2nd IEEE International Conference on Emerging Electronics (ICEE -2014)

J N Tata Auditorium
Indian Institute of Science, Bengaluru

3-6 December 2014

Materials to Devices

IEEE ED/SSC Bangalore Chapter
Centre for Nano Science and Engineering
IISc, Bengaluru-12
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Nanobiosensors

- Manoj Varma (IISc, Bengaluru)
- Soumyo Mukherji (IIT Bombay)
- Mustafa Culha (Yeditepe University, Istanbul, Turkey)

Low-dimensional Semiconductors: Growth & Applications

- Srinivasan Raghavan (Vasu) (IISc, Bengaluru)
- Mandar Deshmukh (TIFR, Mumbai)

Photonics and Plasmonics

- Ambarish Ghosh (IISc, Bengaluru)
- Shankar Kumar Selvaraja (IISc, Bengaluru)

Compound Semiconductor Devices

- Srinivasan Raghavan (Vasu) (IISc, Bengaluru)
- Arnab Bhattacharya (TIFR, Mumbai)

3-D Systems and Packaging Technologies

- M.M. Nayak (IISc, Bengaluru)
- Prosenjit Sen (IISc, Bengaluru)

Computational Modelling at the Nanoscale

- Santanu Mahapatra (IISc, Bengaluru)
- Bhaskaran Muralidharan (IIT Bombay)

Semiconductor Process Technologies

- S. A. Shivashankar (IISc, Bengaluru)
- S. Mohan (IISc, Bengaluru)

ICEE 2014 – Speakers (Plenary Talks)

Anurag Kumar
Indian Institute of Science, Bengaluru, India

The Internet of Things

Arnab Bhattacharya
Tata Institute of Fundamental Research, Mumbai

N-lightenment: The bright world of nitride semiconductors

Arved C. Huebler
Chemnitz University of Technology, Germany

Future Trends in Printed Electronics

Carlo D. Montemagno
University of Alberta, Canada

Thinking Small to Solve Big Problems: Exercising a New Paradigm to Solve Global Quality of Life Challenges

M. Jagadesh Kumar
Indian Institute of Technology Delhi, India

Koomey's law and the steep subthreshold transistors – What is in store?

Jeevak Parpia
Cornell University, USA

Seven years of Graphene resonators – from Scotch Tape to CVD and beyond

Jeremy Levy
University of Pittsburgh, USA

Oxide Nanoelectronics on Demand

Krishna Saraswat
Stanford University, California, USA

Quantum Well Heterostructures for Electronics and Photonics

ICEE 2014 – Speakers (Public Talks)

Rao R. Tummala
Georgia Institute of Technology, USA

System Scaling for Smart, Wearable, IOT and Medical Electronics; A Unique Opportunity for India

Stuart S.P. Parkin
Max Planck Institute for Microstructure Physics, Halle, Germany
and IBM Research – Almaden, California, USA

Spintronic and Ionitronic Computing Technologies

ICEE- 2014 Speakers (Invited Talks)

Aloknath De
CTO, Samsung India

Wearable Electronics: Device Perspective

Anil Prabhakar
IIT Madras

Opto-fluidic flow analysis for monitoring of immunity levels in HIV patients

Anirban Bhattacharya
University of Calcutta

AlGaN-based Multiple Quantum Wells and their applications in Ultraviolet Emitters and Detectors

Bipin Rajendran
IIT Bombay

New algorithms and devices for neuromorphic computing

David S. Citrin
Georgia Tech, USA

Nanoplasmonics: A Platform for Photonic Integration

Debjani Paul
IIT Bombay

Paperfluidic devices for affordable healthcare

Deepak
IIT Kanpur

Organic LED Devices: Light Extraction and In-Ga-Zn Oxide Electronics for back planes

Deleep R.Nair
IIT Madras

Technology - Design interaction: Lessons from the CMOS world

Dipankar Saha
IIT Bombay

GaN Based Nano-wire Devices

Ebinazar B. Namdas
University of Queensland, Australia

Organic Light Emitting Transistors for Display

Harish Bhaskaran
Oxford University, UK

Phase Change Materials for use in optoelectronic applications

Mustafa Culha
Yeditepe University, Istanbul, Turkey

Surface-Enhanced Raman Scattering: From Protein Detection to Cancer Diagnosis

Nandita DasGupta
IIT Madras

III-Nitride HEMTs and MIS-HEMTs – A Study on Gate Leakage and Threshold Voltage Shift

Pradeep R. Nair
IIT Bombay

Perovskite based solar cells - Device Physics and Performance Optimization

K. Radhakrishnan
College of Engineering, Singapore

Ammonia MBE based GaN-HEMT growth on Silicon

K.J. Rangra
CSIR-CEERI Pilani, Rajasthan

Surface Micro-Machined RF MEMS and Test Structures for Induced Stress Characterization

Ravi M. Todi
Qualcomm Technologes Inc., USA

Semiconductor Innovation: Looking for new solutions to old problems

Samar K. Saha
Ultrasolar Tech, USA

Variability-Tolerant Scaled MOSFET Device Structures

B.K. Sehgal
Solid State Physics Laboratory, Delhi

AlGaN/GaN HEMT Devices for RF Applications

Shiv Govind Singh
IIT, Hyderabad

Low temperature, low pressure Cu-Cu bonding for 3-D IC integration

V. Siva Rama Krishna
IIT, Hyderabad

Nanobiosensors using aligned carbon Nanofibers

Srinivasan Anand
KTH-Royal Institute of Technology, Sweden

Photonic Semiconductor Nanostructures: Optical Properties and Applications

Stanislav A. Moshkalev
State University of Campinas, Brazil

Graphene Nanobelts Films for Highly Sensitive, Transparent and Flexible Pressure and Strain Resistive Sensors

Subho Dasgupta
Karlsruhe Institute of Technology, Germany

Printed and low-temperature processed oxide electronics

Sudha Mokkapati
The Australian National University, Canberra

Ultimate efficiency for single nanowire solar cells

Sujit Kumar Sikdar
Indian Institute of Science, Bengaluru

Sensing electrical activity of live neuronal networks in a dish-engineering and neurobiological applications

S. Sundar Kumar Iyer
IIT Kanpur

Increasing Efficiency in Organic Solar Cells and Modules

Takashi Hikihara
Kyoto University, Japan

Applications of coupled nonlinear micro-electro-mechanical resonators

Tarun Kanti Bhattacharya
IIT, Kharagpur

Nanoengineered Sensors and Actuators

Udayan Ganguly
IIT Bombay

Selector Devices for Future Non-Volatile Memory Technologies

Yoganand N. Saripalli
IMEC, Belgium

Gallium Nitride Epitaxy on large area silicon substrates for power and optoelectronic applications

Kota Murali
Global Foundries, Bengaluru

Quantum Effects in Nanodevices

ICEE- 2014 Speakers (Pre-Conference Tutorial)

