

# IWNEBD– 2018 October 31, 2018

## Poster Session - I

Sl. No.	Abstract No.	Presenting Author	Title	Poster No.	Topic
1	ABS-057-VLSI-01	CHANDER MOHAN	Optimization and Comparison of SOI Gate All Around Field Effect Transistor with FinFET at Sub Deca- Nanometer Node	D1P-01-VLSI-01	VLSI Technology & Design
2	ABS-066-VLSI-02	M BHARATHI RAJ	Performance analysis of 7-nm node Negative capacitance – MoS2 nanotube transistor – Based SRAM	D1P-02-VLSI-02	
3	ABS-091-VLSI-03	WAGAJ SANTOSH CHANDRAKANT	Comparison study of Dual Material Gate Silicon on Insulator junctionless Transistor and with junction Transistor for Analog Performance	D1P-03-VLSI-03	
4	ABS-099-VLSI-04	RUDRA SANKAR DHAR	Drive Current Performance for Double Strained Channel MOSFET in Deep Sub-Micron regime	D1P-04-VLSI-04	
5	ABS-105-VLSI-05	GUL FAROZ AHMAD MALIK	Implementation of Digital Logic Functions Using InAs Channel Based Triple Gate Spin Field-Effect Transistor	D1P-05-VLSI-05	
6	ABS-137-VLSI-08	FARKHANDA ANA	Investigation of Leakage Mechanisms in Organic Thin-Film Transistors	D1P-06-VLSI-06	
7	ABS-002-NMFD-01	DIVYANK SOOD	Development of a cost effective, portable AFM setup and experimental analysis using the setup	D1P-07-NMFD-01	Nano Micro Fabrication & Design
8	ABS-008-NMFD-02	AJIT DESHPANDE	Using 3D Printing for Treating Fractures	D1P-08-NMFD-02	
9	ABS-011-NMFD-03	SHUBHAM MISHRA	Micro/nano Lens Fabrication and its Tuning Using Microwave Irradiation	D1P-09-NMFD-03	
10	ABS-013-NMFD-04	ANKIT SAXENA	Analytical evaluation of mechanical strengths associated with material properties of a femur bone in response to daily activities	D1P-10-NMFD-04	
11	ABS-019-NMFD-05	S. SARANYA	Micromachining of quartz substrates using an electrochemical discharge machining (ECDM) process	D1P-11-NMFD-05	
12	ABS-020-NMFD-06	VIJAY KUMAR	Innovative Packaging Approach for MEMS-Based Micropropulsion Devices	D1P-12-NMFD-06	
13	ABS-028-NMFD-07	SHUBHAM JADHAV	Optimization of Magnetron sputtered AlN thin films on Pt thin films for PiezoMEMS devices	D1P-13-NMFD-07	
14	ABS-030-NMFD-08	VIVEKSHEEL RAJPUT	An experimental investigation to improve the micro-hole drilling process in ECDM	D1P-14-NMFD-08	
15	ABS-046-NMFD-09	TRAPTI MUDGAL	Nano/micro structure fabrication using combination of self organization, electron beam and photolithography	D1P-15-NMFD-09	
16	ABS-048-NMFD-10	DEBASHREE BANERJEE	Design of Si-based nanostructured thermoelectric metamaterial for lowered thermal conductivity and enhanced thermoelectric performance	D1P-16-NMFD-10	
17	ABS-056-NMFD-11	DR. MEHER WAN	Fabrication of bio-mimicking micro-needles for painless drug delivery and transdermal extraction of blood	D1P-17-NMFD-11	
18	ABS-062-NMFD-12	SHUBHANSHI SHARMA	Fabrication of 3D Meta-material Perfect Absorber by Direct Laser writing	D1P-18-NMFD-12	
19	ABS-063-NMFD-13	RAJAT KUMAR SINHA	Fabrication of Surface Nano grating on Conventional Optical Fiber	D1P-19-NMFD-13	
20	ABS-064-NMFD-14	JAVEED RESHI	Novel Low Power Nanoscale Authentication System Using Quantum Dot Cellular Automata	D1P-20-NMFD-14	
