

## List of Accepted Abstracts for IWPSD 2021

| S. No. | Paper ID | Name                     | Abstract Title  | Symposium  |
|--------|----------|--------------------------|---|--|
| 1      | 2        | Mr. Debopam Bhattacharya | Design And Simulation of an Open EWOD Based Digital Microfluidic Device for Droplet Actuation Using COMSOL  | Device Simulation and Modeling                             |
| 2      | 4        | Dr. Saurabh Kumar Pandey | Design, Optimization and Performance Analysis of Highly Efficient Quantum Dot Perovskite Solar Cell   | Photovoltaics and Energy Harvesting                        |
| 3      | 5        | Mr. Mohd Sarvar          | Preparation of Iron Catalytic Films by Chemical Route for the Growth of Carbon Nanotubes for Sensing Application.                                   | 2D Materials and Devices                                   |
| 4      | 6        | Dr. Nitheesh M Nair      | Photoresponse of a Printed Transparent Silver Nanowire-Zinc Oxide Nanocomposite   | Oxide Semiconductors and Devices                           |
| 5      | 7        | Dr. Sudha Arumugam       | Role Of Sintering Temperature on the Properties of Tungsten Oxide for Gas Sensing Applications  | Oxide Semiconductors and Devices                           |
| 6      | 10       | Mr. Amarnath R           | Experimental Evidence of Charged Impurity Limited Mobility in Cd <sub>3</sub> As <sub>2</sub> 3dds At Low Temperatures                              | Compound Semiconductors and Devices                        |
| 7      | 12       | Ms. Bisma Bilal          | Performance Investigation of Alkali Metal Fluorides as Alternate Electron Selective Contacts for Topcon Solar Cell                                  | Photovoltaics and Energy Harvesting                        |
| 8      | 14       | Mr. Sanjay Kumar         | Numerical Modelling of WO <sub>3</sub> -Based Memristive System for Neuromorphic Computation  | Emerging Memory & Logic Devices for storage and computing  |
| 9      | 15       | Mr. Venkatarao Selamneni | Complete Wafer Analysis for The Optimization of Operating Parameters Via Temperature, Flow Rate, Mo:S Ratio: A Strategy for MoS <sub>2</sub> Growth | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 10     | 17       | Dr. Naveen Bokka         | Heat And Light Triggered Mechanical Destruction of Electronics  | 2D Materials and Devices                                   |
| 11     | 18       | Dr. Abhijith T           | Preparation Of Molybdenum Disulfide Nanoflakes for Perovskite Solar Cell Applications   | Photovoltaics and Energy Harvesting                        |
| 12     | 20       | Mr. Vivek Adepu          | MXene/TMD based E-Textile Piezoresistive Pressure Sensor for Inconspicuous Sleep Monitoring   | 2D Materials and Devices                                   |
| 13     | 22       | Dr. Swarnalatha Veerla   | High Speed Etching of Silicon in NaOH-Based Solution  | MEMS and NEMS Devices                                      |
| 14     | 23       | Ms. Harini Raghavan      | Metal Nanoparticles (Au, Pt and Pd) Functionalized MoS <sub>2</sub> Based Plasmonic-Enhanced Broadband (Visible-Nir) Flexible Photodetector         | Organic Semiconductors and Flexible Electronics            |
| 15     | 25       | Ms. Sreelakshmy K J      | Surface Electronic Properties Of B-Ga <sub>2</sub> O <sub>3</sub> Single Crystal  | Oxide Semiconductors and Devices                           |
| 16     | 26       | Mr. Sukruth S            | An Empirical Comparison of TMDs Using X-Ray and Ultraviolet Photoelectron Spectroscopy  | 2D Materials and Devices                                   |

|    |    |                          |   |  |
|----|----|--------------------------|---|--|
| 17 | 27 | Ms. Rangeeta -           | Mace Synthesized Silicon Nanowires for Broadband Absorption Applications in Infrared range  | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 18 | 28 | Mrs. Savita Rani         | Enhancement In Optical Properties of Silicon Nanowires with Silver Nanoparticle Deposition  | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 19 | 29 | Ms. V Roopini            | Diamond Nitrogen-Vacancy Center Quantum Heat Engines  | Semiconductor Devices for Quantum Technologies             |
| 20 | 32 | Mr. Mahesh Mlv           | Effect Of Paraelectric Layer On Current Conduction Mechanisms In Ba(Zr <sub>0.15</sub> Ti <sub>0.85</sub> )O <sub>3</sub> Thin Films        | 2D Materials and Devices                                   |
| 21 | 34 | Ms. Anannya Bhattacharya | Performance Investigation Of N-ZnO Nanowire/P-CuO Thin Film Based Heterojunction Devices for Photovoltaic Applications: A Theoretical Study | Device Simulation and Modeling                             |
| 22 | 35 | Ms. Arti Gupta           | Micro-Texturing of Silicon Using Koh: An Additive Free, Facile and Cost-Effective Approach with Minimal Chemical Waste                      | Photovoltaics and Energy Harvesting                        |
| 23 | 36 | Ms. Maneesha Narayanan   | Vanadium Doped B-Ga <sub>2</sub> O <sub>3</sub> Single Crystals: Optical Floating Zone Growth and Characterization                          | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 24 | 39 | Mr. Punit Sharma         | Understanding the Trap Distribution in Hybrid Bulk Heterojunction Solar Cell Incorporated with Phase Pure Iron Pyrite Nanocrystals          | Organic Semiconductors and Flexible Electronics            |
| 25 | 40 | Mr. Rakesh Suthar        | Liquid Phase Exfoliation of Tungsten Disulfide for Non-Fullerene Organic Solar Cell Applications  | Organic Semiconductors and Flexible Electronics            |
| 26 | 41 | Mr. Shiva Lamichhane     | Impact Of Laser Energy on Resistive Switching in BiFeO <sub>3</sub> Thin Films  | Emerging Memory & Logic Devices for storage and computing  |
| 27 | 42 | Mr. Ammar Yasser         | Custom CMOS Process Development for Fabrication of Thermopile Based Thermal Mass Flow Sensor  | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 28 | 44 | Ms. Sreekeerthi Pamula   | Combined Experimental and Computational Study of Printed Capacitive Touch Sensors   | Organic Semiconductors and Flexible Electronics            |
| 29 | 45 | Mr. Suman Das            | Effect Of Channel Epilayer Thickness on Low Power Analog Operation of Asymmetric U-Channel pTFET  | Device Simulation and Modeling                             |
| 30 | 46 | Ms. Soumya Purohit       | Design And Simulation of Stepped Microcantilevers for Energy Harvesting Applications  | Device Simulation and Modeling                             |
| 31 | 47 | Mr. Rohit                | Voltage Tunable Microwave Resonator Using Barium Strontium Titanate (BST) Thin Films Deposited by PLD Technique                             | Oxide Semiconductors and Devices                           |
| 32 | 48 | Ms. Kumari Jyoti         | Memristive Crossbar-Based Window Function as Activation Function for Artificial Neural Network  | Emerging Memory & Logic Devices for storage and computing  |
| 33 | 50 | Mr. Bishwajit Mandal     | Light Stimulated Synaptic Behavior of a Two Terminal Lateral Diode Based On The Bulk Heterojunction Of PBTTT: PCBM                          | Organic Semiconductors and Flexible Electronics            |