Shaibal K. Sarkar
IIT, Bombay

How to fabricate and test Perovskite and dye-sensitized Solar Cells

Sushobhan Avasthi
IISc, Bangalore

How to fabricate and test Silicon Solar Cells

Srinivasan Raghavan
IISc, Bangalore

Graphene and layered materials: Growth by a simple CVD Technique

Mandar Deshmukh
TIFR, Mumbai

How to fabricate and test Graphene-based devices

Anjan Chakravorty
IIT-Madras

Compact Modeling of Semiconductor Devices,

Yogesh Chauhan
IIT-Kanpur

Compact Modeling of Semiconductor Devices

Manoj Varma
IISc, Bangalore

Cost-effective bio-sensors: Fabrication & Testing

Sai Siva Gorthi
IISc, Bangalore

Cost-effective bio-sensors: Fabrication & Testing

Digbijoy Nath
IISc, Bangalore

Epitaxy of III-nitride eterostructures: Growth & Fabrication

V. John
IISc, Bangalore

Design of Power Inverters Using High Frequency Power Switches

Shankar Kumar Selvaraja
IISc, Bangalore

How to fabricate Photonic Integrated Circuits

V. R. Supradeepa
IISc, Bangalore

How to build high power fiber lasers

Pre-Conference Tutorials Workshop
3 December 2014

Tutorial Day, Wednesday, 3rd December 2014 (Forenoon Session)		
Registration:		8.00 am onwards
Hall A: Photovoltaics 9.30 -1.00 pm **Topic 1:** How to fabricate and test Perovskite and Dye-sensitized Solar Cells? **Shaibal Sarkar**, IIT Bombay	**Hall B: Graphene: 9.30-1.00 pm** **Topic 1:** Graphene and layered materials: Growth by a simple CVD Technique **Srinivasan Raghavan (Vasu) IISc**, Bengaluru	**Hall C: Modeling and Simulation: 9.30 -1.00 pm** **Topic 1:** Compact Modeling of Semiconductor Devices **Anjan Chakravorty**, IIT Madras
Tea Break: 11.00-11.30 am	**Tea Break: 11.00-11.30 am**	**Tea Break: 11.00-11.30 am**
Topic 2: How to fabricate and test Silicon Solar Cells? **Sushobhan Avasthi**, IISc, Bengaluru	**Topic 2:** How to fabricate and test Graphene-based devices? **Mandar Deshmukh**, TIFR, Mumbai	**Topic 2:** Compact Modeling of Semiconductor Devices **Yogesh Chauhan,** IIT-Kanpur
Lunch: 1.00 -2.30 pm	**Lunch: 1.00 -2.30 pm**	**Lunch: 1.00 -2.30 pm**
Hall A: Sensors:2.30--6.00 pm Cost-effective bio-sensors: Fabrication & Testing **Manoj Varma**, &**Sai Siva Gorthi**, IISc, Bengaluru	**Hall B: GaN Electronics**:**2.30--6.00 pm** **Topic 1:** Epitaxy of III-nitride heterostructures: Growth & Fabrication **Digbijoy Nath,** IISc, Bengaluru **Topic 2:** GaN power Transistors: Design **Mayank Srivastava,** IISc, Bengaluru	**Hall C: Photonics: 2.30--6.00 pm** **Topic 1:** How to fabricate Photonic Integrated Circuits? **Shankar Kumar Selvaraja,** IISc, Bengaluru
Tea Break: 4.00-4.30 pm	**Tea Break: 4.00-4.30 pm**	**Tea Break: 4.00-4.30 pm**
Contd..	**Topic 3:** Design of Power Inverters Using High Frequency Power Switches **V. John,**IISc, Bengaluru	**Topic 2:** How to build high power fiber lasers? **V.R. Supradeepa,** IISc, Bengaluru

PL-01: Rao R. Tummala, Georgia Institute of Technology, USA

7.00-7.45 pm (Main Hall @ J N Tata Auditorium)

Emerging Frontier in Electronics: System Scaling for Smart, Wearable, IoT, and Medical Electronics: A Unique Opportunity for India

Dinner: 8 pm onwards (Main Guest House Lawn, IISc Campus)

Day 1: Thursday, 4th December 2014 (Forenoon Session)

Main Hall

Introduction/Inauguration: Rudra Pratap 9.00-9.15 am

PT 1.1: Anurag Kumar, IISc Bengaluru 9.15-10.00 am
The Internet of Things

PT 1.2: Krishna Saraswat, Stanford University, California, USA 10.00-10.45 am
Quantum Well Heterostructures for Electronics and Photonics

Session Chair: Rudra Pratap, IISc

Inauguration of Exhibition: 10.45 am

Tea Break 10.50-11.15 am

Hall A: Semiconductor Process Technologies: (11.15-1.15 pm) Session Chair: Y P Prabhakar Rao & Sanjeev Shrivastava, IISc Bengaluru	**Hall B: Compound Semiconductor Devices (11.15 -1.15 pm)** Session Chair: T K Bhattacharya, IIT-Kharagpur & Mandar Deshmukh, TIFR, Mumbai	**Main Hall: Computational Modeling at Nanoscale (11.15 - 1.15pm)** Session Chair:Bhaskaran Muralidharan, IIT Bombay& Santanu Mahapatra, IISc, Bengaluru
STI-01: Deleep R. Nair: IIT Madras 11.15 -11.45 am Technology - Design Interaction: Lessons from the CMOS world	CSI-01: B K Sehgal, SSPL Delhi 11.15-11.45 am AlGaN/GaN HEMT Devices for RF Applications	CMI-01. Bipin Rajendran, IIT Bombay 11.15-11.45 am New algorithms and devices for neuromorphic computing
STC-1. Santanu Talukder, Praveen Kumar, Rudra Pratap, IISc Bengaluru 11.45-12.00 Noon Material Transport and 3-D Patterning at Small Length Scales using Controlled Electromigration (1570026073)	CSI-02: Nandita DasGupta IIT Madras 11.45-12.15 pm III-Nitride HEMTs and MIS-HEMTs – A Study on Gate Leakage and Threshold Voltage Shift	CMC-1. Dipankar Saha, Sitangshu Bhattacharya, and Santanu Mahapatra, IISc, Bengaluru 11.45-12.00 Noon Modeling of Sheet-concentration and Temperature-dependent Resistivity of a Suspended Monolayer Graphene (1570020321)
STC-2. Alison E. Viegas, Debaditya Chatterjee, Tanushree H. Choudhury, Srinivasan Raghavan, Navakanta Bhat, IISc, Bengaluru 12.00-12.15 pm Thin Film Anodized Titania Nanotubes-based Oxygen Sensor (1570024971)	CSC-1. Janesh K Kaushik, V Raman Balakrishnan, Brishbhan Singh Panwar, and Rangarajan Muralidharan, SSPL, Delhi 12.15-12.30 pm Admittance spectroscopy and capacitance dispersion of AlGaN/GaN hetero-structures (1570024905)	CMC-2. S. Ghosh, K. Sharma, S. Agnihotri, and Y. S. Chauhan, S. Khandelwal, S. Khandelwal, F. M. Yigletu, and B. Iˇniguez,IIT-Kanpur 12.00-12.15 pm Modeling of Temperature Effects in a Surface-Potential Based ASM-HEMT model (1570021631)
STC-3. Madhup Shukla, Nandita DasGupta IIT Madras 12.15-12.30 pm Analysis of Gate Leakage Current in Ultra-Thin Oxide Grown by High Water Vapor Pressure Thermal Oxidation on 4H-SiC (1570021143)	CSC-2 A K Jain, S. Sankaranarayanan, D. Khachariya, A. Kumar, M. Meer, K. Takhar, A. Laha, S. Ganguly, D. Saha, IIT Bombay 12.30-12.45 pm Unalloyed Cr/Au contacts to AlGaN/GaN 2 -DEG for HEMT Applications (1570028457)	CMC-3. Niketa Sharma, Nidhi Chaturvedi, CEERI, Pilani 12.15-12.30 pm Design Approach of Traps Affected Source-Gate Regions in GaN HEMTs (1570020817)
STC 4. Shruti Verma, Sushil K. Pandey, Shaibal Mukherjee Manoj K. Manna and Apurba K. Das, IIT-Indore 12.30 -12.45 pm Synthesis and Characterization of Cd-doped ZnO Nanohybrids (1570020289)	CSC-3 Meena Mishra, Sudhir Kumar, S K Tomar, Seema Vinayak, B.K. Sehgal, SSPL, Delhi 12.45-1.00 pm Effect of Traps on Small Signal Equivalent Circuit in AlGaN/GaN HEMTs (1570026611)	CMC-4. M. Saketh Ram, Dawit Burusie Abdi, MSRIT, Bengaluru 12.30-12.45 pm Doping less Tunnel FET with Hetero-Gate-Dielectric: Design and Analysis (1570020513)

