



Ministry of Electronics &
Information Technology,
Government of India



Indian Nanoelectronics Users' Programme – Idea to Innovation
A project of MeitY, Govt. of India



INUP- i2i Hands-on Training Workshop on Fabrication and Characterization of GaN LED
November 14 – 23, 2022 IIT Bombay
Programme Schedule

Monday (November 14, 2022)		
Venue: Room # 301, Seminar Room, 3rd Floor, G.G. Building, Dept. of Electrical Engineering		
08:30 - 09:30 AM	Registration	
09:30 - 11:00 AM	Overview of INUP-i2i	Dr. K. Nageswari
	Tea Break	
11:30 AM - 1:00 PM	Fabrication & Characterization of GaN LED	Prof. Dipankar Saha
	Lunch Break	
02:00 - 07:00 PM	Lab session	
Tuesday (November 15, 2022)		
Venue: Room # 301, Seminar Room, 3rd Floor, G.G. Building, Dept. of Electrical Engineering		
9:30 – 10:30 AM	Overview of IITBNF infrastructure	Dr. Deepti Rukade
10:30 - 11:00 AM	Process flow for fabrication of GaN LED	Mr. Navneet Kumar Thakur
	Tea Break	
11:30 AM -12:30 PM	Lithography	Mr. Nama Premsai
12:30 PM- 01:00 PM	Presentation by participants	
01:00 - 02:00 PM	Lunch Break	
02:00 - 07:00 PM	Lab session	
Wednesday (November 16, 2022)		
Venue: Room # 301, Seminar Room, 3rd Floor, G.G. Building, Dept. of Electrical Engineering		
09:30 - 10:15 AM	Overview of Deep Reactive Ion Etching	Dr. Bikash Dev Choudhury
10:15 - 11:00 AM	Ultrafast spectroscopy techniques	Mr. Ankit Udai
	Tea Break	
11:30 AM - 12:15 PM	Etching Process	Mr. Nama Premsai
12:15 - 1:00 PM	Mask Designing Using Clewin Software	Ms. Akshata Bhosle
01:00 - 02:00 PM	Lunch Break	
02:00 - 07:00 PM	Lab session	
Thursday (November 17, 2022)		
Venue: Room # 301, Seminar Room, 3rd Floor, G.G. Building, Dept. of Electrical Engineering		
09:30 - 10:15 AM	GaN based high electron mobility transistor	Dr. Bhanu Upadhyay
10:15 -11:00 AM	Carrier-photon dynamics in InGaN quantum well and quantum dots	Mr. Ankit Udai
	Tea Break	

11:30 AM - 12:15 PM	Electrically and optically excited quantum well LEDs	Mr. Kanchan Singh Rana
12:15 PM - 1:00 PM	Presentation by participants	
01:00 - 02:00 PM	Lunch Break	
02:00 - 07:00 PM	Lab session	
Friday (November 18, 2022)		
Venue: Room # 301, Seminar Room, 3rd Floor, G.G. Building, Dept. of Electrical Engineering		
09:30 - 10:15 AM	Presentation by participants	
10:15 - 11:00 AM	III- Nitride Materials	Mr. Soumyadip Chatterjee
	Tea Break	
11:30 AM - 1:00 PM	GaN MMIC	Prof. Dipankar Saha
01:00 - 02:00 PM	Lunch Break	
02:00 - 07:00 PM	Lab session	
Monday (November 21, 2022)		
Venue: Room # 301, Seminar Room, 3rd Floor, G.G. Building, Dept. of Electrical Engineering		
09:30 - 10:15 AM	Al ₂ O ₃ formed by post plasma oxidation of Al as a gate dielectric for AlGaIn/GaN CMOS	Ms. Mahalaxmi Patil
10:15 - 11:00 AM	Growth of LED heterostructure	Mr. Soumyadip Chatterjee
	Tea Break	
11:30 AM - 12:15 PM	GaN based Nano light emitting diode - More light from less material	Dr. Bikash Dev Choudhury
12:15 AM - 1:00 PM	Presentation by participants	
01:00 - 02:00 PM	Lunch Break	
02:00 - 07:00 PM	Lab session	
Tuesday (November 22, 2022)		
Venue: Room # 301, Seminar Room, 3rd Floor, G.G. Building, Dept. of Electrical Engineering		
09:30 - 9:50 AM	Passives for GaN MMIC (Inductor)	Mr. Arpit Sahu
9:50 - 10:10 AM	Passives for GaN MMIC (Capacitor)	Ms. Jyoti Sahu
10:10 - 10:30 AM	Passives for GaN MMIC (Resistor)	Mr. Subhajit Basak
	Tea Break	
11:00 - 11:45 AM	Backend processing and packaging	Mr. Gaurav Garg
11:45 AM - 01:00 PM	Presentation by participants	
01:00 - 02:00 PM	Lunch Break	
02:00 - 07:00 PM	Lab session	
Wednesday (November 23, 2022)		
Venue: Room # 301, Seminar Room, 3rd Floor, G.G. Building, Dept. of Electrical Engineering		
09:30 - 10:30 AM	MCQ Test	
10:30 - 11:30 AM	Presentation by participants	
11:30 AM - 12 Noon	Tea Break	
12 Noon - 1:00 PM	Presentation by participants and Feedback session	