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The 11th Asia-Pacific Workshop on Widegap Semiconductors (A

October 13(Sun.) ~ 17(Thu.), 2024 Hanwha Resorts Haeundae, Busan, Republic of Korea

The 11th Asia-Pacific Workshop on Widegap Semiconductors (APWS 2024) will be held in Busan, Korea, from October 13 to 17, 2024. The ten previous workshops were held in Awajishima, Japan (APWS 2003), Hsinchu, Taiwan (APWS 2005), Jeonju, Korea (APWS 2007), Zhangjiajie, China (APWS 2009), Toba, Japan (APWS 2011), New Taipei, Taiwan (APWS 2013), Seoul, Korea (APWS 2015), Qingdao, China (APWS 2017), Okinawa, Japan(APWS 2019), and Taoyuan, Taiwan(APWS 2022). A lot of researchers from the Asia and Pacific region will join those from other parts of the world in stimulating discussions on widegap and ultra-widegap semiconductors such as III-nitrides, Silicon Carbides, Gallium Oxides, Diamonds, and h-BNs etc. APWS 2024 consists of plenary sessions and a series of parallel oral sessions that include keynote, invited and contributed talks, as well as poster sessions, an excursion, a banquet, and industrial exhibitions. The venue, Hanwha Resorts Haeundae, is located in Haeundae beach, the most famous beach in Korea. The wonderful harbor city is regarded as a perfect setting for the conference, and its beautiful environment will not only promote knowledge enhancement but also provide you with unforgettable memories. I do thank you for your participation and contributions in advance and look forward to seeing you all in APWS 2024. Sincerely,

> **Okhyun Nam** Chair of APWS 2024 Professor, Tech Univ. of Korea

IMPORTANT DATES



Abstract Submission Deadline May 31, 2024



Notification of Acceptance July 12, 2024



Pre-Registration Deadline September 6, 2024

CONFERNCE TOPICS

APWS 2024 warmly welcomes professionals and academics interested in the forefront of on Widegap Semiconductors developments to submit their latest and high-quality research abstracts for oral and poster presentations.

Widegap and Ultra-Widegap Semiconductors (III-Nitrides, SiC, Gallium Oxide, Diamond and h-BN etc)

Growth

Bulk growth, epitaxial growth, doping and point defects, growth methods and related technology

Optical Devices

Visible, UV, and white LEDs, micro LEDs, laser diodes, solar cells, detectors and related optical devices

Characterization

Optical and electrical properties, structural analysis, theory and simulation

Electronic Devices Transistors, diodes, high-power and high-frequency devices, device processing, contacts and reliability





사단법인 한국LED·광전자학회 Korea Society of LEDs and Optoelectronics (KSLOE)









Vertical GaN Power Devices on GaN Substrates

Prof. **Jun Suda** Nagoya Univ., Japan



Bulk-Class Quality III-Nitride Heteroepitaxial Films and Their Applications to Optoelectronic Devices

> Prof. Bo Shen Peking Univ., China

PLENARY SPEAKERS



GaN Micro-LED Array for Chip-to-Chip Interconnection

Prof. Hao-Chung Kuo Nat'l Yang Ming Chiao Tung Univ., Taiwan



GaN Device-Based Radio Frequency and Microwave Technology CTO Samuel Cho RFHIC, Korea



New Discoveries that are Unleashing Ultrawide Bandgap Semiconductor Electronics

> Prof. Debdeep Jena Cornell Univ., USA

KEYNOTE SPEAKERS

Symposium GL: III-N Materials and Lighting Devices

- Prof. Steven DenBaars (Univ. of California Santa Barbara, USA) III-Nitrides for MicroLED and Laser Devices for Display, Communication and Quantum Computing
- Prof. Andreas Waag (TU Braunschweig, Germany) Nitrides for Micro-Photonics
- Prof. Kazuhiro Ohkawa (KAUST, Saudi Arabia) High-Power InGaN-Based Red Micro-LEDs and Their Potential to Lasers

Symposium GE: III-N Materials and Electronic Devices

- Prof. Matin Kuball (Bristol Univ., UK) Wide/Ultrawide Bandgap Next Generation RF and Power Devices
- Prof. Ching Ting Lee (Nat'l Chen Kung Univ., Taiwan) The Progress and Development of GaN-based Devices and Integrated Circuits
- Prof. Vanya Darakchieva (Lund Univ./Linköping Univ., Sweden) Advanced Al(Ga)N HEMTs: Epitaxy, Terahertz Characterization and Applications
- Prof. Tamotsu Hashizume (Nagoya Univ., Japan) Controlling Interface States in GaN Power Transistors

Symposium GaO: Ga₂O₃ Materials and Electronic Devices

- TL YoungKyun Jung (Hyundai Motor Company, Korea) TBA
- Dr. Zbigniew Galazka (Leibniz Inst. for Crystal Growth, Germany) Ultra-Wide Bandgap β -Ga₂O₃ and β -(Al_xGa_{1-x})₂O₃ Single Crystals and Their Physical Properties

Symposium SiC: SiC Materials and Devices

- Dr. Hiroshi Kanazawa (Resonac Corporation, Japan) Review of Resnac SiC Epitaxial Wafers for Power Devices
- **Special Session: BN Materials and Devices**
- Prof. Bernard Gil (CNRS-Univ. of Montpellier, France) The Optical Properties of Various Polytypes of sp²-bonded Boron Nitride

Special Session: Diamond Materials and Devices

- Prof. Srabanti Chowdhury (Standford Univ., USA)
- Thin Film Diamond Integration for Enhanced Thermal Management in

COMMITTEE

- **Organizing Committee Chair**
- Okhyun Nam (Tech Univ. of Korea, Korea)

Organizing Committee Co-Chairs

- Jen-Inn Chyi (Nat'l Central Univ., Taiwan)
- Yue Hao (Xidian Univ., China)
- Yoichi Kawakami (Kyoto Univ., Japan)
- Abdallah Ougazzaden (Georgia Tech Europe, France)
- Zlatko Sitar (North Carolina State Univ., USA)

Technical Program Committee Chair

• In-Hwan Lee (Korea Univ., Korea)

Finance Committee Chair

• Jong Hyeob Baek (KOPTI, Korea)

ABOUT BUSAN

Located at the southern tip of the Korean peninsula, Busan is the second largest metropolis in Korea. It is home to the country's longest river, longest beach, and most significant port. Its geography includes a coastline featuring superb beaches and scenic cliffs, mountains that provide excellent hiking and extraordinary views with hot springs scattered throughout the city. Busan enjoys four distinct seasons and a temperate climate that never gets too hot or cold. For these reasons, Busan is becoming a world-class city for tourism and culture and a hot spot destination for international conventions.