STC-5. D.C. Joshi, D.D. Harish, D.Roy, S.Nayak, Md.Qureshi, R.L.N. Saiprasad, T. Shiyani, D. Pamu, and S. Thota, IIT-Guwahati 12.45-1.00 pm Growth mechanism and Electron Spin Resonance Studies of $Zn_{1-x}Ni_xO$/NiO Two-Phase Nanocomposite (1570019575)		CMC-5. Upasana, Rakhi Narang, Mridula Gupta, Manoj Saxena, University of Delhi 12.45-1.00 pm Linearity and analog performance realization of energy efficient TFET-based architectures: An Optimization for RFIC Design (1570021533)
STC-6. Rabaya Basori, A.K. Raychaudhuri, S.N. Bose National Centre for Basic Sciences, Kolkata 1.00-1.15 pm Graphitic oxide-induced enhanced electrical conductance in CuTCNQ nanorod films (1570018095)		CMC-6. Ratul Kumar Baruah and Roy P. Paily, IIT-Guwahati, 1.00-1.15 pm Impact of Fringing Fields in a p-channel Junctionless Transistor (1570020889)
Lunch Break: 1.15 -2.15 pm		

Day 1: Thursday, 4th December 2014 (Afternoon Session)

Main Hall

P T 1.3: Carlo Montemagno University of Alberta, Canada 2.15-3.00 pm

Thinking Small to Solve Big Problems: Exercising a New Paradigm to Solve Global Quality of Life Challenges

Session Chair: Anil Kottantharayil, IIT Bombay

Hall A: 3-D Systems and Packaging Technologies (3.00-5.30 pm) Session Chair: MM Nayak & Prosenjit Sen, IISc, Bengaluru	**Hall B: Low Dimensional Semiconductors: Growth and Applications (3.00-5.30 pm)** Session Chair: M K Radhakrishnan & Yoganand Saripalli, IMEC Belgium	**Main Hall: Nanobiosensor (3.00-5.30 pm)** Session Chair: Soumyo Mukherji, IIT Bombay & Vijay Mishra, IISc, Bengaluru
SPI-01: Shiv Govind Singh, IIT-Hyderabad 3.00- 3.30 pm Low temperature, low pressure Cu-Cu bonding for 3-D IC integration	LDI-01: Stanislav A. Moshkalev,State University of Campinas, Brazil 3-3.30 pm Graphene Nanobelts Films for Highly Sensitive, Transparent and Flexible Pressure and Strain Resistive Sensors	NBI-01: Mustafa Culha, Yeditepe University, Istanbul, Turkey3.00 -3.30 pm Surface-Enhanced Raman Scattering: From Protein Detection to Cancer Diagnosis
Tea Break 3.30-4.00 pm	**Tea Break 3.30-4.00 pm**	**Tea Break 3.30-4.00 pm**
SPC-1: Shreesha Prabhu, Sankaran Koyili, Manjunath M.S. M.M Nayak, IISc Bengaluru 4.00 -4.15 pm A Study on Current vs. Temperature effect of Gold Ribbon for Wire Bonding Applications in Power Devices (1570021683)	LDC-1. Kranthi Kumar V, Sukanya Dhar, Tanushree H. Choudhury, S.A. Shivashankar, Srinivasan Raghavan, IISc 4.00-4.15 pm Controlled growth of monolayer to few-layers of P-type MoS_2 by CVD (1570026615)	NBI-02: Debjani Paul, IIT Bombay 4.00-4.30 pm Paperfluidic devices for affordable healthcare
SPC-2: Tamal Ghosh, Siva Rama Krishna V, Shiv Govind Singh, IIT-Hyderabad 4.15-4.30 pm Electrochemical self-assembled monolayer desorption assisted low temperature Cu-Cu thermocompression bonding (1570026719)	LDC-2. Divya Somvanshi, Satyabrata Jit, IIT-BHU 4.15-4.30 pm Electrical Characteristics of Pd/ZnO Nanowires (NWs)-based Schottky Diodes Grown on Zn Seed Layer-coated n-Si Substrates (1570024643)	NBI-03 V. Siva Rama Krishna, IIT-Hyderabad 4.30-5.00 pm Nanobiosensors using aligned carbon Nanofibers
SPC-3: Rammohan Sriramdas, Shreevar Rastogi, Rudra Pratap, IISc, Bengaluru 4.30-4.45 pm Power requirements of Sensing Nodes and Adequacy of Energy Harvesting (1570026731)	LDC-3. Krishna Bharadwaj B, Priyadharshini Ghosh, Rudra Pratap, Srinivasan Raghavan,IISc, Bengaluru 4.30-4.45 pm Breakdown current density: a measure of boundary defect energy of CVD-grown graphene (1570026717)	NBC-1: Rupali Gangopadhyaya , Ankan Dutta Chowdhury, Amitabha De, Indian Association for the Cultivation of Science, Kolkata 5.00-5.15 pm Functionalised Polyaniline Nanowires: A Prospective Biosensing Platform (1570026561)

Advanced Logic and Memory Devices Session Chair: Navakanta Bhat, IISc, Bengaluru ALI-01: Kota Murali, 4.45-5.15 pm Quantum Effects in Nanodevices	LDC-4. Shruti Subramanian, Shalini Gupta, Priti Gupta, B.A. Chalke, R.D. Bapat, A. Thamizhavel, Arnab Bhattacharya, TIFR, Mumbai 4.45-5.00 pm Synthesis and characterization of transition metal dichalcogenide crystals and thin-films (1570026683)	NBC-2: Shruti Kejriwal, Rajat Vishnoi and Anuj Dhawan, IIT Delhi 5.15-5.30 pm A novel back gated GaN/AlGaN HEMT structure for biological sensing applications (1570020375)
	LDC-5. Premlata Yadav, Pawan Srivastava, Subhasis Ghosh, JNU, New Delhi, 5.00-5.15 pm High Field Effect Mobility of 10,000 cm^2/Vs and 5,000 cm^2/Vs in Undoped and Doped Monolayer Graphene-based Transistors (157000327)	
	LDC-6: Shalini Gupta, Shruti Subramanian, Priti Gupta, B.A. Chalke, R.D. Bapat, A. Thamizhavel, Arnab Bhattacharya, TIFR, Mumbai 5.15-5.30 pm Crystal growth, structural and optical characterization of ReS_2 and $ReSe_2$ (1570026857)	

Poster Session 1: 4th December 2014, 5.30-6.45 pm (Exhibition Hall)

Session Chairs: Anil Prabhakar, IIT Madras & Sushobhan Avasthi, IISc

Panelists: David S. Citrin, Subho DasGupta, Mustafa Culha, & S K Sikdar

3D Systems and Packaging Technologies-3, Nano-electro-mechanical Devices and Systems-4, Nanobiosensors-2, Flexible Electronics-7, Photonics and Plasmonics-13

