

## Technical Programme of NCSMD 2016

**Friday 4th March 2016**

**08:30 Onwards - Registration**

09:15-10:00	NCSMD Inaugural session		
10:00-10:40	Plenary Talk	Prof. Vikram Kumar, IIT Delhi	Title
10:40-11:10	Invited Talk	Prof. M. Jagadesh Kumar, JNU and IIT Delhi	The making of the impossible in the integrated circuit technology

**11:10 to 11:40 High Tea**

11:40-12:10	Invited Talk	Prof. Y.N. Mohapatra, IIT Kanpur	Charge transport and trapping in organic semiconductors
12:10-12:40	Invited Talk	Dr. R.K. Bhan, SSPL Delhi (DRDO)	Development of MEMS based capacitive microaccelerometer for navigational applications
12:40-12:55	Talk (040398)	Dr. Upendra K. Pandey, IISc Bangalore	Effect of Aggregation on Photovoltaic Performance in Squaraine based Donors
12:55-13:10	Industry talk	Aimil Ltd	

**13:10 to 14:00 Lunch**

14:00-14:30	Invited Talk	Prof. S. Chakrabarti, IIT Bombay	Development of Quantum Dot Infrared Photodetectors (QDIPs) at IIT Bombay: from materials optimization to demonstration of 320x256 QDIP-based thermal imagers
14:30-15:00	Invited Talk	Dr. B.K. Sehgal, GATEC Hyderabad	Low Noise and High Power RF Technologies at Gallium Arsenide Enabling Technology Centre
15:00-15:15	Talk (040310)	Dr. U. Dadwal, IIT Delhi	Graphene-GaAs Schottky barrier diodes for photovoltaic applications
15:15-15:30	Talk (040342)	Dr. Mahanth Prasad, CEERI Pilani	Design and Process Optimization of Piezoelectric MEMS Microphone for Aerospace Applications

**15:30 to 16:00 Tea**

16:00-16:30	Invited Talk	Dr. Surinder Singh, SCL Chandigarh (ISRO)	Microelectronic fabrication at Semi-Conductor Laboratory
16:30-17:00	Invited Talk	Prof. Vinay Gupta, University of Delhi	Semiconductor thin films and nanostructures for UV photodetectors and biosensors
17:00-17:30	Invited Talk	Prof. Subhabrata Dhar, IIT Bombay	Two dimensional confinement of electrons in nanowall network of GaN leading to high mobility and long phase coherence time.

17:30-17:45	Talk (040334)	Mr. Jitendra Singh, CEERI Pilani	Low stress ZnO thin film based BAW resonator
17:45-18:00	Talk (040363)	Dr. Aadesh P. Singh, IIT Delhi	Surface Disordered Metal Oxide Thin Films for photoelectrochemical Water Splitting

**General Body Meeting of S.S.I.: 18:00 – 17:00**

**Poster Session 18:00-19:30 followed by dinner (After 19:30, IIT Jodhpur)**

**Saturday 5th March 2016**

**08:30 Onwards - Registration**

09:00-09:40	Plenary talk	Prof. S.B. Krupanidhi, IISc Bangalore	Non-polar III-nitride epitaxy for optoelectronics devices
9:40-10:10	Invited Talk	Dr. Tarun Sharma, RRCAT Indore	Optical probing of 2-Dimensional Electron Gas in AlGaIn/GaN heterostructures
10:10-10:25	Talk (040304)	Dr. Ashish Kumar IUAC Delhi	Investigating Defects Evolution Mechanism in GaN by Swift Heavy Ion Irradiation
10:25-10:40	Talk (040375)	Mr. Mahesh Gokhale, TIFR Mumbai	MOVPE growth of III/V compound semiconductor nanowires on Si (111)

**10:40 to 11:00 Tea**

11:00-11:30	Invited Talk	Dr. R.K. Sharma, SSPL Delhi (DRDO)	Quantum magneto transport in AlGaIn/GaN structures
11:30-12:00	Invited Talk	Prof. S. Raghavan, IISc Bangalore	GaN HEMTs on Si for Power Applications
12:00-12:15	Talk (040313)	Mr. S.Surender Anna University Chennai	Effect of growth temperature on the incorporation of Indium in InGaIn/GaN Heterostructures grown by Metal Organic Chemical Vapor Deposition (MOCVD)
12:15-12:30	Talk (040394)	Dr. Y.S. Katharria, Central University of Rajasthan	Innovative strategies for the advancement of blue GaN light-emitting diodes
12:30-12:45	Talk (040319)	Mr. Raman Kapoor, IIT Delhi	Nanoscale Electrical Characterization of AlGaIn/GaN Heterostructures Using Scanning Probe Microscopy
12:45-13:00	Talk (040323)	Dr. Stanislav Petrov, SemiTEq JSC	III-Nitride Advanced Technologies and Equipment for Microelectronics.