|    |    |                            |  |  |
|----|----|----------------------------|--|--|
| 34 | 51 | Mrs. Juhi Srivastava       | Tight-Binding Investigation of The Electronic and Transport Properties of Graphene–Single Wall Carbon Nanotube Hybrid Junctions                                  | 2D Materials and Devices                                   |
| 35 | 52 | Ms. Nidhi Gupta            | Dual Latching Enabled Mems Inertial Switch for Safe and Arm Device Applications  | MEMS and NEMS Devices                                      |
| 36 | 54 | Mr. Shailendra Kumar       | Photovoltaic Enhancement of Triboelectric Nanogenerator System for Energy Harvesting Applications  | Photovoltaics and Energy Harvesting                        |
| 37 | 55 | Mr. Pushan Guha Roy        | Effect Of Compositional Inhomogeneities in AlGa <sub>N</sub> Alloys on Ultraviolet Light Emitting Diodes   | III-Nitrides: Materials and Devices                        |
| 38 | 56 | Mr. Vishal Suriyanarayanan | Exploring Beta-Gallium Oxide Single Crystals Using X-Ray Diffraction   | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 39 | 57 | Ms. Gunjan Yadav           | Electroluminescence Study of InGa <sub>N</sub> /Ga <sub>N</sub> Quantum Well Based Led   | III-Nitrides: Materials and Devices                        |
| 40 | 59 | Ms. Manisha Kumari         | Study Of Effect of Vacancy On H-LuFeO <sub>3</sub> Using First Principle   | Device Simulation and Modeling                             |
| 41 | 60 | Mr. Pragyey Kumar Kaushik  | Investigation of C-Doped Buffer Layer Using Linearity Parameters In AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs   | III-Nitrides: Materials and Devices                        |
| 42 | 61 | Mrs. Emona Datta           | Dependence Of Analog Performance And Linearity With Channel Doping Concentration For An InGaAs MOSFET  | Device Simulation and Modeling                             |
| 43 | 62 | Ms. Chanchal Jeengar       | Effect Of Post Deposition Annealing Temperature on the Thermoelectric Properties Of In <sub>2</sub> Se <sub>3</sub> Thin Films                                   | 2D Materials and Devices                                   |
| 44 | 63 | Ms. Shreerupa Biswas       | Enhancement Of Low-Temperature No <sub>2</sub> Sensing Via Two Steps Hydrothermal Synthesized ZnO Nanoparticles Loaded MoS <sub>2</sub> Nanoflowers Based Sensor | 2D Materials and Devices                                   |
| 45 | 64 | Ms. Harshita GaNgwar       | A Systematic Study of Electronic and Transport Properties Of Multicomponent Amorphous Semiconductors   | Oxide Semiconductors and Devices                           |
| 46 | 65 | Mr. Spandankumar Ranpariya | Identifying The Recombination Zone in Perovskite Solar Cells   | Device Simulation and Modeling                             |
| 47 | 67 | Mr. Mahesh Gokhale         | Analysis Of Diffuse X-Ray Scattering From InGa <sub>N</sub> /Ga <sub>N</sub> Superlattices with Varying Indium Composition                                       | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 48 | 68 | Ms. Soumi Saha             | Demonstration Of A 2D SnS/MXene Nanohybrid Asymmetric Memristor  | 2D Materials and Devices                                   |
| 49 | 69 | Mr. Arijit Das             | Design & Development of Low Leakage N-On-p Type Quadrant Photo Detector  | Device Simulation and Modeling                             |
| 50 | 70 | Ms. Aakanksha Mishra       | Quasi-Saturation Versus Non-Linear Capacitance Behavior in High Voltage Demos Devices  | Device Simulation and Modeling                             |
| 51 | 71 | Dr. Shouvik Datta          | Tailoring Quantum Oscillations of Excitonic Schrodinger's Cats as Qubits   | Semiconductor Devices for Quantum Technologies             |
| 52 | 73 | Mr. Pilik Basumatary       | Signature Of Defect States in PL Spectra of MaPbI <sub>3</sub> Perovskite Films  | Photovoltaics and Energy Harvesting                        |

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|----|-----|-----------------------------|---|--|
| 53 | 74  | Mrs. Shraddha Pali          | Gate Charge Optimization of Drain Extended Mos Devices for High Voltage High-Frequency CMOS Level Shifter Design                              | Device Simulation and Modeling                             |
| 54 | 76  | Mr. Tahir Ahmad             | DFT+U Study of Silicon Dopant on Electronic, Magnetic and Optical Properties of Bifeo3  | Device Simulation and Modeling                             |
| 55 | 79  | Mr. Saurabh Pareek          | Effect Of Graphitic Carbon Nitride Nanosheet Doping on the Hole Transport Properties Of Pedot:Pss   | 2D Materials and Devices                                   |
| 56 | 80  | Ms. Juhi Kumari             | Role Of MoOx Work Function on Performance of MoOx/N-Si Heterojunction Solar Cells   | Oxide Semiconductors and Devices                           |
| 57 | 81  | Mr. Anweshi Dewan           | A Rechargeable Zn-NiO Electrochromic Battery  | Photovoltaics and Energy Harvesting                        |
| 58 | 82  | Ms. Sobia Waheed            | Ultrasonic Spray Coated Large Area Organic Solar Cell   | Photovoltaics and Energy Harvesting                        |
| 59 | 85  | Ms. Narinder Kaur           | Improved Photoelectric Performance of WO3 Nanoplatelets Synthesized With Hydrothermal Technique   | 2D Materials and Devices                                   |
| 60 | 87  | Mr. Ragul S                 | A First principle Calculation Based Study On The Realization Of A-Graphyne Based Noble Gas Flow Detector                                      | 2D Materials and Devices                                   |
| 61 | 88  | Dr. Ashish Kumar            | Wide Bandgap Semiconductors for Thermoelectric Application  | Photovoltaics and Energy Harvesting                        |
| 62 | 91  | Mr. Rakesh Kumar Pandey     | In-Situ Te Doping with Gate Source In GaSb Epilayer Using Molecular Beam Epitaxy  | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 63 | 92  | Ms. Anamika Kem             | Cost-Effective Green Synthesis of ZnO Nanoparticles Using Limon By Sol Gel Method For Photonic Applications                                   | Oxide Semiconductors and Devices                           |
| 64 | 93  | Mr. Aditya Singh            | Cavity-Induced Enhanced Raman Scattering From 2D Hybrid Perovskites   | 2D Materials and Devices                                   |
| 65 | 94  | Mr. Mohd Rehan Ansari       | Synthesis Of ZnO Nano-Powder by Microwave-Assisted Solution Combustion Method And Effect Of Citric Acid Concentration On Crystallinity Of ZnO | Oxide Semiconductors and Devices                           |
| 66 | 95  | Ms. Shuchi Kaushik          | Lspr Enhanced Solar-Blind Photoresponse Of Robust Al0.4Ga0.6N MSM Photodetectors  | III-Nitrides: Materials and Devices                        |
| 67 | 96  | Ms. Pallavi Aggarwal        | Systematic Study On Growth Mechanism Of WS2 And Its Photodetector Properties  | 2D Materials and Devices                                   |
| 68 | 97  | Mr. Sahin Sorifi            | High Performance, Self-Powered Vertical 2D/3D Heterojunction Photodetector Based On Mechanically Exfoliated Gase And Si                       | 2D Materials and Devices                                   |
| 69 | 98  | Dr. Manikanthababu N        | 100 Kev Ar Ion Irradiation-Induced Effects In B-Ga2O3 Schottky Barrier Diodes   | Compound Semiconductors and Devices                        |
| 70 | 99  | Mr. Manvendra Singh GaNgwar | Photocurrent Enhancement In A-Si:H Solar Cells With Silver Nanoparticles As Plasmonic Back Reflector  | Photovoltaics and Energy Harvesting                        |
| 71 | 100 | Mr. Madan Sharma            | Quasi-Dry Transfer of Large Area Cvd-Grown TMDCs Onto Flexible Substrates   | 2D Materials and Devices                                   |