S No.		Paper ID	Topic	Authors
1	SPP-1	1569995033	Study of solder-based self-assembled 3D micro scale structures via surface evolver	Neha Oraon, Madhav Rao
2	SPP-2	1570026591	High Sensitive Soil-Moisture Sensors Development and Automatic Watering for Irrigation Systems	Prakash Kodali, Navin Hosur
3	SPP-3	1570028643	Ball bump connectivity for polymer based devices using Wirebonder	Manjunath,M.S., M.M. Nayak, Leema Rose Viannie, K. Rajanna
4	NEP-1	1570021061	Fabrication of micro-nano fluidic channels with integrated electrodes	Nagaraj K S, Karthick J, Anitha S, Suma B N, Hegde G M, Sneh Vaswani, Sindhulakshmi Kurup
5	NEP-2	1570026701	Design issues of Piezoresistive MEMS accelerometer for an application specific medical diagnostic system	Sonali Biswas, Anup Kumar Gogoi
6	NEP-3	1570027099	Optimization of high piezoelectric ZnO thin film for acoustic sensor applications	Jitendra Singh, Jamil Akhtar
7	NEP-4	1570028049	Impedance Performance Analysis of Graphene-Carbon Nanotube Composite Based antenna for Conformal Load Bearing Applications	Anand Sreekantan Thampy, Gobalakrishnan Suyambrakasam, Sriram Kumar Dhamodharan
8	NBP-1	1570019429	A Drain-side Gate-underlap I-MOS (DGI-MOS) Transistor as a Label-free Biosensor for Detection of Charged Biomolecules	N. Kannan, M. Jagadesh Kumar
9	NBP-2	1570020639	Traditional graphene-based and junctionless carbon nanotube based field effect transistor for cholesterol sensor	Md. Abdul Barik, Manoj Kumar Sarma, Jiten Ch. Dutta
10	FEP-1	1569997483	Detection of multiple trap distribution from steady state current-voltage characteristics of organic	S. M. H. Rizvi, B. Mazhari

			diode	
11	FEP-2	1570000203	Localized morphological change induced degradation in organic electronic devices	Jagdish A.K, Gangineni Pavankumar, Praveen C Ramamurthy, D Roy Mahapatra, Gopalkrishna Hegde
12	FEP-3	1570014055	Optical and switching studies of Quaterthiophene (QT) thin films	Sasidaran V and Shreekrishnakumar K
13	FEP-4	1570026715	Dielectric optimization for Inkjet-Printed TIPS-Pentacene Organic Thin-Film Transistors	Subhash Singh, Y N Mohapatra
14	FEP-5	1570027835	Simulation study of the electrical behavior of bottom contact organic thin film transistors	Farkhanda Ana Najeeb-ud-Din
15	FEP-6	1570030401	Impact of Morphology on Charge Carrier Mobility in Top Gate C_{60} Organic Field Effect Transistors	Akash Nigam, Günther Schwabegger, Rizwan Ahmed, Clemens Simbrunner, Helmut Sitter, Malin Premaratne, and V.Ramgopal Rao
16	FEP-7	1570034625	Flexible Graphene Antennas for Plastic Electronics	Maruthi Nagavalli Yogeesh, Kristen N Parrish, Deji Akinwande,
17	PPP-1	1569993973	Intermolecular Energy Transfer near Plasmonic Nanoshell	Manmohan S. Shishodia, Soniya Juneja, Boris D. Fainberg, Abraham Nitzan
18	PPP-2	1570020869	Tunable resonator-based photonic crystal switch	Ashutosh Kumar Dikshit, Satyabrata Jit, Jitendra Bhadur Singh, Subhashish Tiwari, Praveen Chandra Pandey
19	PPP-3	1570021257	Influence of Bias current and Gain compression coefficient on Modulation characteristics of 1.55 µm DFB laser	Abida Yousuf, Najeeb-ud-din
20	PPP-4	1570021419	Plasmonic Enhancement of Photocurrent in GaN Based UV Photodetectors	Arjun Shetty, Kamal John Sundar, Basanta Roul, Shruti Mukundan, Greeshma Chandan, Lokesh Mohan, Ambarish Ghosh, K J Vinoy, S B Krupanidhi
21	PPP-5	1570021559	Large chiro-optical effect in stacked chiral metamaterials	Gangadhar W.Bandewad, Greshma Nair, Ambarish Ghosh
22	PPP-6	1570021563	Dispersion Relation of Surface Magneto Plasmons	Deepika, Prashant Chauhan, Anshu Varshney and Vivek Sajal
23	PPP-7	1570021629	Photonic Crystal Fabrication For Integrated Optics Application	Yadunath.T.R, Anusree Kandoth, Srinivasulu, Venketeswara Rao K, T Badrinarayana, T.Srinivas, Lavendra Yadav, Gopalkrishna Hegde, S. Mohan
24	PPP-8	1570023015	Simulation and Fabrication of Porous Silicon-based Mach-Zehnder Interferometer for Biochips	L. Sujatha, Prita Nair
25	PPP-9	1570024523	Fiber Bragg Grating Tiltmeter	Sharath Umesh, Shikha Ambastha, Sundarrajan Asokan
26	PPP-10	1570026623	Gold Nanoshells coated 'U' bend optical fiber for near infra-red LSPR-based refractive index sensing	Joseph Tharion, Shraddha K. Chauhan, Soumyo Mukherji
27	PPP-11	1570026637	A multichannel tunable polarizing filter using 1D ternary photonic crystal containing single-negative materials	Maitreyi Upadhyay, Ranijita Panda, Puspendra Singh, S. K. Awasthi, S. P. Ojha
28	PPP-12	1570026643	Size and Surrounding Medium Effects on Plasmonic Response of Au-Ag-Cu Nanospheres	Amit Bansal, S. S. Verma
29	PPP-13	1570026649	Optoelectronic Properties of Graphene Silicon Nano-Texture	Brahmanandam Javvaji, M. Ajmalghan, Abhilash Ravikumar, D.Roy Mahapatra

PL-02: Stuart S.P. Parkin, Max Planck Institute for Microstructure Physics, Halle, Germany and IBM Research – Almaden, California, USA **7.00-7.45 pm(Main Hall)**

Spintronic and Ionitronic Computing Technologies

Banquet Dinner: 8 pm onwards @ The Sheraton Bengaluru, Brigade Gateway

Day 2: Friday, 5th December 2014 (Forenoon Session)

Main Hall

P T 2.1: Arnab Bhattacharya, TIFR, Mumbai 9.00-9.45 am
N-lightenment: The bright world of nitride semiconductors

P T 2.2: Arved C. Huebler, Chemnitz University of Technology, Germany 9.45-10.30 am
Future Trends in Printed Electronics

