,

³전남대학교 물리학과

FP2-3 13:40-16:45 Investigation on Etch Characteristics of Magnetic Tunnel Junction

Stacks in a CH₄/O₂/ArPlasma

저자: Tea Young Lee, Eun Ho Kim, and CheeWon Chung

소속: Department of Chemical Engineering, Inha University

FP2-4 13:40-16:45 Inductively Coupled Plasma Reactive Ion Etching of MgO Thin Films in

CH₄/Ar Plasma

저자: Tea Young Lee, Eun Ho Kim, Il Hoon Lee, and Chee Won

Chung

소속: Department of Chemical Engineering, Inha University

FP2-5 13:40-16:45 용매 증발 제어를 통한 고분자 복합 소재의 non-lithography 패터닝 기술

저자: 정희준, 박철민

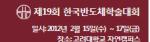
소속: 연세대학교 신소재과학과

FP2-6 13:40-16:45 Inductively Coupled Plasma Effect on Graphene Field Effect Transistor

저자: Y. D. Lim, D. Y. Lee, and W. J. Yoo

소속: Department of Nano Science and Technology, Sungkyunkwan University

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E. Compound Semiconductors 분과

FP2-7 13:40-16:45 Influence of Series Resistance and Interface State Density on Electrical Characteristics of Ru/Ni/n-GaN Schottky Diode

저자: M. Siva Pratap Reddy¹, V. Rajagopal Reddy², and Jung-Hee Lee¹

소속: ¹School of Electrical Engineering & Computer Science, Kyungpook National University, ²Department of Physics, Sri Venkateswara University

FP2-8 13:40-16:45 Drain Field Plate를 통한 AlGaN/GaN HEMT의 Off-state Breakdown Voltage 특성 개선에 관한 연구

저자: 안호정¹, 최우진¹, 박봉렬², 차호영², 서광석¹

소속: ¹서울대학교 전기컴퓨터공학과, ²홍익대학교 전자전기공학과

FP2-9 13:40-16:45 Sapphire Substrate밑면에 성장시킨 ZnO Nanorods의 LED성능에 미치는 영향

저자: 진주, 류버들, 한민, 김현규, 김희윤, 박재영, 홍창희

소속: 전북대학교 반도체 화학공학부

FP2-10 13:40-16:45 BCl³ ICP 건식 식각 공정으로 게이트 리세스한 0.25@ T-gate AlGaN/GaN/SiC HEMT 소자제작 및 특성

저자: 송인협^{1,2}, 장경욱¹, 안호균², 민병규², 임종원², 강동민², 김성일², 장우진², 이종민², 윤형섭², 문재경²

소속: ¹한서대학교 신소재공학과, ²한국전자통신연구원 RF융합부품연구팀

FP2-11 13:40-16:45 Deep Level Defects in InGaN/GaN Blue Light Emitting Diode

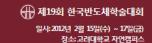
저자: P. Koteswara Rao¹, Byungguon Park¹, Sang-Tae Lee¹, Moon-Deock, Kim¹, Jae-Eung Oh², and Song-Gang Kim³

소속: ¹Department of Physics, Chungnam National University, ²School of Electrical and Computer Engineering, Hanyang University, ³Department of Information and Communications, Joongbu University

FP2-12 13:40-16:45 Effect of Gate Leakage Current on AlGaN/GaN HEMTs with Electron Beam Irradiation

저자: Seung Kyu Oh, S. M. Wie, and Joon Seop Kwak

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소속: Department of Printed Electronics Engineering, Sunchon National University

FP2-13 13:40-16:45

LED Light Extraction Efficiency Study of GaN Based Light Emitting Diodes using by Various Ion Implanted Current Blocking Layer

저자: Y. D. Kim, M. J. Park, and J. S. Kwak

소속: Department of Printed Electronics Engineering, Sunchon National University

C. Materials Growth & Characterization 분과

FP2-14 13:40-16:45

Photoluminescence and Dielectric Function of Cuprous Oxide Thin

저자: Jun-Woo Park¹, Hyungkeun Jang¹, Sung Kim¹, Suk-Ho Choi¹, Joongoo Kang², Su-Huai Wei², and Hosun Lee¹

소속: ¹Department of Applied Physics, Kyung Hee University, ²National Renewable Energy Laboratory

FP2-15 13:40-16:45

Homoepitaxial Growth of 4H-SiC on Carbon-Face Substrate using BTMSM

저자: Hun Hee Lee, Han Seok Seo, Jeong Hyuk Yim, Do Hyun Lee, Changhyun Kim, and Hyeong Joon Kim