**13:00 to 14:00 Lunch**

14:00-14:30	Invited Talk	Prof. B.M. Arora IIT Bombay	Optoelectronics of Solar Cells
14:30-15:00	Invited Talk	Prof. A. Bhattacharya, University of Calcutta	Ultraviolet Photodetectors Based On AlGaN Alloys Grown By Molecular Beam Epitaxy
15:00-15:30	Invited Talk	Dr. Govind Gupta NPL Delhi (CSIR)	Fabrication of Efficiency Enhanced Nitride based Photo-detectors
15:30-15:45	Industry Talk	Dr. Abhay Joshi Tektronics Ltd.	

### 15:45 to 16:00 Tea

16:00-16:30	Invited Talk	Prof. K. Baskar Anna University Chennai	Growth of nitride semiconductors for optoelectronic devices
16:30-17:00	Invited Talk	Prof. A. Bhattacharya, TIFR, Mumbai	GaN nanowires: From basic growth mechanisms to device structures
17:00-17:15	Talk (040329)	Mr. Chirantan Singha University of Calcutta	Optical properties of AlN/GaN MQWs grown by Molecular Beam Epitaxy
17:15-17:30	Talk (040301)	Mr. K. Prabakaran Anna University Chennai	Structural and Optical characterization of InGaN/GaN MQW Structures Grown by Metal Organic Chemical Vapour Deposition

### Poster Session 18:00-19:30 followed by dinner (after 19:30, Hotel Indana Place)

## Sunday 6th March 2016

### 08:30 Onwards - Registration

09:00-9:30	Invited Talk	Dr. S. R. Vadera Defence Lab Jodhpur (DRDO)	Tunable optical nanomaterials
9:30 -9:45	Talk (040307)	Dr. S. Rath IIT Bhubaneswar	Co-operative excitonic transitions and white light emission in Au8-CdS hybrid nanorods
9:45-10:00	Talk (040309)	Dr. Shubra Singh Anna University Chennai	Developing ZnO rich $Zn_{(1-x)}O_{(1-x)}Ga_{(x)}N_{(x)}$ solid solution and investigating band gap modification by Low temperature photoluminescence.
10:15-10:30	Talk (040356)	Dr. Nupur Saxena, University of Delhi	Temperature sensor based on CdS:SiO <sub>2</sub> and Cd <sub>0.99</sub> Ag <sub>0.01</sub> S:SiO <sub>2</sub> nanocomposites
10:30-10:45	Industry Talk	SemiTEq	

### 10:45 to 11:15 Tea

11:15-11:30	Talk (040358)	Dr. Pragati Kumar University of Delhi	Ion beam irradiated nano-crystalline CdS thin films: An approach for better photo sensitivity
11:30-11:45	Talk (040396)	Prof. G. D. Sharma LMNIIT Jaipur	Organic bulk heterojunction solar cells based on D-A copolymer and small molecules
11:45-12:00	Talk (040325)	Mr. R. Agarwal, BITS Pilani	Design and Simulation of Micro-cantilever based Bio-sensing Platform
12:00-12:15	Talk (040395)	Dr. Jasa Ram DRDO Defence Lab, Jodhpur	Synthesis of 2-D thermoelectric materials using a facial microwave sintering process
12:15-12:30	Talk (040305)	Mr. Arpan Kumar Nayak IIT Kharagpur	Hierarchical nanostructured WO <sub>3</sub> -SnO <sub>2</sub> for selective sensing of volatile organic compounds
12:30-12:45	Talk (040380)	Miss. Khushboo Agarwal IIT Delhi	Nanosopic and Macroscopic Study of the effect of Carbon and Silicon on Structural, Electrical and Thermoelectric Properties of Bismuth Telluride Thin Films
12:45-12:55	Talk (040365)	Mr. D.K. Mohanty SSPL Delhi	Laser induced damage studies on alumina and silica thin films for antireflection coating
12:55:13:10	Closing Ceremony		

**13:10 Lunch and departure**