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|----|-----|-------------------------------|--|--|
| 72 | 101 | Dr. Ravi Kumar                | Estimation Of Asymmetrically Distributed Anti-Phase Domains Ratio In GaAs/Si(100) Epitaxial Layers Using High Resolution X-Ray Diffraction                         | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 73 | 102 | Mr. Yogesh Yadav              | Temporal Response of Ionic Liquid Gated Organic Field-Effect Transistors   | Organic Semiconductors and Flexible Electronics            |
| 74 | 104 | Mr. Jayjit Mukherjee          | Effect Of Electric Field and Thermal Stress On Reverse Leakage Current in GaN HEMT And its Recovery  | III-Nitrides: Materials and Devices                        |
| 75 | 105 | Mr. Partha Sarathi Padhi      | Engineering M-W Polarization In Al <sub>2</sub> O <sub>3</sub> /TiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> Nanolaminates For High Density Storage Capacitors | Oxide Semiconductors and Devices                           |
| 76 | 106 | Mr. Himangshu Deka            | Design And Simulation Of Highly Efficient One-Sided Short Pin Diode Silicon Heterojunction Solar Cell  | Photovoltaics and Energy Harvesting                        |
| 77 | 107 | Dr. Bhera Ram Tak             | Flexible Deep Uv Photodetectors On B-Ga <sub>2</sub> O <sub>3</sub> Epitaxy  | Oxide Semiconductors and Devices                           |
| 78 | 108 | Mr. Chitra Sai Srivatsava K   | Reducing Efficiency Roll-Off In Oled By Charge Balance And By The Use Of Tadf Host And Guest Material  | Organic Semiconductors and Flexible Electronics            |
| 79 | 109 | Ms. Mansha Kansal             | Performance Analysis Of Pecvd Grown Carbon Nanotube Field Effect Transistor (CntFET)   | Device Simulation and Modeling                             |
| 80 | 110 | Ms. Bhaswati Chakraborty      | Label-Free FET Biosensor Based On ZnO Nanorods For Ultrasensitive Detection Of Cancer Biomarker  | Oxide Semiconductors and Devices                           |
| 81 | 111 | Mr. Srest Somay               | Influence Of Cu <sub>2</sub> O Proximity On Electronic Properties Of Graphene From First Principles  | 2D Materials and Devices                                   |
| 82 | 112 | Dr. Kasala Suresha            | Phonon Drag Thermopower In Silicene In Equipartition Regime At Room Temperature  | 2D Materials and Devices                                   |
| 83 | 113 | Mr. Faiz Ali                  | Flexible Electrochromic Displays Via Room Temperature Oxidation Of Electroless Nickel  | Oxide Semiconductors and Devices                           |
| 84 | 114 | Mr. Anweshan Chakrabarti      | Effect Of Plasma Exposure On The Electrical Characteristics Of Suspended Gate Field Effect Transistor  | MEMS and NEMS Devices                                      |
| 85 | 116 | Ms. Garikapati Nagasarvari    | Silver Nanoparticle-Based Flexible Force Sensors   | Organic Semiconductors and Flexible Electronics            |
| 86 | 117 | Ms. Guggilam Lakshmi Priyanka | Design Optimization Of Si Nanowire FET For Biosensor Applications  | Device Simulation and Modeling                             |
| 87 | 118 | Mrs. Shrabani Guhathakurata   | Electrical Performance Of Protein-Based Flexible Mim Structure Fabricated At Room Temperature For Proteotronic Applications  | Organic Semiconductors and Flexible Electronics            |
| 88 | 119 | Ms. Geetanjali Vashisht       | Impact Of Disorder On The Charge Carrier Transport And Recombination Properties In Asymmetrically Doped InGaAs/GaAs QWs Probed By Magneto-Pl And Pc Measurements   | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 89 | 122 | Ms. Anusha S                  | Superconducting Stub-Tuner Impedance Matching Circuit for High-Frequency Measurements of Nanoscale Devices   | Semiconductor Devices for Quantum Technologies             |

|     |     |                         |   |  |
|-----|-----|-------------------------|---|--|
| 90  | 123 | Mr. Prashant Bisht      | Synthesis of Two Dimensional WS <sub>2</sub> using Pulsed Laser Deposition Effect and Growth Parameters and Gas Sensing Performance | 2D Materials and Devices                                   |
| 91  | 124 | Ms. Nivedya T           | Coexistence Of Two Bipolar Resistive Switching Modes with Opposite Polarity in Cu <sub>x</sub> O (0 ≤ X ≤ 1) Based RRAM Devices     | Emerging Memory & Logic Devices for storage and computing  |
| 92  | 126 | Mr. Debasish Panda      | Charge Storage Mechanism in Protein-Conjugated Zinc Oxide Nanoparticles for Proteotronic Devices Applications                       | Organic Semiconductors and Flexible Electronics            |
| 93  | 127 | Dr. Suresh Kumar Jangir | Growth Parameter Dependent Surface Morphology of the Catalyst Free InAs/GaSb Nanowire Heterostructure                               | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 94  | 128 | Mr. Albert Daimari      | Simulation Of Chaotic Dynamics of Human Heart Based on Van Der Pol Model and Control of Chaos                                       | Device Simulation and Modeling                             |
| 95  | 129 | Ms. Sreevidya N         | Inducing Phase Transitions in MoS <sub>2</sub> by Ionic Liquid Gating   | 2D Materials and Devices                                   |
| 96  | 130 | Mr. Kamal Lohani        | Simulation And Fabrication of InGaN/GaN MQW Laser Diode   | III-Nitrides: Materials and Devices                        |
| 97  | 131 | Mr. Subodh Tyagi        | Effect Of Annealing on MBE grown CdTe epilayers on GaAs (211) B Substrates  | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 98  | 132 | Mr. Vishwas Jindal      | Excitons In 2h-MoS <sub>2</sub> Under Electric Fields: An Electro-Reflectance Spectroscopy Study                                    | 2D Materials and Devices                                   |
| 99  | 133 | Mr. Dibya Sankar Das    | Excitons in 2H-MoS <sub>2</sub> Under Magnetic Fields   | 2D Materials and Devices                                   |
| 100 | 134 | Mr. Shammi Kumar        | Stabilization Of Epitaxial Srnbo <sub>3</sub> Perovskite Film On Cubic Substrates   | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 101 | 135 | Dr. Lalit Goswami       | Graphene Quantum Dot Decorated ZnO/GaN-Nanostructured Superior-Performance UV Photodetectors  | III-Nitrides: Materials and Devices                        |
| 102 | 139 | Mr. Dinesh Kumar        | Charge Carrier lifetime Effect on the Performance of the Perovskite Solar Cell Through Device Modeling                              | Photovoltaics and Energy Harvesting                        |
| 103 | 140 | Mr. Shivam Porwal       | Numerical Study And Device Optimization Of Lead-Free Double Perovskite Solar Cells By Using Scaps-1d                                | Photovoltaics and Energy Harvesting                        |
| 104 | 141 | Ms. Preeti Bharti       | Movpe Grown AlGaN/GaN High Electron Mobility Transistor Employing Thin GaN Buffer Layer.  | III-Nitrides: Materials and Devices                        |
| 105 | 142 | Ms. Jai Shree Bhardwaj  | Role Of Number Of Layers And N-Type Doping Concentration Of Graphene In Ito/N-Graphene/A-Si:H/C-Si(P)/Ag Heterojunction Solar Cells | 2D Materials and Devices                                   |
| 106 | 143 | Mr. Prashant Kumar      | Single Layer Anti-Reflective Coating Of Si <sub>3</sub> N <sub>4</sub> On GaSb Substrate  | Compound Semiconductors and Devices                        |
| 107 | 145 | Mr. Aditya Yadav        | Transition Metal Oxide (TMO) Thin Films Based Ultrasensitive No Gas Sensor  | 2D Materials and Devices                                   |
| 108 | 146 | Mr. John Wellington     | Design And Simulation of Germanium Junctionless Nanowire Gate All-Around Phototransistor For Infrared Detection                     | Device Simulation and Modeling                             |