21	ABS-069-NMFD-16	ASHISH KUMAR	Solution Blowing: A novel technique to extrude polymer fibers	D1P-21-NMFD-15	
22	ABS-071-NMFD-17	SIVASANGARI SATHIAMOORTHY	Micro patterned cross linked SU8 photo resist on glass substrate for the growth of textured metal, metal oxide and semiconducting compound thin films	D1P-22-NMFD-16	
23	ABS-073-NMFD-18	JAGADISH RAJENDRAN	Optical lithography process optimization for area up scaling (from 4mm x 4mm to 20mm x 20mm ) of surface texturing of quaternary Cu2ZnSnSe4 solar absorber for enhanced optical absorbance	D1P-23-NMFD-17	
24	ABS-082-NMFD-20	PRIYANKA KAJAL	Planar heterojunction mixed Halide based PSC's by one and two step solution deposition technique	D1P-24-NMFD-18	
25	ABS-084-NMFD-21	TARLOCHAN SINGH	Role of anodic behavior during micro-channeling with ECDM	D1P-25-NMFD-19	
26	ABS-085-NMFD-22	BRIJ BANSI NATH ANCHAL	Fabrication of electro-spin coated Zn0.92 Fe0.08 O nano-micro porous thin film and application in LPG sensing	D1P-26-NMFD-20	
27	ABS-093-NMFD-23	KAMAL	Fabrication of Racetrack Micro Ring resonator on Micro-Pillars for Efficient Light Coupling from Fiber to Resonator	D1P-27-NMFD-21	
28	ABS-098-NMFD-24	ABHIJIT GHOSH	Nanostructured devices for spin-wave based applications	D1P-28-NMFD-22	
29	ABS-107-NMFD-25	SATNAM SINGH	Processing and Characterization of Metallic Powder based Castings using Microwave Energy	D1P-29-NMFD-23	
30	ABS-116-NMFD-27	ANUJA DAS	Fabrication of Multi-Length Scale Wrinkles by Modulating Substrate Viscoelasticity in a Metal-Polymer Bilayer	D1P-30-NMFD-24	
31	ABS-131-NMFD-31	DR. SANDIP PATIL	Synthesis and fabrication of PAN/CNT Composite Nanofibers and its Application by Near-Field Electrospinning Process	D1P-31-NMFD-25	
32	ABS-139-NGLT-01	PULIKANTI GURUPRASAD REDDY	EUV Photodynamic Study of Hybrid Non-chemically Amplified Resist Bearing Tin as an Absorption and Resolution Enhancer	D1P-32-NGLT-01	Next Generation Lithography

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## Poster Session - II

Sl. No.	Abstract No.	Presenting Author	Title	Poster No.	Topic
1	ABS-003-MEMS-01	Paridhi Puri	Registration of Cells using Dielectrophoresis in a C-Serpentine channel	D2P-01-MEMS-01	Bio-MEMS/ Sensors/NEMS/MEMS
2	ABS-036-MEMS-04	Ribu Mathew	Impact of additive gold immobilization layer on the performance of piezoresistive micro/nano-cantilever chemical/biological sensors	D2P-02-MEMS-02	
3	ABS-037-MEMS-05	RIBU MATHEW	A Finite Element Method (FEM) based Approach of Modeling a Miniaturized Silicon Piezoresistive Pressure Sensor by Incorporating Doping Profile of a Diffused Resistor	D2P-03-MEMS-03	
4	ABS-040-MEMS-06	Manisha Kumari	Fe doped SnO <sub>2</sub> nanoparticle modified pencil graphite electrode for electrochemical sensing of dopamine	D2P-04-MEMS-04	
5	ABS-045-MEMS-07	Aditya Sharma	Quantum Dots Mediated Electrochemical Immunosensing of UTI Biomarker	D2P-05-MEMS-05	
6	ABS-052-MEMS-08	Shubhankar Majumdar	Determination of GaN based Sensor Sensitivity using Support Vector Regression	D2P-06-MEMS-06	
7	ABS-058-MEMS-09	Siddhanta Roy	Generalized Theory of inherent Pull-in Instability in MEMS actuator/sensor and its Consequences on Static and Dynamic response	D2P-07-MEMS-07	
