PEC
EXPLORE INNOVATE EXCEL

One Day National Seminar

on

Recent Advances and Challenges Faced in GaN HEMT

In association with IEEE Chandigarh Sub-section

IEEE
Chandigarh Sub-section

August 19, 2017

OBJECTIVE OF THE WORKSHOP

High electron mobility and large breakdown voltage of wide bandgap (WBG) semiconductor, i.e., Gallium Nitrite (GaN) has enabled the emergence of WBG devices called high-electron mobility transistor (HEMT). They are very promising candidates for high-power and high frequency applications due to their excellent material properties such as high electron mobility in channel, low specific resistance, polarization, good thermal conductivity, and high critical electric field. Traditionally, the silicon based transistor based power converters used to switch the current during several tens to hundreds of nanoseconds, however, in GaN transistors the current transitions may be shortened to a few nanoseconds. These devices are expected to have better low-noise performance compared to MOSFETs enabling the high power efficiency, high frequency and high-operating temperature. Therefore, these devices can be used for industrial, defense, medical, and commercial applications due to their rugged and reliable technology

This one day seminar will help the participants to understand and utilize the unique properties GaN material, and thus their significance in the design of HEMT transistors. The seminar will provide an insight to both theoretical and practical knowledge for the design, analysis, and operation of GaN HEMT transistors in order to meet the needs of relevant industry and research organization.

TOPICS TO BE COVERED

- Growth of high quality GaN material for HEMTs
- HEMT fabrication and characterization techniques
- Issues related to measurement of HEMTs
- GaN HEMT applications such as Amplifiers, RF switches and high voltage power switching devices
- Simulation and Mathematical modelling of devices
- Challenges associated with GaN devices

LIST OF RESOURCE PERSONS.

- Scientists/Engineers from DRDO/ ISRO /CSIR labs etc.
- Faculty from IISc, IITs and Institute of National repute.

ADDRESS FOR CORRESPONDANCE

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REGISTRATION FORM

Full Name:……
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Designation:……..
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Organization:……
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Address for Correspondence: …….....
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Email:……..
Type of Participation: (Please Tick)

Students / JRFs / SRFs, ☐
Teachers ,Scientists, Engineer from Industries ☐
Research organizations ☐
IEEE Member (If Yes, Please Tick) ☐

Venue	Seminar Hall , New Academic Block, PEC University of Technology, Sector-12, Chandigarh
Time	09:00 AM (onwards)
Registration Fees	This event is FREE to attend. Seats are limited. **Confirm your participation latest by 14.08.2017.**

SUPPORTED BY

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