소속: Department of Materials Science and Engineering, Seoul National University

FP2-16 13:40-16:45

Structural Properties of Nonpolar A-plane MgxZn1-xO Films on R-plane Sapphire Substrates by Plasma-assisted Molecular Beam Epitaxy

저자: S. K. Han¹, H. S. Lee¹, D. S. Lim², S. K. Hong^{1,2}, M. H. Jung³, J. Y. Lee³, and T. Yao⁴

소속: ¹Department of Advanced Materials Engineering, Chungnam National University, ²Graduate School of Green Energy Technology, Chungnam National University, ³Department of Materials Science and Engineering, KAIST, ⁴Center for Interdisciplinary Research, Tohoku

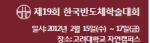
FP2-17 13:40-16:45

Influence of Temperature on Structural, Optical Properties and Chemical Bonding Energy of TiO² Thin Films Grown on Glass Substrate by PLD

저자: 빈민욱 1 , 이원재 1 , 최은호 2 , 유영조 2

소속: 1동의대학교 융합부품공학과,

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²삼성코닝정밀소재 에너지 소재 Labortory

FP2-18 13:40-16:45 Ni-assisted, Large-area Graphene Growth using Rapid Thermal Annealing

저자: Jae Hwan Chu¹, Jinsung Kwak¹, Tae-Yang Kwon¹, Soon-Dong Park¹, Heungseok Go², Sung Youb Kim¹, Kibog Park², and Soon-Yong Kwon^{1,2}

소속: ¹School of Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology, ²School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology

FP2-19 13:40-16:45 2-step ELOG of GaN on C-plane Sapphire using Carbonized PR Mask

저자: Sungwook Moon¹, Sang-il Kim², Samseok Jang², Jungyeop Hong¹, Junhyuck Kwon², and Dongjin Byun^{1,2}

소속: ¹Department of Nano-photonics, Korea University, ²Department of Material Science and engineering, Korea University

FP2-20 13:40-16:45 Improved Crystalline Quality of Si-doped a-plane GaN using Higher Initial Growth Pressure

저자: Keun Man Song¹, Jong Min Kim¹, Chan Soo Shin¹, Chul Gi Ko¹, Hyun Koun Cho², Dae Ho Yoon², Sung Min Hwang³, and Hogyoung Kim⁴

소속: ¹Korea Advanced Nano Fab Center, ²School of Advanced Materials Science and Engineering, Sungkyunkwan University, ³Korea Electronics Technology Institute, ⁴College of Humanities and Sciences

FP2-21 13:40-16:45 Nucleation and Growth of GaN Compound on Various Powders

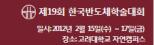
저자: 홍성기¹, 이효종¹, 박진섭², 조명환³, and Takafumi Yao³ 소속: ¹Materials Science and Engineering, Dong-A University, ²Department of Electronic Engineering, Hanyang University,

³Institute for Materials Research, Tohoku University

FP2-22 13:40-16:45 Growth of GaN using Patterned Metal Mask by Metal-organic Chemical Vapor Deposition

저자: J. Park¹, D. Moon², S. Park², S. H. Park², and E. Yoon²

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소속: ¹Department of Electronic Engineering, Hanyang University, ²Department of Materials Science and Engineering, College of Engineering, Seoul National University

FP2-23 13:40-16:45

Growth of Monolayer Graphene from Solid Carbon Source using Rapid Thermal Annealing

저자: J. Kwak¹, J. H. Chu¹, T.-Y. Kwon¹, S.-D. Park¹, S. Y. Kim¹, K. Park², and S.-Y. Kwon^{1,2}

소속: ¹School of Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology, ²School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology

FP2-24 13:40-16:45

Investigation of Crystallization Procedurs and Crystal Structures of Nitrogen Doped GeSb Phase Change Film

저자: Hyung Keun Kim and Doo jin Choi

소속: Department of Material Science and Engineering, Yonsei University

FP2-25 13:40-16:45

Fabrication of Vertically Aligned GaN/air-gap Mmicrostructures using Ddoping Selective Electrochemical Etching

저자: Ah Hyun Park, Yong Seok Lee, Hyun Jeong, Tae Hoon Seo, Kang Jea Lee, and Eun Kyung Suh

소속: School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University

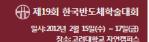
FP2-26 13:40-16:45

Structural and Electrical Properties of Nano-crystalline Graphite Layer on 6H-SiC Formed by Direct Electron Beam Irradiation