8	ABS-059-MEMS-10	UJJWOL BARMAN	Fabrication of ZnO Nanoparticle based FET for Biosensing Applications	D2P-08-MEMS-08	
9	ABS-061-MEMS-11	Namami Goswami	Fabrication of SAW Dual Delay Line for Biosensing Applications	D2P-09-MEMS-09	
10	ABS-072-MEMS-12	PRABHAKAR RAI	Au decorated Cu <sub>2</sub> O octahedral with embedded potential barrier layer: Gas sensing performance towards NO <sub>2</sub> gas	D2P-10-MEMS-10	
11	ABS-081-MEMS-13	SUBRAMANIAN SAKTHINATHAN	Highly Sensitive Electrochemical Detection of Environmental Pollutant Mercury Ion Using Pt Supported on micro-meso ZSM-5 Modified Electrode	D2P-11-MEMS-11	
12	ABS-086-MEMS-14	Nipin Kohli	Acetone Sensing Properties of Europium Doped Chromium Oxide Nanoparticles	D2P-12-MEMS-12	
13	ABS-088-MEMS-15	M.L.Aggarwal	Correlation factor comparison of various models in a shape memory alloy spring	D2P-13-MEMS-13	
14	ABS-092-MEMS-16	Prateek Bindra	Highly sensitive capacitive type ethanol sensors based on double layer TiO <sub>2</sub> nanotubes array	D2P-14-MEMS-14	
15	ABS-100-MEMS-17	Deepak Onkar Patil	Innovative technique for Brain tumor analysis in MRI using KITE algorithm	D2P-15-MEMS-15	
16	ABS-106-MEMS-18	Sweety	Controlled RESET Resistances Using Current Sweep in Nb <sub>2</sub> O <sub>5</sub> Thin Film based Atomic Switches	D2P-16-MEMS-16	
17	ABS-108-MEMS-19	Ajeet Kumar	Quantized Conductance States in Metal-Oxide Based Resistive Switches: Switching Mechanism and Multi-State Non-Volatile Memory	D2P-17-MEMS-17	
18	ABS-114-MEMS-20	AKSHAYA KUMAR A	Fabrication of Interdigitated Electrodes (IDEs) with Nanostructured Sensitive Layer for Electrochemical Sensor Applications	D2P-18-MEMS-18	
19	ABS-138-MEMS-22	VINAY KUMAR SRI-VASTAVA	Manual Spray Coating technique for Deep Etched Bulk Micro machined Trenches	D2P-19-MEMS-19	
20	ABS-140-MEMS-23	Aditi Dighe	Thin Film Si Photodetectors for Fluorescence Sensing	D2P-20-MEMS-20	
21	ABS-047-BEMF-02	Lokesh Kumar Gangwar	Detection of cardiac troponin I using liquid-crystal biosensor	D2P-21-BEMF-01	Bioelectronics, Microfluidics
22	ABS-077-BEMF-03	Dr Alok Pandya	PREVENTIVE DIAGNOSTICS USING PAPER BASED NANOPLATFORM	D2P-22-BEMF-02	
23	ABS-117-BEMF-04	Appan Roychoudhury	Paper microfluidic based capillary electrophoresis microchip for separation and simultaneous detection of dopamine, epinephrine and serotonin	D2P-23-BEMF-03	
24	ABS-001-TFNS-01	NEERAJ MARWAHA	Ultra Fast Investigation of Manganese (Mn) Doped MgO Nanostructures	D2P-24-TFNS-01	Thin Films and 2D-3D Nanostructures
25	ABS-009-TFNS-02	DINESH BABU K	NONLINEAR OPTICAL PROPERTIES AND OPTICAL LIMITING EFFECT OF L – GLUTAMIC ACID THIN FILMS BY Z SCAN METHOD	D2P-25-TFNS-02	
26	ABS-015-TFNS-03	ARUNIMA SINGH	Understanding the Stability of Point Defects in Monolayer MoS <sub>2</sub> from First-principles Approaches	D2P-26-TFNS-03	
27	ABS-016-TFNS-04	Kazi Hasibur Rahman	Effect of seed layers on the growth of 3D TiO <sub>2</sub> nanorod thin films by Hydrothermal Method	D2P-27-TFNS-04	
28	ABS-018-TFNS-05	Dr. Subimal Majee	Inkjet printed flexible transparent conducting films for next generation electronics	D2P-28-TFNS-05	
