



IWPSD 2021
Indian Institute of Technology Delhi, New Delhi
14 - 17 December, 2021



Symposium- III Nitrides: Materials and Devices (HALL 1)

DAY 1 (D1) (14th December 2021/Tuesday)

9:00-11:15 Inaugural Session and Keynote Talk - Hall 1 (Common for all symposia)		
Session-1 (Morning)		
Time (IST)	Speaker	Title
11:15 – 12:00	Huili Grace Xing (Cornell University, USA)	3N-SKN-1: How to Extract Power out of Ga ₂ O ₃ and GaN?
12:00 – 12:30	Sudhiranjan Tripathy (IMRE, Singapore)	3N-I-1: Development of AlGaN/GaN High Electron Mobility Transistors on 200 mm Si (111)
12:30 – 13:00	Meena Mishra (SSPL Delhi)	3N-I-2: GaN MMIC Design and RF characterization
LUNCH BREAK (13:00 – 14:00)		
Session-2 (Afternoon)		
Time (IST)	Speaker	Title
14:00 – 14:30	Haiding Sun (USTC, China)	3N-I-3: GaN-based ultraviolet light emitting diodes and novel photoelectrochemical-type detecting devices
14:30 – 15:00	Anirban Bhattacharya (University of Calcutta)	3N-I-4: Controlling alloy phenomenon in AlGaN grown by Molecular Beam Epitaxy: Effect on ultraviolet light emitting diodes
15:00 – 15:30	Biplab Sarkar (IIT Roorkee)	3N-I-5: Ultrawide bandgap semiconductor Schottky Diodes: Characteristics and device design Strategies
15:30 – 15:45	Kapil Narang (SSPL Delhi)	3N-O-1: Material and Device characteristics of lattice matched InAlN/GaN HEMT on SiC
15:45 – 16:00	Abheek Bardhan (IISc Bangalore)	3N-O-2: Effect of In-situ Si ₃ N _x Cap Growth Condition on the Mobility of 2DEG at the GaN/AlGaN Heterojunction
16:00 – 16:15	Tea Break	

16:15 – 17:15	Industry Session-Hall 1 (Common for all symposia)
17:15 – 18:45	Plenary Session-Hall 1 (Common for all symposia)
END OF DAY 1	

DAY 2 (D2) (15th December 2021/Wednesday)

9:30-11:15	Plenary Session-Hall 1 (Common for all symposia)	
Session-1 (Morning)		
Time (IST)	Speaker	Title
11:15 – 12:00	Ramon Collazo (NCSU, USA)	3N-SKN-2: A Systematic Approach to Point Defect Management in III-Nitrides
12:00 – 12:30	Xiaohang Li (KAUST, Saudi Arabia)	3N-I-6: Epitaxial growth of β -Ga ₂ O ₃ (-201) thin film on fourfold symmetry CeO ₂ (001) substrate for heterogeneous integrations
12:30 – 13:00	Apurba Laha (IIT Bombay)	3N-I-7: All Epitaxy Gd ₂ O ₃ /AlGaIn/GaN MOS HEMT on 150 mm Si Wafer
LUNCH BREAK (13:00 – 14:00)		
Session-2 (Afternoon)		
Time (IST)	Speaker	Title
14:00 – 14:45	Helge Weman (NTNU, Norway)	3N-SKN-3: AlGaIn Nanowire UV LEDs using Graphene as a Transparent Conducting Substrate
14:45 – 15:15	Govind Gupta (NPL Delhi)	3N-I-8: Fabrication of 2D-TMDC/GaN heterostructures for broad band optical detection
15:15 – 15:45	Suchandan Pal (CEERI Pilani)	3N-I-9: AlGaIn-based UV-LEDs: Aspects of efficiency improvement and droop management
15:45 – 16:00	Shuchi Kaushik (IIT Delhi)	3N-O-3: LSPR enhanced solar-blind photoresponse of robust Al _{0.4} Ga _{0.6} N MSM photodetectors
16:00 – 16:15	Tea Break	
16:15 – 18:00	POSTER SESSION	
18:00 – 19:00	Industry Session-Hall 1 (Common for all symposia)	
END OF DAY 2		

DAY 3 (D3) (16th December 2021/Thursday)

9:30-11:15	Plenary Session - Hall 1 (Common for all symposia)	
Session-1 (Morning)		
Time (IST)	Speaker	Title
11:15 – 12:00		
12:00 – 12:30	Ashutosh Kumar (RISE, Sweden)	3N-I-10: Visualizing Mg-induced defects in GaN at atomic scale
12:30 – 13:00	Rajesh Bag (SSPL Delhi)	3N-I-11: MOVPE growth technology development of HEMT structures for X and Ku band devices
LUNCH BREAK (13:00 – 14:00)		
Session-2 (Afternoon)		
Time (IST)	Speaker	Title
14:00 – 14:30	Tian-Li Wu (NCTU, Taiwan)	3N-I-12: AlGaN/GaN MISHEMT for power electronics
14:30 – 15:00	D. S. Rawal (SSPL Delhi)	3N-I-13: Advancement in GaN HEMT process technology for X and Ku band MMIC applications
15:00 – 15:30	R. Muralidharan (IISc Bangalore)	3N-I-14: AlGaN/GaN based HEMTs
15:30 – 15:45	V. Aggarwal (NPL, New Delhi)	3N-O-4: Effect of optical defects on laser MBE grown epitaxial GaN based ultra-violet photodetectors characteristics
15:45 – 16:00	Jagori Raychaudhuri (SSPL, Delhi)	3N-O-5: Impact of buffer thickness and doping on buffer traps in AlGaN/GaN HEMTs through TCAD based device simulation study
16:00 – 16:15	Tea Break	
16:15 – 18:00	POSTER SESSION	
END OF DAY 3		

DAY 4 (D4) (17th December 2021/Friday)

9:30-11:15	Plenary Session - Hall 1 (Common for all symposia)	
Session-1 (Morning)		
Time (IST)	Speaker	Title
11:15 – 12:00	Srabanti Chowdhury (Stanford University, USA)	3N-SKN-4: Wide bandgap materials for power, performance and thermal management
CONCLUDING SESSION (13:00 – 13:30)		