|     |     |                                 |  |   |
|-----|-----|---------------------------------|--|---|
| 109 | 148 | Mr. Sumit Sharma                | Highly Sensitive WSe <sub>2</sub> Field Effect Transistor- Based Biosensor For Ammonia Detection In Biological Fluids  | 2D Materials and Devices                                  |
| 110 | 149 | Mr. Sachchidanand Sachchidanand | Design And Analysis of Cs <sub>3</sub> Sb <sub>2</sub> Br <sub>9</sub> /Si Tandem Solar Cell Using Scaps   | Photovoltaics and Energy Harvesting                       |
| 111 | 150 | Mr. Bipul Kumar Pradhan         | Controlled Growth of Vertically Self-Aligned GaN Nanorod Array On Flexible Metal Foil By Laser MBE Technique   | III-Nitrides: Materials and Devices                       |
| 112 | 152 | Mr. Subrata Ghosh               | Optimization Of TiO <sub>2</sub> Based Electron Transport Layer for Perovskite Solar Cell  | Photovoltaics and Energy Harvesting                       |
| 113 | 153 | Mr. Rafiqul Alam                | Flicker Noise in An Electrolyte Gated Large Area Gr-FET  | 2D Materials and Devices                                  |
| 114 | 154 | Mrs. Hari Priya Gajula          | Insights Of Interface of CeO <sub>2</sub> -Based Mos Structures Developed by Solution Method   | Oxide Semiconductors and Devices                          |
| 115 | 156 | Mr. Snehangshu Mishra           | Machine Learning Bandgap Predictions to Develop High-Performing Perovskite Solar Cells for Indoor Light Harvesting   | Photovoltaics and Energy Harvesting                       |
| 116 | 157 | Mr. Washim Reza Ali             | Mems Acoustic Sensor for Low Frequency Applications  | MEMS and NEMS Devices                                     |
| 117 | 158 | Mr. Abhijit Das                 | Effect On Photo-Absorbance and Optical Energy-Gap Of Al <sub>2</sub> O <sub>3</sub> after Deposition Of Ag Thin Film on it   | Oxide Semiconductors and Devices                          |
| 118 | 159 | Mr. Saikat Biswas               | Resistive Switching Characteristics of Al/AIOx/HfOx/ITO/PET Flexible ReRam Devices   | Emerging Memory & Logic Devices for storage and computing |
| 119 | 160 | Mr. Akash Patnaik               | Effect of Spacer Layer on 2DEG Charge Density in Uniformly Doped $\beta$ -(Al <sub>x</sub> Ga <sub>1-x</sub> ) <sub>2</sub> O <sub>3</sub> /Ga <sub>2</sub> O <sub>3</sub> HFET      | Device Simulation and Modeling                            |
| 120 | 161 | Ms. Didhiti Bhattacharya        | Two-Dimensional WS <sub>2</sub> Nanosheet Embedded PVDF Nanocomposites for Photosensitive Flexible Piezoelectric Nanogenerators with a Colossal Energy Conversion Efficiency ~ 25.6% | 2D Materials and Devices                                  |
| 121 | 162 | Mr. Biswajit Khan               | One Dimensional Quantum Transport in Ultra Short Junctionless Tri-Gate MOSFET  | Semiconductor Devices for Quantum Technologies            |
| 122 | 164 | Ms. Rami Reddy Sowmya           | An Overview on The Team Model and Significance of Window Functions in Modelling Memristor  | Emerging Memory & Logic Devices for storage and computing |
| 123 | 165 | Mr. Himanshu Bangar             | Large Area Growth Of 2D-GeTe Thin Films Using Pulsed Laser Deposition for Spintronics Application  | Semiconductor Devices for Quantum Technologies            |
| 124 | 166 | Mr. Anterdipan Singh            | Design Of Multilayer Thin Film Antireflection Coatings for Silicon Based Solar Cells   | Photovoltaics and Energy Harvesting                       |
| 125 | 168 | Dr. Vaibhav Rana                | Piezoresistive Polycrystalline MoS <sub>2</sub> Based Mems Universal Gas Flow Meter  | MEMS and NEMS Devices                                     |
| 126 | 169 | Ms. Neesha Yadav                | Determination of the number of layers by optical contrast study in two-dimensional van der Waals magnetic material Fe <sub>3</sub> GeTe <sub>2</sub>                                 | 2D Materials and Devices                                  |

|     |     |                                       |  |  |
|-----|-----|---------------------------------------|--|--|
| 127 | 170 | Mr. Sandeep                           | Determination Of Number of Layers of PtSe <sub>2</sub> on The Transparent Stamp Using Optical Microscopy                                     | 2D Materials and Devices                                   |
| 128 | 171 | Mr. Sandeep Vura                      | Epitaxial BaTiO <sub>3</sub> on MgO on Silicon for Electro-Optic Modulators  | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 129 | 172 | Mr. Sandilya Ventrapragada Rama Satya | Epitaxial VO <sub>2</sub> on Si 100 via Tin Buffer Layer For CMOS Applications   | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 130 | 173 | Ms. Debashrita Mahana                 | Thermal Oxidation Process of Cu Thin Films Deposited by Vacuum Evaporation   | Oxide Semiconductors and Devices                           |
| 131 | 174 | Mr. Shashank Banchhor                 | Analysis Of Self-Heating In 5nm Stacked Nanosheet Transistor   | Device Simulation and Modeling                             |
| 132 | 175 | Mr. Abhishek Ghosh                    | Tuning Thermoelectric Transport in Ag Modified Sb <sub>2</sub> Te <sub>3</sub> Through Band Structure Modifications and Carrier Filtering    | Photovoltaics and Energy Harvesting                        |
| 133 | 178 | Ms. Jagori Raychaudhuri               | Impact Of Buffer Thickness and Doping on Buffer Traps in AlGa <sub>N</sub> /Ga <sub>N</sub> HEMTs Through TCAD Based Device Simulation Study | III-Nitrides: Materials and Devices                        |
| 134 | 179 | Mr. Anshuman Raunak                   | Piezoelectric Zinc Oxide Thin Film Deposition Using Spin Coating Technique.  | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 135 | 182 | Mr. Indranil Mal                      | Theoretical Analysis of InPNBi/InP Heterostructure For 1550nm Optical Communication Window   | Compound Semiconductors and Devices                        |
| 136 | 183 | Mr. Mithun R                          | Electric Field-Induced Charge Transfer in Vdw Heterostructures: A First-Principle Study  | 2D Materials and Devices                                   |
| 137 | 184 | Mr. Vijay Kumar Gill                  | Effect Of N-CdS Layer Thickness On The Power Conversion Efficiency of p-CIGS/n-Cds/n-ZnO Solar Cell: A Numerical Simulation Study            | Device Simulation and Modeling                             |
| 138 | 185 | Mr. Prabal Dweep Khanikar             | A-MoO <sub>3</sub> /p-Si Heterojunction Photodetector with Broadband Detection And High Responsivity at Room Temperature                     | 2D Materials and Devices                                   |
| 139 | 190 | Mr. Yuvraj Misra                      | Switching In 2D Materials Memristors: A Quantum-Transport Study  | Device Simulation and Modeling                             |
| 140 | 191 | Ms. Alka Jakhar                       | Continuous Wave Frequency Domain Terahertz Spectroscopic Analysis and Characterization of Metamaterials                                      | MEMS and NEMS Devices                                      |
| 141 | 192 | Mr. Suprovat Ghosh                    | Active Split Ring Resonator Coupled Vo <sub>2</sub> Phase Transition for Terahertz Modulator Applications                                    | Oxide Semiconductors and Devices                           |
| 142 | 197 | Ms. Richa Mudgal                      | Study Of Spin-Orbit Torque in PtSe <sub>2</sub> /NiFe Heterostructure  | Semiconductor Devices for Quantum Technologies             |
| 143 | 198 | Ms. Meenakshi Patwal                  | Determination Of Coupling Coefficient in Large Optical Cavity Distributed Feedback Laser Structure with Metal Surface Grating                | Compound Semiconductors and Devices                        |
| 144 | 200 | Ms. Anjali Lalithambika               | First Principles Investigations of Differences in Nucleation and Growth of Transition Metal  | 2D Materials and Devices                                   |