Session Chair: Saurabh Lodha, IIT Bombay

Tea Break: 10.30-11.00 am

Hall A: Flexible Electronics (11.00 -1.15 pm) Session Chair: Sanjiv Sambandan & Y P Prabhakar Rao, IISc, Bengaluru	**Hall B: Advanced Logic and Memory Devices (11.00-1.15 pm)** Session Chair: Ebinazar B Namdas, University of Queensland, Australia & Srinivasan Anand, KTH-Royal Institute of Technology, Sweden	**Main Hall : Photovoltaics and Energy Systems (11.00-1.15 pm)** Session Chair: Harish Bhaskaran, Oxford University, UK & Sushobhan Avasthi, IISc, Bengaluru
FEI-01: Deepak, IIT-Kanpur 11.00-11.30 am Organic LED Devices: Light Extraction and In-Ga-Zn Oxide Electronics for back planes	ALI-02: Ravi M Todi, Qualcomm Technologies Inc, CA USA, 11.00-11.30 am Semiconductor Innovation: Looking for new solutions to old problems	PEI-01: S. Sundar Kumar Iyer, IIT Kanpur 11.00-11.30 am Increasing Efficiency in Organic Solar Cells and Modules
FEI-02: Aloknath De, Samsung, India 11.30-12.00 noon Wearable Electronics: Device Perspective	ALI-03: Samar K Saha, Ultrasolar Technology, Santa Clara, CA 11.30-12.00 noon Variability-Tolerant Scaled MOSFET Device Structures	PEI-02: Sudha Mokkapati,The Australian National University, Canberra 11.30-12.00 noon Ultimate efficiency for single nanowire solar cells
FEI-03: Subho DasGupta, Karlsruhe Institute of Technology, Germany 12.00-12.30 pm Printed and low-temperature processed oxide electronics	ALC-1. Vishal A. Tiwari, Andreas Scholze, Rama Divakaruni, Deleep R. NairIIT Madras12.00-12.15 pm Modeling of Gate-induced Drain Leakage mechanisms in Silicon-Germanium channel pFET (1570021349)	PEI-03: Pradeep R. NairIIT Bombay12.00-12.30 pm Perovskite-based solar cells - Device Physics and Performance Optimization
FEC-1: Oppili Prasad, Prateek Jha, Sanjiv Sambandan, Bharadwaj Amrutur, IISc Bengaluru 12.30-12.45 pm Towards low cost stretchable electronics systems based on toner transfer of copper interconnect patterns onto elastomeric substrates (1570021439)	ALC-2: Anup Kumar, Chitrakant Sahu, Jawar Singh, IIITDM, Jabalpur 12.15-12.30 pm Sub-threshold Analog/RF Performance Estimation of Doping-less DGFET for ULP Applications (1570026571)	PEC-1: Abhijit Kukarni, Vinod John, IISc, Bengaluru 12.30-12.45 pm High-Frequency Transformer Based Grid-connected Inverter Topology for Photovoltaic Systems (1570025773)
FEC-2: Deepa Singh, Deepak, Ashish Garg, IIT-Kanpur 12.45-1.00 pm Development of P(VDF-TrFE) capacitor on flexible substrates for non-volatile memory devices (1570021169)	ALC-3: Selwin Kumar Pushpadhas, Deleep R. Nair, Amitava DasGupta, IIT Madras 12.30-12.45 pm Novel FinFET with Dynamic Threshold Voltage (1570021429)	PEC-2. Meenakshi Bhaisare, Sandeep S.S., Anil Kottantharayil, IIT Bombay 12.45-1.00 pm Thermal stability of single layer pulsed - DC reactive sputtered AlO_x film and stack of ICP - CVD SiN_x on AlO_x for p-type c-Si surface passivation (1570014987)
FEC-3: Varsha Rani, Sarita Yadav, Akanksha Sharma and Subhasis Ghosh, JNU Delh 1.00-1.15 pm What Decides the Mobility of Small Molecule-based Organic Semiconductors in Organic Thin Film Transistors? (1570020541)	ALC-4. Sangeeta Singh, Pawan Pal, Rohit Mittal, Anurag Tamia, P.N. Kondekar IIITDM, Jabalpur 12.45-1.00 Silicon on Ferroelectric Tunnel FET (SOF-TFET) for Low Power Application (1570025279)	PEC-3. Bandana Singha, Chetan Singh Solanki, IIT Bombay 1.00-1.15 pm Experimental study of boric acid diffused emitters for n- type c-Si solar cells (1570021639)
	Lunch Break: 1.15-2.15 pm	

Day 2: Friday, 5th December 2014 (Afternoon Session)

Main Hall

PT 2.3: **Jeevak Parpia, Cornell University, USA** 2.15-3.00 pm
Seven years of Graphene Resonators – from Scotch Tape to CVD and beyond

Session Chair: V Venkataraman, Physics, IISc Bengaluru

Hall A : Nanobiosensor (3.00 - 5.30 pm) Session Chair: Debjani Paul, IIT Bombay & Mustafa Culha, Yeditepe University, Istanbul, Turkey	**Hall B: Compound Semiconductor Devices (3.00 -5.30 pm)** Session Chair: Dipankar. Saha, IIT Bombay & Digbijoy Nath, IISc, Bengaluru	**Main Hall: Flexible Electronics (3.00-5.30 pm)** Session Chair: Gopal Hegde, IISc, Bengaluru &S. Sundar Kumar Iyer, IIT Kanpur
NBI-04: S K Sikdar, IISc, Bengaluru 3.00- 3.30 pm Sensing electrical activity of live neuronal networks in a dish: engineering and neurobiological applications	CSI-03: Yoganand Saripalli, IMEC Belgium, 3.00-3.30 pm Gallium Nitride Epitaxy on large area silicon substrates for power and optoelectronic applications	FEI-04: Udayan Ganguly, IIT Bombay 3.00- 3.30 pm Selector Devices for Future Non-Volatile Memory Technologies
Tea Break 3.30-4.00 pm	**Tea Break 3.30-4.00 pm**	**Tea Break 3.30-4.00 pm**
NBI-05: Anil Prabhakar, IIT Madras 4.00 -4.30 pm Opto-fluidic flow analysis for monitoring of immunity levels in HIV patients	CSI-04: K. Radhakrishnan, College of Engineering, Singapore 4.00-4.30 pm Ammonia MBE based GaN-HEMT growth on Silicon	FEI-05: Ebinazar B Namdas, University of Queensland, Australia 4.00 -4.30 pm Organic Light Emitting Transistors for Display
NBC-3: Sachin Dhariwal, Rahul Prajesh, Ajay Agarwal, AcSIR & CSIR, India 4.30-4.45 pm Nanogap Electrode Formation by Sacrificial Layer Technique (1570024395)	CSC-4: Priti Gupta, A. Azizur Rahman, Shruti Subramanian, Shalini Gupta, Nirupam Hatui, B.A. Chalke, R.D. Bapat, A. Thamizhavel, Arnab Bhattacharya, TIFR, Mumbai 4.30 -4.45 pm Transition-metal dichalcogenides: novel substrates for epitaxial growth of III-nitride semiconductors (1570026079)	FEC-4: Sibani Bisoyi, Shree Prakash Tiwari, Ute Zschieschang, Hagen Klauk, IIT-Jodhpur 4.30-4.45 pm Influence of gate and drain bias on the bias-stress stability of flexible organic thin-film transistors (1570020605)
NBC-4. Brince Paul, Chandra Shekhar Sharma, Shiv Govind Singh, Siva Rama Krishna V.,IIT-Hyderabad 4.45-5.00 pm Fabrication and Characterization of Zinc Oxide Nanowires for High Sensitivity Sensing applications (1570026723)	CSC-5. Manikant, Nagaboopathy Mohan, Rohith Soman, Hareesh Chandrasaker and Srinivasan Raghavan, IISc Bengaluru 4.45-5.00 pm AlGaN/GaN HEMTs 2DEG behavior on various transition buffers (1570029433)	FEC-5: Swathi S K, Ranjith K, Praveen C Ramamurthy, IISc, Bengaluru 4.45-5.00 pm Understanding evolution of electronic energy band in low turn on voltage DACz polymer diodes (1569997333)
NBC-5: Ashwini N Mallya, Sowmya P, Praveen C Ramamurthy 5.00-5.15 pm Organic nanocomposite sensor for detection of Escherichia coli (1569996381)	CSC-6: Sayantani Sen, Pallabi Pramanik, Chirantan Singha, Alakananda Das, Abhra Shankar Roy, Susanta Sen, Anirban Bhattacharya, University of Calcutta 5.00-5.15 pm Solar Blind Photodetectors based on AlGaN Bulk Film and Quantum Wells (1570027431)	

	CSC-7. Nirupam Hatui, A. Azizur Rahman, Priti Gupta, Carina B. Maliakkal, Arnab Bhattacharya, TIFR Mumbai 5.15-5.30 pm Single-step MOVPE growth of semipolar (11-22) AlGaN across the composition range (1570026071)	

(Special Session)