저자: Heung Seok Go¹, Jinsung Kwak², Youngeun Jeon¹, Bum-Kyu Kim³, Nam Kim⁴, Jae-Hyun Ko⁵, Sung Youb Kim², Byung Cheol Lee⁶, Hyun Suk Kang⁶, Soon-Yong Kwon², and Kibog Park¹

全会: ¹Electrical and Computer Engineering, Ulsan National Institute of Science and Technology (UNIST), ²Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology (UNIST), ³Physics, Chonbuk National University, ⁴Division of Convergence Technology, Korea Research Institute of Standards and Science, ⁵Physics, Hallym University, ⁶Quantum Optics Lab, Korea Atomic Energy Research Institute

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FP2-27 13:40-16:45 Growth of InP/InGaP Quantum Structure for the 808-nm Wavelength **Emission**

저자: S. Y. Kim^{1,2}, E. H. Lee¹, J. D. Song¹, I. K. Han¹, J. I. Lee¹, and T. W. Kim²

소속: ¹Nano Photonics Research Center, Korea institute of Science and Technology, ²Division of Electronics and Computer Engineering, Hanyang University

FP2-28 13:40-16:45 Molecular Beam Epitaxy를 이용한 Large Droplet Island 성장

저자: 이은혜¹, 송진동¹, 김수연¹, 배민환¹, 한일기¹, 장수경², 이정일¹ 소속: ¹한국과학기술연구원 나노포토닉스센터, ²연세대학교 물리학과

FP2-29 13:40-16:45 Enhancement of Emission from InGaN/GaN Multiple Quantum Wells via Surface Plasmon Resonance

저자: Kyoung Su Lee, Seon Pil Kim, and Eun Kyu Kim

소속: Quantum-Function Research Lab. and Department of Physics, Hanyang University

K. Memory (Design & Process Technology) 분과

FP2-30 13:40-16:45 A Novel Cross-bar Array Scheme to Suppress Sneak Path Current in Memory Operation

저자: Jun Yeong Seok, Gun Hwan Kim, Seul Ji Song, Jung Ho Yoon, Kyung Jin Yoon, Min Hwan Lee, and Cheol Seong Hwang

소속: WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

ZN 기반의 저항 변화 메모리의 스위칭 메커니즘 및 기억유지 특성 연구 FP2-31 13:40-16:45

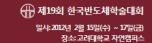
저자: 김희동, 안호명, 서유정, 김경헌, 송민영, 이동명, 김태근

소속: 고려대학교 전기전자전파공학과

FP2-32 13:40-16:45 Bipolar Switching Behavior of ZnO Thin Films Deposited by Metal Organic Chemical Vapor Deposition using Different Growth **Temperature**

저자: Yim So Young¹, Lee Jong-Han², Samseok Jang², Lee Do Han², Tae-Geun Seong¹, Sahm Nahm^{1,2}, and Dongjin Byun²

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소속: ¹Department of Nano Semiconductor Engineering, Korea
University, ²Department of Materials Science and Engineering,
Korea University

FP2-33 13:40-16:45

Ion Beam Etching of Sub-30nm Scale Perpendicular-MTJ for Reducing by-product and Damage of Sidewall.

저자: Daehong Kim¹, Bongho Kim¹, Sungwoo Chun¹, Jihun Kwon¹, Seonjun Choi¹, and Seung-Beck Lee^{1,2}

소속: ¹Department of Electronic Engineering, Hanyang University, ²Institute of Nano Science and Technology, Hanyang University

FP2-34 13:40-16:45

Resistive Switching Properties of TaOx with a Variety of Reactive Metal

저자: 송성호, 양민규, 김재혁, 성동준, 주현수, 김은미, 박찬진, 박성건, 백인규, 박순오, 최시영

소속: 삼성전자 반도체 연구소 공정개발팀

FP2-35 13:40-16:45

Si/SiGe Vertical Gate DHBT (VerDHBT)-based 1T DRAM Cell For Improved Retention Characteristics With a Large Hysteresis Window

저자: Ja Sun Shin, Hyunjun Choi, Hagyoul Bae, Jaeman Jang, Daeyoun Yun, Euiyoun Hong, Hyojoon Seo, Dae Hwan Kim, and Dong Myong Kim

소속: School of Electrical Engineering, Kookmin University

FP2-36 13:40-16:45

Deposition Temperature Dependence of the Memory Characteristics for AYO(Al₂O₃/Y₂O₃/SiO₂) Multi-stacked Film

저자: Hye Young Jung^{1,2} and Doo Jin Choi¹

소속: ¹Department of Materials Science & Engineering, Yonsei University, ²Samsung Electronics Co., Ltd.