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|-----|-----|----------------------------|---|--|
|     |     |                            | Disulphides of Mo And W On c-Plane Sapphire Surface   |  |
| 145 | 201 | Prof. Sudeb Dasgupta       | Optimization Of Negative Differential Conductance (NDC) Point for Multi Gate Devices Considering Self Heating Effects Using Surface to Volume Ratio (SVR) | Device Simulation and Modeling                             |
| 146 | 205 | Mr. Abhishek Sharma        | Effect Of Cavity Length on Edge Emitting Semiconductor Laser Performance  | Device Simulation and Modeling                             |
| 147 | 207 | Mr. Amber Kumar Jain       | Design Optimization Of p-GaN HEMT for Normally-Off Operation  | III-Nitrides: Materials and Devices                        |
| 148 | 209 | Dr. Shashwat Rathkanthiwar | Crystal Growth of Monolayer MoS2 for Device Applications  | 2D Materials and Devices                                   |
| 149 | 210 | Mr. Satish Verma           | Lowering Motional Impedance in Micromachined Frequency-Synthesizer Using Ultra-Thin (SiO2 ~30 nm) Internal Dielectric                                     | MEMS and NEMS Devices                                      |
| 150 | 212 | Mr. Ajoy Mandal            | Organic Field-Effect Transistors (OFET) Based Ultra-Fast SARS- CoV-2 Sensors Using Angiotensin Converting Enzyme 2 (ACE2) As Receptor Molecules           | Organic Semiconductors and Flexible Electronics            |
| 151 | 214 | Dr. Suman Mandal           | Low Power Flexible Organic Field-Effect Transistor Based on Moisture Induced Ionic Dielectric Layer For Humidity Sensing Application                      | Organic Semiconductors and Flexible Electronics            |
| 152 | 215 | Mr. Shiv Prakash Verma     | Organic Phototransistor Based IR Sensors Using upconversion Nanoparticles (UCNPs) As A Sensing Material   | Organic Semiconductors and Flexible Electronics            |
| 153 | 216 | Mr. Samik Mallik           | Ni-MOF Thin Films as Gate Dielectric Of Low Voltage Organic Field Effect Transistors  | Organic Semiconductors and Flexible Electronics            |
| 154 | 217 | Ms. Priyanka Rani          | Mesoporous GO-TiO2 Nanocomposites For Flexible Solid-State Supercapacitor Applications  | 2D Materials and Devices                                   |
| 155 | 219 | Dr. Sudeep Verma           | Excitation Power Dependent Photoluminescence Characteristics of Bulk ZnTe (110) Substrates Grown by TGSM  | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 156 | 220 | Mr. Sourav Naval           | Su-8/BTO Nanocomposite Cantilever Beam Based Triboelectric Generator  | MEMS and NEMS Devices                                      |
| 157 | 221 | Mr. Manu Garg              | Ultrasensitive Reduced Vanadium Dioxide Based Mems Pirani Gauge with Extended Dynamic Range   | MEMS and NEMS Devices                                      |
| 158 | 225 | Mr. Hardhyan Sheoran       | High Performance of MOCVD Grown B-Ga2O3 Based Solar-Blind Photodetectors for High Temperature Applications  | Compound Semiconductors and Devices                        |
| 159 | 228 | Mr. Abdul Kaium Mia        | Aptamer Functionalized CVD Grown WS2 Monolayer FET For Real-Time Detection Of E.Coli  | 2D Materials and Devices                                   |
| 160 | 229 | Mr. Nalin Vilochan Mishra  | Modeling The Impact Of Quantum Confinement On The Electrostatics Of UTB Double Gate MOS Devices   | Device Simulation and Modeling                             |
| 161 | 230 | Mr. Nadeem Tariq Beigh     | M-Patterned Flexible Mems Compatible Piezoelectric Nanocomposite Based Pressure Sensor  | Organic Semiconductors and Flexible Electronics            |

|     |     |                                |  |  |
|-----|-----|--------------------------------|--|--|
| 162 | 231 | Mrs. Rekha Singh               | Interfacial Studies In Hg <sub>0.7</sub> Cd <sub>0.3</sub> Te (MCT) Based hetrostructure For IR Application By Electron Microscopy.  | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 163 | 233 | Mr. Riju Pal                   | Intrinsic Room Temperature Ferromagnetism In Van Der Waals Fe <sub>5</sub> GeTe <sub>2</sub> Crystal                                 | Emerging Memory & Logic Devices for storage and computing  |
| 164 | 234 | Mr. Swapnil More               | A Versatile Resonant Transducer Based on Graphene NEMS   | MEMS and NEMS Devices                                      |
| 165 | 235 | Dr. Soumita Mukkopadhyay       | Responses Of Buffer Solution of Different Ph Values on a Fabricated Chip and Its Extrapolation for Milk Adulterant Detection Studies | 2D Materials and Devices                                   |
| 166 | 237 | Mr. Kacho Imtiyaz Ali Khan     | Thin Films Growth of Polycrystalline Ferromagnetic Kagome Metal Fe <sub>3</sub> Sn <sub>2</sub> Using Pt Buffer Layer                | Semiconductor Devices for Quantum Technologies             |
| 167 | 238 | Mr. Avinash Paliwal            | MOCVD Growth, Characterization, And Wave-Function Analysis of InGaN/GaN Short Period Superlattices                                   | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 168 | 240 | Ms. Shradha Gupta              | Thermal Admittance Spectroscopy of AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT Structure   | III-Nitrides: Materials and Devices                        |
| 169 | 244 | Mr. SaiGaNesh P                | Spice Simulation For Solution Processed Bottom Gate Bottom Contact Organic Thin Film Transistor                                      | Organic Semiconductors and Flexible Electronics            |
| 170 | 245 | Mr. Shubhrasish Mukherjee      | High Responsivity UV-Visible Broadband Phototransistor Based On Graphene –WS <sub>2</sub> Heterostructure                            | 2D Materials and Devices                                   |
| 171 | 246 | Mr. Hemraj Dahiya              | Synthesis Of Hydrated Vanadium Pentoxide (HVO) For Hole Transporting Material in Organic Solar Cell                                  | Organic Semiconductors and Flexible Electronics            |
| 172 | 247 | Mr. Mohit Singh                | Single Setup for Measurement of Spatial And Temporal Coherence Using A Modified Michelson Interferometer                             | Device Simulation and Modeling                             |
| 173 | 249 | Mr. Rehan Ahmed                | Seedless Hydrothermal Growth and Simulation of ZnO Nanorods Towards the Piezo Tactile Sensor   | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 174 | 250 | Mr. Nadeem Firoz               | Impact Of Metal Work Functions on The Source Resistance of Amorphous Indium Gallium Zinc Oxide Thin Film Transistors                 | Oxide Semiconductors and Devices                           |
| 175 | 252 | Dr. Apoorva Chaturvedi         | Novel Solid State Synthesis Route of Layered Materials and its Applications  | 2D Materials and Devices                                   |
| 176 | 253 | Ms. Manushree Tanwar           | Cross-Sectional Raman Mapping in Silicon Nanostructures  | Semiconductor Devices for Quantum Technologies             |
| 177 | 254 | Mr. Ningthoujam Somorjit Singh | Facile Low-Cost Synthesis of Monolayer Reduced Graphene Oxide With Super Large Lateral Size And Its Application In Sers              | 2D Materials and Devices                                   |
| 178 | 255 | Dr. Rabaya Basori              | Opto-Electronic Transport Of A Single Cu:TCNQ Nanowire Fabricated On Silicon Nitride Membrane  | Compound Semiconductors and Devices                        |
| 179 | 256 | Mrs. Linet Thomas C            | Sub-Miniaturized Piezoresistive Sensors for Invasive Pressure Measurements   | MEMS and NEMS Devices                                      |