Hall C

MIND to MARKET Sessions

SESSION 1 (11:00 - 1:15 PM)

Chairman – ***Dr. V S Rama Murthy***

Prototype Development activity at Research fabs :

CeNSE, IISc – Prof. Navakanta Bhat	(20 mins)
CEN at IIT Bombay - Dr. Soumyo Mukherji	(20 mins)
Centre for NEMS at IIT Madras- Prof. Nandita Das Gupta	(20 mins)
Infrastructure and Product Development at SCL, Chandigarh – Mr. Surinder Singh	(20 mins)
Infrastructure and Scaling up of devices at SITAR, Bangalore – Dr. LingaMurthy, SITAR	(20 mins)
A New Fab in India – Vision – Mr. Vishal Verma, HSMC	(20 mins)

SESSION 2 (3:00 - 5:30 PM)

Chairman – ***Dr. Baladev Raj***

Research interaction with CeNSE , IISc as an Industry Affiliate :

Dr. Sreenivasan– Lam Research	(20 mins)
Dr. Amitava Pramanik– UniLever	(20 mins)
Process Requirements of Industry – Expectations from Research Institutions Mr. Suraj Rengarajan – Applied Materials	(20 mins)
Research interaction with CeNSE, IISc as an Industry Affiliate Dr. G. Veda Prakash, Centum Electronics	(20 mins)
Sensor and System Development for Strategic Sector Mr. BalaShanmugham, CMTI	(20 mins)

Start ups and their Success stories :

No Po Nano Technologies - Dr. Gadadhar Reddy	(10 mins)
i2n Technologies Pvt. Ltd - Mr. Rajiv Menon	(10 mins)

Concluding Session - Dr. S. Mohan (20 mins)

Poster Session 2: 5th December 2014, 5.30-6.30 pm (Exhibition Hall)

Session Chairs: V. Siva Rama Krishna, IIT-Hyderabad & Prosenjit Sen, IISc

Panelists: T K Bhattacharya, Nandita DasGupta, Ebinazar B Namdas, Deleep R. Nair, K. Radhakrishnan

Low-Dimensional Semiconductors: Growth and Applications- 1, Semiconductor Process Technologies-15, Computational Modeling at the Nanoscale-14

S No.	Code	Paper ID	Topic	Authors
1	LDP-1	1570021567	Understanding non-Gaussian velocity fluctuations in helical nanopropellers	Arijit Ghosh, Ambarish Ghosh
2	STP-1	1569996011	Process-induced-strain Maximisation of Nanoscale Silicon-on-Sapphire High-k gate-dielectric MOSFETs by Adjusting Device Aspect Ratio	Sulagna Chatterjee
3	STP-2	1569999931	Growth and Microwave Characteristic of Epitaxial $Ba_{0.5}Sr_{0.5}TiO_3$ Thin Films for Electrically Steerable Microwave Devices	James Raju K C, Lakshmi Narayana Rao G, Sudheendran K, Ram Katiyar, Shojan Pavunny
4	STP-3	1570008389	Microwave pulse-assisted wet chemical synthesis of ZnO nanoparticles with excellent UV emission	Aarti Choudhary
5	STP-4	1570018879	VLS Growth of Silicon Nanowires in Cold Wall Cat-CVD Chamber	Sanchar Acharya, Anil Kottantharayil
6	STP-5	1570020699	Metal-Assisted Chemical Vertical Etching of Si: Effect of Catalyst Morphology and Oxidant Concentration	Deepu Bagur Rudrappa, Sangeeth Kallatt, Suresh Addepalli, Savitha P
7	STP-6	1570021461	Conformal Growth Study of Oxide on Silicon Nano-pillars	Anitha Shiva, Nagaraj K.S, G.M. Hegde
8	STP-7	1570021653	Study of NBE emission enhancement of ZnO nanorods by changing the surface property of ultrathin Ag interlayer	Anil Kumar Pal, D. Bharathi Mohan
9	STP-8	1570024723	Material and Mechanical Characterization of PECVD a-SiC:H films with H_2 dilution	Adithi.U, Sadanand Deshpande, K.N. Bhat
10	STP-9	1570026235	A Quick Method to Realize and Characterize Bimorph Cantilevers	Rahul Prajesh, Ajay Agarwal
11	STP-10	1570026425	RF sputtered ZnO nanorods for hydrogen sensors	Mahesh Kumar, Sapana Ranwa
12	STP-11	1570026461	Influence of Growth Paramaters on the Crystallinity and Stress of SiGe films grown by LPCVD	Madhuri Suresh, Siva Penmetsa, Savitha P
13	STP-12	1570026595	Single Step Fabrication of Nano-Structured Superhydrophobic Surfaces Showing Angle Dependent Colors	Abinash Tripathy, Ankur Goswami, Prosenjit Sen
14	STP-13	1570026617	Improvement in Crystallinity of Sputtered YSZ/Si Films by Tuning Growth Stress	Amiya Banerjee, Narayan K. V. L. V. Achari, Srinivasan Raghavan
15	STP-14	1570026905	Effect of dead layer on the efficiency of planar semiconductor neutron detectors	G Prasanna, Manoj Parida, K Prabakar, Raghu Ramaiah M, S Tripura Sundari, J Jayapandian, CS Sundar
16	STP-15	1570027549	Fabrication and release of SU-8 structures on soft substrate	Richa Mishra, Tarun Kanti Bhattacharya, Tapas Kumar Maiti

17	CMP-1	1569994973	Two Dimensional Analytical Model for Threshold Voltage of Graded-Channel SOI MOSFETs	Varun Goel, Sanjay Sharma, Sanjay Kumar, Satyabrata Jit
18	CMP-2	1570017955	Enhancement of Multisubband Electron Mobility in Barrier Delta Doped Asymmetric GaAs/AlGaAs Double Quantum Well Structure	Sudhakar Das, Rasmita Kumari Nayak, Trinath Sahu, Ajit Kumar Panda
19	CMP-3	1570020291	Drain Current Model for SOI TFET considering Source and Drain side Tunneling	Pratyush Pandey, Rajat Vishnoi, M. Jagadesh Kumar
20	CMP-4	1570020363	Numerical study of the Threshold Voltage of TFETs with localized charges	Rajat Vishnoi, M. Jagadesh Kumar
21	CMP-5	1570020911	To expound superconductive quantum transport for C20 fullerene with disparate electrode material	Milanpreet Kaur, Ravinder Singh Sawhney, Derick Engles
22	CMP-6	1570021223	Analysis of Quasi-Saturation and Negative Differential Resistance in Graphene FETs	Brajesh Rawat, Roy P Paily
23	CMP-7	1570021579	Analysis and Modeling of Quantum Capacitance in III-V Transistors	Avirup Dasgupta, Chandan Yadav, Priyank Rastogi, Amit Agarwal, Yogesh Chauhan
24	CMP-8	1570021595	Comprehensive modeling of gas sensor based on Si_3N_4 passivated AlGaN/GaN Schottky diode	Subhashis Das, Shubhankar Majumdar, Rahul Kumar, Mihir Mahata, Syed Dinara, Dhrubes Biswas
25	CMP-9	1570021657	Charge-based Modeling of Channel Material Engineered P-type Double Gate MOSFET	Vandana Kumari, Aravindan Ilango, Manoj Saxena, Mridula Gupta
26	CMP-10	1570025267	Material Engineering in Cylindrical Surrounding Double Gate (CSDG) MOSFETs for Enhance Electrostatic Integrity and RF Performance	Jay Hind Kumar Verma, Subhasis Haldar, R S Gupta, Mridula Gupta
27	CMP-11	1570026475	Design and Simulation of a High Performance Dopingless p-Tunnel Field Effect Transistor	Sajad A. Loan, Faisal Bashir
28	CMP-12	1570026557	Microfluid-based Energy Harvesting Device simulation & optimization	Rohit Shrivastava, Kavya Nalluri, Siva Rama Krishna, Ashudeb Dutta, ShivGovind Singh
29	CMP-13	1570026573	Improved Parameter Extraction Technique for GaN HEMT's Small Signal Model	Umakant Goyal, Meena Mishra, Seema Vinayak
30	CMP-14	1570026711	Generalized Analytical Approach for Estimating the Wave function and Gate Tunneling Current in a Nanoscale MOSFET	Madhu Kushwaha, Arun Kumar Chatterjee, B Prasad
Cultural Event: 6.30-7.30 pm				

Day 3: Saturday, 6th December 2014 (Forenoon Session)

Main Hall

PT 3.1: Jeremy Levy, University of Pittsburgh, USA 9.00-9.45 am
Oxide Nanoelectronics on Demand

PT 3.2: M Jagadesh Kumar, Indian Institute of Technology, Delhi 9.45-10.30 am
Koomey's law and the steep subthreshold transistors – What is in store?

