

IMFEDK 2023

Keynote Speech/ Invited Talk

Nov, 16 (Thu)

Opening

10:00-10:05 Opening Remarks Mutsumi Kimura (Ryukoku University)

Keynote Speech

Chair: Hirobumi Watanabe

10:45-11:25

IN02 **<Invited> Future Perspectives of Advanced CMOS Logic
Technology**

Toshiro Hiramoto
(The University of Tokyo)

Special Lecture

Chair: Ken Nakahara

13:20-14:00

IN01 **<Invited> Fundamentals, Commercialization, and Future Challenges
of SiC Power Device**

Tsunenobu Kimoto
(Kyoto University)

Session 2 - Compound -

Chair: kazushi Hayashi

14:00-14:40

IN06 **<Invited> Recent researches of GaN-based materials and devices in
NU-AIST**

Toshihide Ide, Hisashi Yamada, Xuelun Wang, Toshikazu Yamada, Reiko Azumi,
and Toru Ujihara
(AIST)

Session 3 - Emerging & Silicon - Chair: Joel T. Asubar

16:00-16:40

IN09 **<Invited> MOVPE growth of AlGa_N on RIE-treated GaN surfaces and its application to AlGa_N/Ga_N electron devices**

Akio Yamamoto, Ali Baratov, Joel T. Asubar, and Masaaki Kuzuhara
(University of Fukui)

16:40-17:20

IN10 **<Invited> Liquid-injection MOCVD-grown Ga₂O₃ on sapphire and 4H-SiC substrates: Material, transport, and MOSFET properties**

Milan Tapajna, Fridrich Egyenes, Fedor Hrubíšák, Kristína Hušeková, Edmund Dobročka, Peter Nádaždy, Alica Rosová, Hemendra Chouhan, Javad Keshtkar, and Filip Gucmann
(Slovakia Academy of Science)

Nov, 17 (Fri)

Session 5 - Industrial - Chair: Masayuki Furuhashi

11:00-11:40

IN05 **<Invited> Cutting-edge THz devices as essential parts of IOWN - Innovative Optical and Wireless Network**

Takuya Tsutsumi
(NTT)

11:40-12:20

IN04 **<Invited> Establishment of “JOINT2” Consortium for Next Generation Semiconductor Package Evaluation and Development of Packaging Technology**

Sadaaki Katoh
(Resonac Corporation)

Session 6 - Silicon - Chair: Mutsumi Kimura

14:40-15:20

IN07 **<Invited> Analog CMOS Implementation of Neuromorphic Hardware**

Shigeo Sato, Satoshi Moriya, Satoshi Ono, and Hideaki Yamamoto
(Tohoku University)

Keynote Speech

Chair: Hidetoshi Ishida

16:00-16:40

IN03 **<Invited> Gate Technology and transport mechanisms for Normally-off p-GaN HEMTs**

Giuseppe Greco, Patrick Fiorenza, Filippo Giannazzo, Ferdinando Iucolano, and Fabrizio Roccaforte
(CNR-IMM)

16:40-17:20

IN08 **<Invited> Growth of Nitrides on Nearly Lattice-Matched Substrate ScAlMgO₄ and its Application**

Takashi Matsuoka, Hirotaka Yahara, Chihiro Hagiwara, Takuya Iwabuchi, and Takeshi Kimura
(Tohoku University)

Awards & Closing Remarks

17:50-18:10 Award Presentation Naohiro Ueda (Nisshinbo Micro Devices)

18:10-18:20 Closing Remarks Mutsumi Kimura (Ryukoku University)