|     |     |                          |  |   |
|-----|-----|--------------------------|--|---|
| 180 | 257 | Ms. Rekha Agarwal        | Crystalline Domain Dependent THz Emission from Epitaxial NiO/Pt Heterostructures   | Semiconductor Devices for Quantum Technologies            |
| 181 | 258 | Ms. Anusmita Chakravorty | Loss Of Charge Compensation in Semi-Insulating 4H-SiC Due To 100 Mev Ag Ion Irradiation  | Compound Semiconductors and Devices                       |
| 182 | 260 | Mr. Kapil Narang         | Material And Device Characteristics of Lattice Matched InAlN/GaN HEMT On SiC   | III-Nitrides: Materials and Devices                       |
| 183 | 262 | Mr. Arijit Pal           | Effect Of Uric Acid Adsorption Over 2D Graphene Oxide: A First Principles Study  | 2D Materials and Devices                                  |
| 184 | 265 | Mr. Vishnu Aggarwal      | Effect of Optical Defects on Laser MBE Grown Epitaxial GaN Based Ultra-Violet Photodetectors Characteristics                                       | III-Nitrides: Materials and Devices                       |
| 185 | 266 | Mr. Mrityunjay Pandey    | Ambipolar Electrical Transport In MoS <sub>2</sub> /WSe <sub>2</sub> Van Der Waals Heterostructures  | 2D Materials and Devices                                  |
| 186 | 267 | Mr. Ambreesh Kumar       | Solution Growth Of Millimeter Order Lead Free Cs <sub>2</sub> AgBiBr <sub>6</sub> Double Perovskite Single Crystals For Solar Cell Applications    | Photovoltaics and Energy Harvesting                       |
| 187 | 270 | Dr. Abheek Bardhan       | Effect Of In-Situ Si <sub>3</sub> N <sub>4</sub> Cap Growth Condition On The Mobility Of 2DEG At The GaN/AlGa <sub>0.5</sub> N Heterojunction      | III-Nitrides: Materials and Devices                       |
| 188 | 271 | Mr. Mula Raju            | Synthesis Of 2D-MoS <sub>2</sub> /MoO <sub>2</sub> Vertical Heterostructures by Chemical Vapor Deposition (CVD)                                    | 2D Materials and Devices                                  |
| 189 | 272 | Mr. Vinit Kumar Yadav    | Fabrication Of Patterned Micromagnet and Microfluidic Channel for Positive Magnetophoresis Application   | MEMS and NEMS Devices                                     |
| 190 | 273 | Ms. P Divyashree         | Design And Simulation of FET Device: MoS <sub>2</sub> as a Channel Material  | 2D Materials and Devices                                  |
| 191 | 274 | Dr. S G Nagarajan        | Numerical Simulation Of Silicon Solidification Process Using OpenFOAM  | Device Simulation and Modeling                            |
| 192 | 275 | Mrs. Sanna Mairaj        | Modeling Of Negative Capacitance Field Effect Transistors Based on Different Ferroelectric Materials   | Device Simulation and Modeling                            |
| 193 | 276 | Ms. Chanchal -           | Study of the Effect of Helium Gas Addition to SF <sub>6</sub> /O <sub>2</sub> Chemistry for SiC Dry Etching In AlGa <sub>0.5</sub> N/GaN/SiC HEMTs | III-Nitrides: Materials and Devices                       |
| 194 | 279 | Ms. Sonia Sarkar         | Efficient Signal Processing For Low-Cost Magnetometry Using Nitrogen Vacancy Center In Diamond   | Semiconductor Devices for Quantum Technologies            |
| 195 | 280 | Mr. Joshua Asirvatham    | Controlled Hard Breakdown Induced Multi-Level Switching In Ag/SiO <sub>2</sub>   | Emerging Memory & Logic Devices for storage and computing |
| 196 | 281 | Dr. N Ramshanker         | Design Of Microheaters With High Temperature Uniformity For Gas Sensors  | Device Simulation and Modeling                            |
| 197 | 282 | Dr. Rakhi Grover         | Structural, Morphological, And Optical Studies on NiO-TiO <sub>2</sub> Nanocomposite Prepared By Sol-Gel Technique                                 | Oxide Semiconductors and Devices                          |
| 198 | 283 | Dr. Arabinda Barman      | Defect Assisted Resistive Switching In Ta <sub>2</sub> O <sub>5</sub> Based Memory Devices   | Emerging Memory & Logic Devices for storage and computing |

|     |     |                               |   |  |
|-----|-----|-------------------------------|---|--|
| 199 | 285 | Dr. Biplab Sarkar             | Laterally Varying Polarity GaN Films: Growth, Processing and Applications   | III-Nitrides: Materials and Devices                        |
| 200 | 287 | Mr. Prateek Malhotra          | Prediction Of Power Conversion Efficiency in Organic Solar Cells Using Machine Learning   | Organic Semiconductors and Flexible Electronics            |
| 201 | 288 | Dr. Ravi Pathak               | Effect Of Fluence On H-Implantation Induced Microstructural Damage In GaSb  | Compound Semiconductors and Devices                        |
| 202 | 289 | Mr. Deepak Kumar Mohanty      | Facet Coating of Laser Diode Using SiO <sub>2</sub> /TiO <sub>2</sub> Material Deposited by Ion Assisted E-Beam Evaporation   | Compound Semiconductors and Devices                        |
| 203 | 290 | Dr. Muralidharan Balakrishnan | Applications Of Organic Light Emitting Diodes – Devices to Prototypes   | Organic Semiconductors and Flexible Electronics            |
| 204 | 292 | Mr. Chandra Kant              | Inkjet Printing of Phosphorescent Emissive Material For Organic Light-Emitting Diodes   | Organic Semiconductors and Flexible Electronics            |
| 205 | 293 | Ms. Shreyasi Das              | Optically Tuned Many-Body Phenomena in Atomically Thin two-dimensional WS <sub>2</sub>  | 2D Materials and Devices                                   |
| 206 | 295 | Mr. Indraneel Sinha           | Synthesis And Characterization of Epitaxial Magnetic Semiconductor Films in Topological Insulator   | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 207 | 296 | Ms. Sathi Das                 | Fabrication Of Flexible Sensing Substrate Using Ag-TiO <sub>2</sub> And PET Film For Detection Of Dye Molecules   | Oxide Semiconductors and Devices                           |
| 208 | 298 | Mr. Sudhanshu Gautam          | Bi <sub>2</sub> Se <sub>3</sub> Thin Films for Thermoelectric and Photodetector Applications  | Photovoltaics and Energy Harvesting                        |
| 209 | 299 | Mr. Bhalkumar P               | Etch Rate Optimization of SiO <sub>2</sub> Film by Varying Zeta Potential of Silica Nanoparticles Abrasion Using CMP  | Semiconductor Devices for Quantum Technologies             |
| 210 | 300 | Mr. Durgesh Banswar           | Electric Field Induced Mechanical Modulation in Vanadium Dioxide (VO <sub>2</sub> ) Coated Micro-String Resonator   | MEMS and NEMS Devices                                      |
| 211 | 301 | Ms. Madhuri S                 | Pulsed Dc Sputtered Con Thin Film for Renewable Energy Applications   | Photovoltaics and Energy Harvesting                        |
| 212 | 304 | Mr. Kiran Kumar Sahoo         | The Influence of Rf Sputtering Power and Argon To Oxygen Gas Flow Ratio On The Structural, Morphological, And Electrical Properties Of Ta <sub>2</sub> O <sub>5</sub> Films | Oxide Semiconductors and Devices                           |
| 213 | 305 | Dr. Jalaja M A                | Role of Pyrochlore in Semiconducting Relaxor PbFe <sub>1/2</sub> Nb <sub>1/2</sub> O <sub>3</sub> Thin Films  | Oxide Semiconductors and Devices                           |
| 214 | 307 | Mr. Navneet Navneet           | Modification In Electronic Properties of Ruthenium Passivated N-GaN Confirmed by Scanning Tunneling Spectroscopy in Ambient Condition.                                      | III-Nitrides: Materials and Devices                        |
| 215 | 308 | Mr. Biswanath Panda           | Driving Scheme for An OLED Cluster Display for Automotive Application   | Organic Semiconductors and Flexible Electronics            |
| 216 | 309 | Dr. Pramod Yadav              | Oxygen Vacancy Migration Driven Ferroelectricity In Y-Doped ZrO <sub>2</sub> /Si Thin Films   | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 217 | 310 | Dr. Sandeep Singh Chauhan     | Simulation And Fabrication of Flexible Energy Harvester Using the PVDF Film with Conditioning Circuit   | Photovoltaics and Energy Harvesting                        |