29	ABS-022-TFNS-06	Vijayendra Shastri	Micro and nano-scale patterning using liquid metal flow	D2P-29-TFNS-06	
30	ABS-024-TFNS-07	SATHI CHATTERJEE	Effect of growth time on morphological and optical properties of electrodeposited zinc oxide (ZnO) thin films	D2P-30-TFNS-07	
31	ABS-050-TFNS-09	Maneesha Sharma	Study of Control Parameters for Electromigration Induced Nanostructure Formation in Cr-Thin Films	D2P-31-TFNS-08	
32	ABS-054-TFNS-10	NAYANA G H	Modeling the characteristics of Graphene Field Effect Transistors	D2P-32-TFNS-09	
33	ABS-078-TFNS-11	Rahul kumar	Controlled vapor transport and substrate orientation induced-transition from basal to edge plane MoS <sub>2</sub> crystal growth	D2P-33-TFNS-10	
34	ABS-087-TFNS-12	Sandeep Prakash Desai	Structural and Opto-electrical properties of Spray Deposited Iron Doped Cadmium Based Transparent Conducting Oxides	D2P-34-TFNS-11	
35	ABS-094-TFNS-13	Sugandha Sharma	Growth of Cd <sub>x</sub> Zn <sub>1-x</sub> O thin film on p-Si (111) substrate using pulsed laser deposition	D2P-35-TFNS-12	
36	ABS-095-TFNS-14	Sharad Kumar Jain	Nanofabrication of Pixelated Polarizer Array by Electron Beam Lithography	D2P-36-TFNS-13	
37	ABS-096-TFNS-15	Prashant Varma	Electron Beam Grey Scale Lithography over Convex Surfaces for Blaze Grating Development	D2P-37-TFNS-14	
38	ABS-101-TFNS-16	Nandini Bhandaru	Topographic Pattern Directed Ordering and Dewetting of Phase Separated Domains in Polymer Blend Thin Films	D2P-38-TFNS-15	
39	ABS-103-TFNS-17	zaid mohammad shah	Conductive Polymer Composites Material Based Fractional-Order Capacitance Implementation	D2P-39-TFNS-16	
40	ABS-104-TFNS-18	MUBASHIR AHMAD	Modelling and Performance Analysis of Silicene Based FET	D2P-40-TFNS-17	
41	ABS-115-TFNS-19	Arjyayoti Goswami	Effect of parameters on the atomic scale friction during AFM analysis of a substrate	D2P-41-TFNS-18	
42	ABS-119-TFNS-20	Subhavna Juneja	Ternary nanocomposite based microgel system for simultaneous addressal of multidrug resistance and environmental ecotoxicity	D2P-42-TFNS-19	
43	ABS-129-TFNS-21	Vikash Sharma	Magnetic properties, dispersion behaviour and biological activity of CoFe <sub>2</sub> O <sub>4</sub> nanoparticles synthesized using modified co-precipitation method	D2P-43-TFNS-20	
44	ABS-136-TFNS-23	ANUP KUMAR BERA	Ion sculpting of thin Fe/Si(100) films during growth: origin of uniaxial magnetic anisotropy in polycrystalline Fe film	D2P-44-TFNS-21	

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## Poster Session - III

Sl. No.	Abstract No.	Presenting Author	Title	Poster No.	Topic
1	ABS-005-ADFM-01	CHHAYABRITA MAJI	Exploration of Heusler alloys for magnetic refrigeration and sensor applications	D3P-01-ADFM-01	Advanced Functional Materials
2	ABS-006-ADFM-02	DR. ASHOK G. MATANI	Utilizing lithium ion, carbon nanotubes and graphene batteries in electric vehicles	D3P-02-ADFM-02	
3	ABS-007-ADFM-03	S K TRIPATHY	First-Principles Calculation of Structural, Electronic and Optical Properties of CdAl <sub>2</sub> Te <sub>4</sub> Semiconductor	D3P-03-ADFM-03	