G. Device & Process Modeling, Simulation and Reliability 분과

FP2-37 13:40-16:45

Optical Modeling of NBIS Instability and Hole Current in a-IGZO Systems

저자: Yoon Jang Chung¹, Un Ki Kim¹, Jeong Hwan Kim¹, Eric Hwang¹, Sang ho Rha², and Cheol Seong Hwang¹

소속: ¹WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter–university Semiconductor Research Center, Seoul National University, ²Department of Nano Science and Technology,

에 제19회 한국반도체학술대회 일사:2012년 2월 15일(수) ~ 17일(급)

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Graduate School of Convergence Science and Technology, Seoul National University

FP2-38 13:40-16:45 A Smart Scribe SRAM Test Structure for Bitcell Variation

Characterization in Macro Level

저자: 김현수, 김형태, 황재철, 김영현, 배윤미, 윤성준, 이은철, 홍규식 소속: 삼성전자 System LSI, Product & Test Engineering Team

FP2-39 13:40-16:45 A Product Representative Scribe-line Process Monitor for CMOS

Analog/ Mixed-signal Circuit Performance Characterizaiton and Yield

Improvement

저자: 김형태, 김현수, 김영현, 황재철, 배윤미, 윤성준, 이은철, 홍규식

소속: 삼성전자 System LSI 제품기술팀

FP2-40 13:40-16:45 Simulation Study of Resurf Stepped Oxide (RSO) Type Semi Super-

junction (semi-SJ) Trench Double Diffusion MOSFET (TDMOS) with

Various Geometrical Parameters

저자: 나경일¹, 구진근¹, 김상기¹, 김종대¹, 양일석², 이진호¹

소속: ¹한국전자통신연구원 융합부품소재연구부분 IT융합부품기술팀,

²한국전자통신연구원 융합부품소재연구부분 전력제어소자연구팀

FP2-41 13:40-16:45 Dynamic Pixel Test Pattern for CMOS Image Sensor

저자: KS Lee, HJ Lee, MJ Jang, JC Kim, ST Kim, JW Moon, IW Cho, and KD Yoo

소속: Hynix Semiconductor Inc.

FP2-42 13:40-16:45 Separate Extraction Technique of Gate, Source, Drain, and Substrate

Resistances in Individual MOSFET Combining I-V and C-V

Characteristics

저자: Ja Sun Shin, Hagyoul Bae, Euiyoun Hong, Jaeman Jang,

Daeyoun Yun, Hyojoon Seo, Hyunjun Choi, Dae Hwan Kim, and

Dong Myong Kim

소속: School of Electrical Engineering, Kookmin University

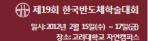
FP2-43 13:40-16:45 Migration of Oxygen lons and Vacancies in Tunneling based

Resistance Switching Element

저자: Seung Jae Baik

소속: Department of Electrical Engineering, KAIST

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FP2-44 13:40-16:45 Design Optimization of Vertical Double Gate SiGe/Si Heterostucture Tunneling Field-Effect Transistors

저자: 윤영준¹, 이재성², 박윤수², 서재화¹, 우성윤¹, 강인만¹ 소속: ¹경북대학교 전자공학부, ²경북대학교 전자전기컴퓨터학부

FP2-45 13:40-16:45 Measurement of Band Bending Voltage in SiO₂/Poly-silicon Stack during FN Tunneling by Constant Current Stress Test.

저자: 나희도, 오진호, 목인수, 김종기, 이규민, 이성훈, 손현철

소속: 연세대학교 신소재공학과

FP2-46 13:40-16:45 Accuracy Verification of Asymmetric Substrate Resistance Model for Multi-finger RF MOSFETs

저자: Min-Kwon Choi, Ju-Young Kim, and Seonghearn Lee

소속: Department of Electronic Engineering, Hankuk University of Foreign Studies

FP2-47 13:40-16:45

Analytical Model-based SPICE Simulation for the Design of Amorphous InGaZnO Thin-Film Transistors-based Circuits

저자: 김우준, 배민경, 김용식, 김재형, 허인석, 장재만, 정현광, 공동식, 김윤혁, 이재욱, 조춘형, 전성우, 김동명, 김대환 소속: School of Electrical Engineering, Kookmin University