|     |     |                             |  |   |
|-----|-----|-----------------------------|--|---|
| 218 | 312 | Mr. Suman Mandal            | Graphene Growth by One-Dimensional Nucleation  | 2D Materials and Devices                                  |
| 219 | 313 | Ms. Sreejyothi Sankararaman | Chiral Photo Response in Plasmon Enhanced Layered Semiconductors   | 2D Materials and Devices                                  |
| 220 | 314 | Mr. Rijo Baby               | Selectively Removed P-GaN on Al <sub>2</sub> S <sub>3</sub> Ga <sub>0.75</sub> N for Realizing Reliable Normally Off P-GaN HEMTs   | III-Nitrides: Materials and Devices                       |
| 221 | 315 | Mr. Om Prakash Das          | Thermometry Across Switching Oxide Layer in ReRAM Device   | Emerging Memory & Logic Devices for storage and computing |
| 222 | 316 | Mr. Amrit Kumar Mondal      | Direct Observation of Interfacial Dzyaloshinskii-Moriya Interaction And Spin Pumping In Single Layer Graphene/Co <sub>20</sub> Fe <sub>60</sub> B <sub>20</sub> Heterostructures | Emerging Memory & Logic Devices for storage and computing |
| 223 | 317 | Mr. Hemant Kumar Verma      | Ultra-Sensitive Self-Sensing Dynamic NEMS Cantilever-Based Sensors For Label-Free Gas Sensing  | MEMS and NEMS Devices                                     |
| 224 | 318 | Mr. Taslim Khan             | Effect Of Variation in Ambient Oxygen Pressure on The Growth Of bGa <sub>2</sub> O <sub>3</sub> Thin Films by Pulsed Laser Deposition Technique                                  | Compound Semiconductors and Devices                       |
| 225 | 320 | Dr. Sushant Mittal          | Machine Learning Based Line-Edge Roughness Induced Variability Modeling in Advanced FinFETs  | Device Simulation and Modeling                            |
| 226 | 321 | Mr. Deepak Kumar Dinkar     | Engineering Polarization Topologies Through Depolarization Fields in SiO <sub>2</sub> -BaTiO <sub>3</sub> Composite Thin Films   | Semiconductor Devices for Quantum Technologies            |
| 227 | 322 | Dr. Hidayath Ulla           | Organic Light-Emitting Diodes With Inkjet Printed PEDOT: PSS   | Organic Semiconductors and Flexible Electronics           |
| 228 | 323 | Dr. Surya Ghosh             | Ethanol Sensing Performance Of Ultra-Long Thread-Like Zinc Oxide Nanowires Grown By Customized Hydrothermal Technique  | Oxide Semiconductors and Devices                          |
| 229 | 324 | Mr. Krishnamanohara .       | Solution-Processed OLED Fabrication Using CBP/PO-01 Small-Molecule   | Organic Semiconductors and Flexible Electronics           |
| 230 | 325 | Ms. Anjali Goel             | Performance Projection of Stacked Silicon Nanosheet-FET Architectures for Future Technology Node   | Device Simulation and Modeling                            |
| 231 | 328 | Ms. Suchetana Mukhopadhyay  | Femtosecond Laser-Induced Ultrafast Spin Dynamics In Ferromagnetic Thin Films: A Comparative Study Using Two Theoretical Models  | Emerging Memory & Logic Devices for storage and computing |
| 232 | 329 | Mr. Deep Singh              | A Compact Model of a Wse <sub>2</sub> Field effect Transistors   | 2D Materials and Devices                                  |
| 233 | 330 | Mr. Subham Naskar           | Synthesis Of 2D Van-Der Waals Ferromagnetic 1T-CrTe <sub>2</sub> Grown by Chemical Vapor Deposition  | 2D Materials and Devices                                  |
| 234 | 331 | Mrs. Arpita Das             | Al, Mg Co-Doped ZnO Thin Film: Effect of Variation of Annealing Temperature on Structural, Optical and Electrical Characteristics  | Oxide Semiconductors and Devices                          |
| 235 | 332 | Ms. Shreyashi Sinha         | Preparation Of STM Tips for Imaging and Spectroscopy Of 2D Materials   | 2D Materials and Devices                                  |

|     |     |                           |  |   |
|-----|-----|---------------------------|--|---|
| 236 | 333 | Dr. Subhajit Pal          | Giant Piezoelectric Response in Non-Stoichiometric Epitaxial BaTiO <sub>3</sub>  | Oxide Semiconductors and Devices                          |
| 237 | 335 | Ms. Mansi Pahuja          | Role Of Se Incorporation in Porous Carbon/Ni <sub>5</sub> P <sub>4</sub> Interface: Aiming Towards the Development of HER Kinetics And Waste Heat Management | Photovoltaics and Energy Harvesting                       |
| 238 | 336 | Dr. Chandrima Mondal      | A Super Heterojunction Negative Capacitance High Electron Mobility Field Effect Transistor   | III-Nitrides: Materials and Devices                       |
| 239 | 337 | Mr. Arun M                | Dynamic Tuning of ENZ Region of ITO and Sensing Using a Tapered Optical Fiber  | Oxide Semiconductors and Devices                          |
| 240 | 338 | Dr. Sandeep Kumar         | Semi-Transparent Au as Top Contact in Perovskite Solar Cells Fabricated On Stainless-Steel Substrate   | Organic Semiconductors and Flexible Electronics           |
| 241 | 340 | Prof. Mridula Gupta       | Effective Mobility Extraction of GaN-HEMT Using S-Parameter  | Device Simulation and Modeling                            |
| 242 | 341 | Mr. Arijit Kayal          | Nanoscale Reduction of Graphene Oxide and Investigating the Correlation Of Macroscopic Electrical Response With Local Electronic Properties.                 | 2D Materials and Devices                                  |
| 243 | 342 | Ms. Priya Mudgal          | Mosete As an Anode Material for Sodium Ion Batteries   | 2D Materials and Devices                                  |
| 244 | 343 | Mr. Anirudh Venugopalarao | Effect Of AlN Nucleation Layer on Electrical Properties Of GaN/AlGa <sub>N</sub> HEMT With A Super-Lattice Buffer  | III-Nitrides: Materials and Devices                       |
| 245 | 344 | Ms. Sraboni Dey           | Modelling a ITO Nanostructured System For Developing A Spectrally Selective Absorber/Emitter   | Oxide Semiconductors and Devices                          |
| 246 | 345 | Ms. Sreya Pal             | Spin Texture Driven Reconfigurable Magnonics In Diatomic Nanodot Array   | Emerging Memory & Logic Devices for storage and computing |
| 247 | 347 | Mr. Deepak Sharma         | Gratings Assisted Optical Transduction Of The Mechanical Resonator's Vibrations And Non-Linearity Measurements   | MEMS and NEMS Devices                                     |
| 248 | 348 | Mr. Sachin Rahi           | Flexible Organic Transistors With PAA/HfO <sub>2</sub> Bi-Layer Gate Dielectric  | Organic Semiconductors and Flexible Electronics           |
| 249 | 349 | Mr. Samridh Sharma        | Suspended Microchannel Resonator Fabrication Using Wafer Bonding   | MEMS and NEMS Devices                                     |
| 250 | 351 | Mr. Siddhanta Roy         | A Quantum Mechanical Analysis Of Double Gate And Single Gat Soi Devices In Sub 10 Nm Regime  | Device Simulation and Modeling                            |
| 251 | 353 | Ms. Shubhangi Bhardwaj    | Novel Derivative of Tetraphenylethylene (TPE) As Hole Transport Material for Planar Perovskite Solar Cell  | Photovoltaics and Energy Harvesting                       |
| 252 | 354 | Ms. Gargi Konwar          | Flexible Organic Field-Effect Transistor Using Natural Protein as A Gate Dielectric For Green Electronics  | Organic Semiconductors and Flexible Electronics           |
| 253 | 355 | Mr. Mohd Amir             | Effect Of Different Layers Thickness And Material Parameters on The Performance Of Inverted P3HT:PCBM Based Organic Photovoltaic Cell                        | Photovoltaics and Energy Harvesting                       |