4	ABS-010-ADFM-04	SHIKHA SAINI	Thermodynamic Stability and Electronic Structure of Complex Metal – Oxide (TMxMgyOz) Clusters	D3P-04-ADFM-04	
5	ABS-014-ADFM-05	EKTA ARORA	Effect of Finite -Temperature on Native Defects in NaAlH <sub>4</sub>	D3P-05-ADFM-05	
6	ABS-017-ADFM-06	GAURAV ARORA	Transversely isotropic properties of microwave-cured PLLA/HA porous bio-nanocomposite	D3P-06-ADFM-06	
7	ABS-025-ADFM-07	KEYA SAHU	Molar ratio dependent morphological and optical properties of polyaniline-zinc oxide (PAni-ZnO) nanocomposite	D3P-07-ADFM-07	
8	ABS-026-ADFM-08	SMITA DEY	Morphological and optical properties of pure polypyrrole and polypyrrole-ZnO composite	D3P-08-ADFM-08	
9	ABS-027-ADFM-09	GOPAL AVASHTHI	Development of Multifunctional Metal Free Graphene-Oxide Based Materials	D3P-09-ADFM-09	
10	ABS-029-ADFM-10	SUSHIL KUMAR	A Study to improve the machining characteristics in Electrode Discharge Machining of Inconel 706 Super Alloys	D3P-10-ADFM-10	
11	ABS-041-ADFM-12	SHALINI BAHEL	Novel MgO-BaO-TiO <sub>2</sub> -SnO <sub>2</sub> based microwave dielectric material for microwave/millimeter wave applications	D3P-11-ADFM-11	
12	ABS-042-ADFM-13	SHALINI BAHEL	Comparative analysis on various methods of synthesis of MgTiO <sub>3</sub> based dielectric ceramics	D3P-12-ADFM-12	
13	ABS-049-ADFM-14	MADHU BOCHALYA	Tunable Optical Properties of Lead-Free Inorganic-Organic Hybrid 2D Materials	D3P-13-ADFM-13	
14	ABS-051-ADFM-15	GANESH C. PATIL	Fabrication and Characterisation of a Novel MWCNT based Junctionless Transistor using Chemical Bath Deposition	D3P-14-ADFM-14	
15	ABS-065-ADFM-16	M BHARATHI RAJ	Investigation of Negative capacitance – MoS <sub>2</sub> based nanotube transistor sandwiched with polyvinylidene fluoride as ferroelectric gating material	D3P-15-ADFM-15	
16	ABS-070-ADFM-17	RUDRA KUMAR	TiO <sub>2</sub> Nanoparticles Decorated Mesoporous Hollow Carbon Nanospheres as Sulfur Host for Lithium-Sulfur Batteries	D3P-16-ADFM-16	
17	ABS-074-ADFM-18	MRINMOY GARAI	Processing-Microstructure and Mechanical Properties of Sm <sup>3+</sup> and Gd <sup>3+</sup> Doped K-Mg-Al-Si-O-F Glass-ceramics	D3P-17-ADFM-17	
18	ABS-076-ADFM-19	ANKIT TYAGI	Nickel Iron layered double hydroxides nanosheets for energy storage application	D3P-18-ADFM-18	
19	ABS-079-ADFM-20	RAMACHANDRAN BALAJI	Bioinspired Functional Dip Photocatalysts based on Various Flower Petals using Atomic Layer Deposition and Sputtering for Environmental Remediation	D3P-19-ADFM-19	
20	ABS-080-ADFM-21	SONAL SINGHAL	Synthesis and Properties of Carbon Nanospheres Grown on Silicon Nanowire Substrate	D3P-20-ADFM-20	
21	ABS-083-ADFM-22	NEERAJ GOEL	Scalable Growth of High-Quality MoS <sub>2</sub> Film by Magnetron Sputtering	D3P-21-ADFM-21	
22	ABS-090-ADFM-24	SAROJ K. PARIDA	Topological analysis of C <sub>2</sub> X (X = K, Ca, Ga) with carbon monosulfide	D3P-22-ADFM-22	
23	ABS-102-ADFM-25	ARADHANA ROY	Gold Nanoparticles dispersed Ferroelectric Liquid Crystal: Composite functional material fabricated opto-communication network device	D3P-23-ADFM-23	