Session Chair: K.N. Bhat, IISc Bengaluru

Tea Break 10.30-11.00 am

Hall A: Nano-electro-mechanical Devices and System (11.00- 1.15 pm) Session Chair: K J Vinoy, ECE & Akshay Naik, CeNSE, IISc Bengaluru	**Hall B: Compound Semiconductor Devices (11.00-1.15 pm)** Session Chair: Sadanand Deshpande, IISc, Bengaluru & Nandita DasGupta IIT Madras	**Main Hall : Photonics and Plasmonics (11.00 -1.15 pm)** Session Chair: Shankar Kumar Selvaraja & V R Supradeepa, IISc, Bengaluru
NEI-01: Takashi Hikihara Kyoto University, Japan11.00-11.30 am Applications of coupled nonlinear micro-electro-mechanical resonators	CSI-05: Dipankar Saha, IIT Bombay 11.00 -11.30 am GaN Based Nano-wire Devices	PPI-01: David S. Citrin Georgia Inst. of Technology, USA 11.00-11.30 am Nanoplasmonics: A Platform for Photonic Integration
NEI-02: K. J. Rangra CSIR-CEERI Pilani, Rajasthan 11.30-12.00 Noon Surface Micro-Machined RF MEMS and Test Structures for Induced Stress Characterization	CSI-06: Anirban Bhatacharya, University of Calcutta 11.30-12.00 noon AlGaN-based Multiple Quantum Wells and their applications in Ultraviolet Emitters and Detectors	PPI-02: Harish Bhaskaran Oxford University, UK 11.30-12.00 noon Phase Change Materials for Use in Optoelectronic Applications
NEI-03: T.K. Bhattacharya, IIT-Kharagpur 12.00-12.30 pm Nanoengineered Sensors and Actuators	CSC-8: Abheek Bardhan, Nagaboopathy Mohan, Rohith Soman, Manikant, Srinivasan Raghavan, IISc, Bengaluru 12.00-12.15 pm Efficient curvature management under tensile stress in graded AlGaN buffer layer for device quality GaN growth on Si (111) substrate (1570026679)	PPI-03: Srinivasan Anand KTH-Royal Institute of Technology, Sweden12.00-12.30 pm Photonic Semiconductor Nanostructures: Optical Properties and Applications
NEC-1: Leema Rose Viannie, G.R. Jayanth, K.Rajanna, V.Radhakrishna, Gopalkrishna Hegde IISc, Bengaluru 12.30-12.45 pm Releasing residual stress on SU8 microcantilever based thermal actuator (1570027669)	CSC-9: Ponnusamy Arivazhagan, Krishnan Baskar, Eric Faulques, Fouad Bennis, Anna University 12.15-12.30 pm Time-resolved photoluminescence studies on AlGaN double heterostructures (1570026509)	PPC-1: Prashanth R, Shankar Kumar Selvaraja, Manoj M. Varma, IISc, Bengaluru 12.30-12.45 pm Sensitivity analysis of tunable double microring resonator based intensity sensor (1570021753)
NEC-2: Shubhi Bansal, Prosenjit Sen IISc, Bengaluru 12.45-1.00 pm Non-Axisymmetric Oscillations of Droplets in Electrowetting-on-Dielectric (1570026653)	CSC-10: Shreyash Singh, Nidhi Chaturvedi, BITS-Pilani 12.30-12.45 pm Influence Of AlGaN and InGaN Back Barrier On The Performance Of AlGaN/GaN HEMT (1570021309)	PPC-2: Bhuvaneshwari Karunakaran, Ammar Jagirdar, Debjani Paul, Soumyo Mukherji, IIT Bombay 12.45-1.00 pm Fabrication of nearly hemispherical polymer lenses using water droplet as mold (1570026667)
NEC-3. Prashant N.Kambali, Ashok Kumar Pandey, IIT-Hyderabad 1.00-1.15 pm Electrostatic Forces in Fixed-Fixed Microbeams under Direct and Fringing Field Effects (1570021583)	CSC-11: Chirantan Singha, Pallabi Pramanik, Sayantani Sen, Alakananda Das, Abhra Shankar Roy, Susanta Sen, Anirban Bhattacharya, Univ. of Kolkata 12.45-1.00 pm Theoretical and Experimental Studies on AlGaN Multiple Quantum Wells for Ultraviolet Emitters (1570027433)	PPC-3: Haobijam J. Singh, Ambarish Ghosh, IISc, Bengaluru 1.00-1.15 pm Variability on the Chiro-optical Response of Helically Arranged Metallic Nanoparticles (1570021675)
	Lunch Break: 1.15-2.15 pm	

Day 3: Saturday, 6th December 2014 (Afternoon Session)
Main Hall

Panel Discussion: Emergence of India as Electronics Powerhouse 2.15- 3.30 pm

Panelists: Ajay Kumar, Joint Secy. DeitY, Govt. of India
Apparao Mallavarapu (Rao) Centum Electronics
MN Vidyashankar, President IESA
Ganapathy Subramaniam, Walden International
J. Vasi, IIT Bombay

Session Chair: Navakanta Bhat

Poster Session 3: 3.30-5.00 pm (Exhibition Hall)

Session Chair: Deepak, IIT-Kanpur & Akshay Naik, IISc, Bengaluru

Panelists: Srinivasan Anand, Pradeep Nair, S. Sundar Kumar Iyer, Sudha Mokkapati, Samar K Saha, K. J. Rangra, Takashi Hikihara

Advanced Logic & Memory Devices-8, Photovoltaics and Energy Systems-14, Compound Semiconductor Devices-19