24	ABS-109-ADFM-26	RAJEEV RAY	Structural and optical properties of lead free all inorganic perovskite quantum dots	D3P-24-ADFM-24	
25	ABS-110-ADFM-27	PRAVEEN SINGH	CORRELATION OF MICROSTRUCTURE EVOLUTION AND FUNCTIONAL WEAR PERFORMANCE OF HEAT TREATED DUAL PHASE STEEL	D3P-25-ADFM-25	
26	ABS-111-ADFM-28	NISHA KUMARI	Insect Wing Inspired Biomimetic Surfaces for Catalytic Application	D3P-26-ADFM-26	
27	ABS-120-ADFM-29	DR. JASPAL SINGH	Au-TiO <sub>2</sub> plasmonic nanohybrid for efficient photocatalytic degradation of organic dyes	D3P-27-ADFM-27	
28	ABS-124-ADFM-30	ASST PROF. SANTOSH JUKE	TEA- ethoxylate assisted synthesis of MnCo <sub>2</sub> O <sub>4</sub> nanospheres with superior supercapacitor application	D3P-28-ADFM-28	
29	ABS-126-ADFM-31	CHANDERBHAN CHOTIA	Thermoelectric Properties of Polyol Method Synthesized Cu <sub>2</sub> Te Nanoparticles	D3P-29-ADFM-29	
30	ABS-132-ADFM-32	MONIKA SAXENA	Synthesis and Effect of Diluents on the Stability of Cadmium Sulfide Nanoparticles	D3P-30-ADFM-30	
31	ABS-133-ADFM-33	M BHARATHI	Investigation of Negative capacitance – MoS <sub>2</sub> based nanotube transistor sandwiched with polyvinylidene fluoride as ferroelectric gating material	D3P-31-ADFM-31	
32	ABS-004-WSMD-01	MANAS RANJAN TRIPATHY	Performance Enhancement of Tunnel FETs Using Source Pocket	D3P-32-WSMD-01	Wide Bandgap Semiconductors and Micro-Nanodevices
33	ABS-012-WSMD-02	POOJA BASERA	Unraveling the Role of Oxygen Vacancy and Substitutional Defects in Modulating the Electronic Structure TiO <sub>2</sub>	D3P-33-WSMD-02	
34	ABS-021-WSMD-03	C USHA	Potential Based Analytical Model for P-Channel Surrounding Gate TFET	D3P-34-WSMD-03	
35	ABS-023-WSMD-04	MANISH KUMAR	Elucidating the role of charged impurities on various substitutional and interstitial configurations of Nitrogen-doped SrTiO <sub>3</sub> Perovskite	D3P-35-WSMD-04	
36	ABS-031-WSMD-05	NAWAZ SHAFI	Highly sensitive GAA 3D Si-MOSFET based Hybrid Biosensor with integrated Amplifier and Noise cancellation stage	D3P-36-WSMD-05	
37	ABS-035-WSMD-07	FAISAL BASHIR	Design and Simulation of High Performance Dopingless Tunnel Diode	D3P-37-WSMD-06	
38	ABS-053-WSMD-09	H.BIJO JOSEPH	Simulation study of InAs/Si TFET with a pocket implant	D3P-38-WSMD-07	
39	ABS-055-WSMD-10	AJAY KUMAR VISVKARMA	Study of TiN/Au Schottky Contact on AlGaIn/GaN HEMT Fabricated by Reactive Sputtering	D3P-39-WSMD-08	
40	ABS-060-WSMD-11	SHIKHA MARWAHA	Silicon tandem solar cells with carrier selective contacts	D3P-40-WSMD-09	
41	ABS-067-WSMD-12	ISHAN C GHOSEKAR	Design and Fabrication of P3HT interlayer polymer solar cells for improving efficiency	D3P-41-WSMD-10	
42	ABS-097-WSMD-13	V. N. RAMAKRISHNAN	Modeling and Simulation of Quasi-Vertical GaN on Si Power MOSFET	D3P-42-WSMD-11	
43	ABS-112-WSMD-14	BHOOP SINGH	Study of CNTFET for sub nano scale applications	D3P-43-WSMD-12	
44	ABS-125-WSMD-15	RUPIKA SINGH TOMAR	Synthesis and Optoelectronics Applications of Heterojunction layers of MoS <sub>2</sub> and Graphene	D3P-44-WSMD-13	
45	ABS-127-WSMD-16	SANJIV KUMAR TIWARI	Correlation between donor-acceptor pair (DAP) and Green Emission in Nanocrystalline ZnO	D3P-45-WSMD-14	