S. No.	Code	Paper ID	Topic	Authors
1	ALP-1	1570021423	A Novel Partially Insulated Junctionless Transistor for Low Power Nanoscale Digital Integrated Circuits	Ganesh C. Patil, Vijaysinh Bonge, Mayur Malode, Rahul Jain
2	ALP-2	1570021521	Ab-initio study of doping versus adsorption in monolayer MoS_2	Priyank Rastogi, Sanjay Kumar, Somnath Bhowmick, Amit Agarwal, Yogesh Chauhan
3	ALP-3	1570021591	High Performance Charge Plasma-based Multi Zone Lateral Bipolar Junction Transistor	Faisal Bashir, Sajad A. Loan
4	ALP-4	1570021623	Vertical Nanowire Transistor-based CMOS VTC Analysis	Satish Maheshwaram, Sanjeev Manhas, Anand Bulusu
5	ALP-5	1570026343	Geometric Programming-based gate sizing for switching power reduction	Sachin Maheshwari, Rajesh Vijayvargiya, Karan Gandhi, Anu Gupta
6	ALP-6	1570026579	Stress- and phase-engineered ZrO_2/Ge for high-k dielectric applications	Narayan K. V. L. V. Achari, Amiya Banerjee, Srinivasan Raghavan
7	ALP-7	1570026609	A High-k, Metal Gate Vertical-Slit FET for Ultra-Low Power and High-Speed Applications	Somesh Kumar, Sarabjeet Kaur, Rohit Y. Sharma
8	ALP-8	1570026721	Performance Comparison of Bulk and SOI Planar Junctionless SONOS Memory	Rajesh Lodhi, Somdutta Pandey, Chitrakant Sahu, Jawar Singh
9	PEP-1	1569993035	Day-Ahead Prediction of Solar Power Output for grid-connected solar photovoltaic installations using Artificial Neural Networks	Muhammad Ehsan, R; Sishaj P Simon; Venkateswaran Payyalore,
10	PEP-2	1569993555	Investigation on silver nanoparticles based plasmonic antireflection and its impact on electrical performance of mono c-Si solar cells	Hemant Kumar Singh, Sandeep Kumbhar, Mallikarjuna Chary, Balraj Arunachalam, Pratibha Sharma, Chetan Solanki
11	PEP-3	1569995781	Effect of KOH Etch Solution Volume and Circulation Method on Surface Texturization of Si(100)	Ujwala Bhat, Savitha P
12	PEP-4	1569996457	Nickel nanoparticle for improving current density in inverted polymer solar cell	Arulvarman Kesavan, Praveen Ramamurthy
13	PEP-5	1570015947	Effect of annealing on structural properties of electrodeposited CZTS thin films	Tulshi Shiyani, M. Patel, I. Mukhopadhyay, A. Ray
14	PEP-6	1570021333	Study of Cu_2SnS_3 thin films for photoactive applications	Sandra Dias. SB Krupanidhi
15	PEP-7	1570021459	Laser fired ohmic contacts in silicon using pulse modulated CW laser	Akash Kumar, Som Mondal, Anishkumar Soman, Aldrin Antony
16	PEP-8	1570021469	One Dimensional Photonic Crystal Reflector using Silicon-rich Silicon Nitride and Silicon Oxynitride Multilayers for Solar Cells	Anishkumar Soman, Aldrin Antony
17	PEP-9	1570021477	Design of Integrated Thermal-Photovoltaic Hybrid Solar Energy Power Generation System	Mohana S, K. Rathnakannan
18	PEP-10	1570021519	Fabrication of free standing PEDOT:PSS nanofibers mat using electrospinning	Khadija Khanum, Shruti Hegde, Praveen Ramamurthy
19	PEP-11	1570021527	Photoconductivity Studies of CdS Thin Films	Rajesh Kumar, Ruby Das
20	PEP-12	1570021575	Fractal Nanoantenna For Solar Energy	Rohit Dwarkadas Apurva, Amit

				Naik
21	PEP-13	(1570021607)	Nanoporous $Li_4Ti_5O_{12}$ material for electrode of lithium ion battery	Sobhit Saxena, Anjan Sil
22	PEP-14	1570026603	Effect of size on the scattering properties of silica nanoparticles	Sonali Das, Avra Kundu, S. Hossain, Hiranmay Saha, Swapan Datta
23	CSP-1	1570017449	Comprehensive study of AlGaAs/GaAs heterostructures grown by MBE: Structural and compositional analysis	Rahul Kumar, Partha Mukhopadhyay, Sanjay Jana, Ankush Bag, Saptarsi Ghosh, Subhashis Das, Mihir Mahata, Dhrubes Biswas
24	CSP-2	1570020747	AlGaN/GaN MOS-HEMTs Using Rapid Thermal Oxidation of Barrier Layer	Sreenidhi Turuvekere, Amitava DasGupta, Nandita DasGupta
25	CSP-3	1570021249	Suitability of sol-gel derived amorphous and crystalline compositions of In-Ga-Zn oxide for thin film transistors	Ishan Choudhary; Deepak Deepak
26	CSP-4	1570021317	Gallium nitride based metal-semiconductor and metal-insulator-semiconductor Schottky diodes	Arjun Shetty, Basanta Roul, Shruti Mukundan, Greeshma Chandan, Lokesh Mohan, KJ Vinoy, SB Krupanidhi
27	CSP-5	1570021585	Study of growth of in situ Ga catalyzed AlGaAs nanostructures using MOVPE technique	Rajesh Bag, J. Lohani and R. Tyagi, D. K. Pandya, R. Singh
28	CSP-6	1570021679	Fowler Nordheim Tunneling Contribution in AlGaN/GaN on Si (111) Schottky Barrier Current	Ankush Bag, Palash Das, Saptarsi Ghosh, Partha Mukhopadhyay, Apurba Chakraborty, Syed Mukulika Dinara, Rahul Kumar, Dhrubes Biswas
29	CSP-7	1570025313	Analysis of reverse leakage current in differently passivated AlGaN/GaN HEMTs	Anushree Tomer, Sindhu Dayal, Sunil Sharma, Henika Arora, Sonalee Kapoor, Deependra Singh Rawal, Seema Vinayak
30	CSP-8	1570025795	The Effect of Different Silicon Nitride Passivation Recipes on the DC Characteristics of AlGaN/GaN HEMTs	Robert Laishram, Sunil Sharma, Sindhu Dayal, Rupesh Chaubey, R. Raman, B. Sehgal
31	CSP-9	1570026075	Effect of buffer layers on the growth of semipolar (11-22) oriented GaN	A. Azizur Rahman, Nirupam Hatui, Priti Gupta, Carina B. Maliakkal, Arnab Bhattacharya
32	CSP-10	1570026513	Electrical characteristics of post-gate annealed AlGaN/GaN HEMTs on sapphire substrate	Somna Mahajan, Anushree Tomer, Robert Laishram, Anant Naik, Vanita Agarwal
33	CSP-11	1570026529	Role of AlN interlayer on Structural and Electrical properties of AlGaN/GaN HEMTs	Raju Ramesh, Krishnan Baskar
34	CSP-12	1570026587	Silicon ion irradiation effects on AlGaN/GaN heterostructures grown by Metalorganic Chemical Vapor Deposition	Balaji Manavaimaran, Krishnan Baskar
35	CSP-13	1570026601	Analysis of fast and slow trap states on electrical performance of AlGaN/GaN HEMTs	Janesh Kumar Kaushik, V. Raman Balakrishnan, Panwar Singh Brishbhan, Rangarajan Muralidharan
36	CSP-14	1570026761	Dependence of Field Plate Parameters on Dielectric Constant in a 4H-SiC Schottky Diode	Bhawani Shankar, Sanjeev Gupta, William Taube, Jamil Akhtar
37	CSP-15	1570028897	Growth of High Quality GaN Nanowalls on Si (111) Surface	Satish Shetty, S. Shivaprasad
38	CSP-16	1570028899	Improved structural quality of GaN nanowall network grown on pre-nitrided c-sapphire	Varun Thakur, Sanjay Kumar Nayak, K.K. Nagaraja, S. Shivaprasad
39	CSP-17	1570028901	Growth of high quality InN films and nano-rods grown on GaN nano wall network	Malleswararao Tangi, Arpan De, S.M. Shivaprasad
40	CSP-18	1570029435	Effect of Ga flux and rf-power on homoepitaxial growth of single crystalline GaN films	Shibin Krishna TC, Neha Aggarwal, Monu Mishra, Govind Gupta
41	CSP-19	1570033333	Estimation of background carrier concentration in semi-insulating, fully depleted GaN films	Hareesh Chandrasekar, Srinivasan Raghavan, Navakanta Bhat

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