|     |     |                           |   |  |
|-----|-----|---------------------------|---|--|
| 254 | 356 | Dr. Vani Pawar            | Acetamidinium-Substituted 2D Ruddlesden Popper Halide Perovskite Solar Cells  | 2D Materials and Devices                                   |
| 255 | 357 | Ms. Shalini Singh         | Energy Harvesting From Water Droplet Motion On Wetted Stripped Channels   | MEMS and NEMS Devices                                      |
| 256 | 359 | Ms. Nisheka Anadkat       | Semi-Transparent Acetamidinium Substituted Perovskite Solar Cells   | Photovoltaics and Energy Harvesting                        |
| 257 | 360 | Mr. Krishna Rudrapal      | Forming-Free, Self-Rectifying, Self-Compliance, And Multibit Operation From W/Wo <sub>3</sub> -X/Pt Resistive Switching Device                              | Emerging Memory & Logic Devices for storage and computing  |
| 258 | 361 | Dr. Omita Nanda           | Growth And Characterization Of Reduced Graphene Oxide/ Nickel Oxide Nanocomposite Thin Films By Electrodeposition Technique                                 | Oxide Semiconductors and Devices                           |
| 259 | 362 | Mr. Anand Patel           | Towards Room Temperature Masing Using Diamond   | Semiconductor Devices for Quantum Technologies             |
| 260 | 363 | Mrs. Monalisa Mohanty     | Evaluation And Interpretation of Maximum Power Point Tracking in Photovoltaic System Under Partial Shading Conditions                                       | Photovoltaics and Energy Harvesting                        |
| 261 | 367 | Mr. Sushil Kumar          | V-Doped Nickel-Rich Phosphide Nanoflakes Of High-Performance Flexible Supercapacitors   | 2D Materials and Devices                                   |
| 262 | 368 | Mr. Sooraj Kumar          | Interfacial Engineering Using TiO <sub>2</sub> to Reduce The Electric Field Required For Metal Insulator Transition In VO <sub>2</sub>                      | Oxide Semiconductors and Devices                           |
| 263 | 369 | Mr. Ujjawal Rathore       | Self-Modulation In Nano-Constriction Based Spin Hall Nano-Oscillator  | Semiconductor Devices for Quantum Technologies             |
| 264 | 372 | Ms. Mitta Divya           | Mechanical Reliability Of High Performance InOrganic/Organic Composite Semiconductor Channel FETs Printed On Polyimide Substrates                           | Organic Semiconductors and Flexible Electronics            |
| 265 | 375 | Mrs. Devika Jena          | Performance Analysis of GaN FinFETs   | III-Nitrides: Materials and Devices                        |
| 266 | 376 | Mr. Sandeep Mondal        | Inkjet-Printed MoS <sub>2</sub> Transistors and Circuits  | 2D Materials and Devices                                   |
| 267 | 378 | Mr. Jyoti Ranjan Pradhan  | Inkjet-Printed, Deep Sub-Threshold Operated, Pseudo-CMOS Inverters and Ring Oscillators with High Voltage Gain, Operation Frequency & Low Power Consumption | Oxide Semiconductors and Devices                           |
| 268 | 379 | Ms. Baisali Kundu         | Edge-Epitaxial Growth Of 2D Lateral Heterostructures  | 2D Materials and Devices                                   |
| 269 | 381 | Mrs. Eleena Mohapatra     | Performance Of Strained-SiGe In FinFETs And Stacked Nanosheet FETs For Sub-7nm Technology Node  | Device Simulation and Modeling                             |
| 270 | 382 | Dr. Bhaveshkumar Kamaliya | 3d Nanostructures on Ge (100) Surface by Focused Ion Beam (FIB) Induced Self-Organization for Enhanced Light Absorption                                     | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 271 | 383 | Mr. Ajay Kumar            | Boron Allotropes as A Dirac Material  | 2D Materials and Devices                                   |

|     |     |                            |  |  |
|-----|-----|----------------------------|--|--|
| 272 | 384 | Mr. Subhajit Jana          | Few-Layer Phosphorene Ultra-Small Silver Nanoparticle Hybrid: Plasmonic Enhancement of Broadband Photoresponse   | 2D Materials and Devices                                   |
| 273 | 385 | Ms. Dipti Umed Singh       | Temperature Tunable Transmission Control of Thermochromic VO <sub>2</sub> Hybridized With IR – 1D Photonic Crystals For Smart Windows  | Photovoltaics and Energy Harvesting                        |
| 274 | 386 | Mr. Sumit Kumar            | Cvd Grown ZrO <sub>2</sub> Nanostructures Based Low-Concentration H <sub>2</sub> s Gas Sensor  | Oxide Semiconductors and Devices                           |
| 275 | 391 | Mr. Amit Kumar Shringi     | Effect Of Contact Diameter on The Performance Of Worm Properties of am-BTO Resistive Switching Devices   | Emerging Memory & Logic Devices for storage and computing  |
| 276 | 392 | Mr. Nipun Sharma           | Ultrasensitive Detection of Pb <sup>2+</sup> Ions Using G-C <sub>3</sub> N <sub>4</sub> Functionalized AlGa <sub>N</sub> /Ga <sub>N</sub> High Electron Mobility Transistors | III-Nitrides: Materials and Devices                        |
| 277 | 394 | Ms. Resmi E                | Characterization Of Bulk Degradation Due to Light And Elevated Temperature In Industrial Solar Cells   | Photovoltaics and Energy Harvesting                        |
| 278 | 395 | Dr. Tarapasanna Dash       | Stress Dependent Electrical Characteristics of Flexible A-IGZO TFTs  | Organic Semiconductors and Flexible Electronics            |
| 279 | 396 | Mr. Ashok Kumar            | Growth Of Vertically Aligned 2D SnS <sub>2</sub> Flakes for Highly Sensitive and Selective NO <sub>2</sub> Gas Sensor  | 2D Materials and Devices                                   |
| 280 | 397 | Mr. Maloy Das              | A-Fe <sub>2</sub> O <sub>3</sub> Based NO <sub>2</sub> Gas Sensor Decorated with Highly Sensitive MoS <sub>2</sub> Prepared by Radio Frequency Magnetron Sputtering          | Oxide Semiconductors and Devices                           |
| 281 | 398 | Mr. Rajat Rajat            | Realization Of H <sub>2</sub> s Gas Sensor Using Sol-Gel Processed ZnFe <sub>2</sub> O <sub>4</sub> Thin Film  | Oxide Semiconductors and Devices                           |
| 282 | 399 | Ms. Pariksha Malik         | Absorption Enhancement With Au/Ag Nanoparticle Over Arc Layer At Front Surface Of Thin Film Silicon Solar Cell   | Photovoltaics and Energy Harvesting                        |
| 283 | 401 | Mr. Vikas Pandey           | Enhanced Sensing Performance Of MoS <sub>2</sub> Functionalized AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT For No <sub>2</sub> Gas Detection                                    | III-Nitrides: Materials and Devices                        |
| 284 | 404 | Dr. Ambesh Dixit           | Theoretical Studies On Bismuth-Free Cs <sub>2</sub> AgCrBr <sub>6</sub> Halide Double Perovskites As Promising Photovoltaic Absorbing Material                               | Photovoltaics and Energy Harvesting                        |
| 285 | 405 | Prof. S. Sundar Kumar Iyer | Performance Comparison of Organic Photovoltaic Cells with Silicon Solar Cell For Different Light Spectrum And Brightness   | Organic Semiconductors and Flexible Electronics            |
| 286 | 406 | Ms. Rachana Sain           | Effect Of Polymorphous Transformation of Dy Doped Sm <sub>2</sub> O <sub>3</sub> Nanoparticles from Cubic To Monoclinic Phase On The Optical Properties                      | Semiconductor Crystal Growth, Epitaxy and Characterization |
| 287 | 407 | Mr. Piyush Choudhary       | Impact Of Reagents and Reducing Methods On Characteristics Of Graphene Oxide And Reduced Graphene Oxide.   | 2D Materials and Devices                                   |
| 288 | 408 | Mr. Ajay Visvkarma         | Surface Study of Chemical Treated AlGa <sub>N</sub> /Ga <sub>N</sub> HEMT Epi-Structure  | III-Nitrides: Materials and Devices                        |
| 289 | 410 | Dr. Sourajeet Roy          | Fast Extraction of Quantum Confinement Effect on Threshold Voltage of Gate-All-  | Device Simulation and Modeling                             |



|     |     |                                  |   |   |
|-----|-----|----------------------------------|---|---|
|     |     |                                  | Around FETs Using Machine Learning Methods  |   |
| 290 | 411 | Mr. Mangla Nand                  | Effect of O <sub>2</sub> Partial Pressure on Valence Band Maxima of HfO <sub>2</sub> Thin Film  | Oxide Semiconductors and Devices                |
| 291 | 412 | Mr. Shreeraj Joshi               | Thermoelastic Dissipation in Square Plates with Etch Holes: Thermal Mode Approach   | MEMS and NEMS Devices                           |
| 292 | 413 | Mr. Amit Kumar                   | CuO-Decorated SnO <sub>2</sub> Hierarchical Nanostructures as Efficient and Established Sensing Materials for H <sub>2</sub> S Gas Sensors        | 2D Materials and Devices                        |
| 293 | 414 | Dr. Sambathkumar Balasubramanian | Comparing Air Stability of Paper Solar Cell with MoO <sub>3</sub> and Epoxy as Encapsulation Layers   | Organic Semiconductors and Flexible Electronics |
| 294 | 415 | Dr. Dharendra Sahoo              | Impact Of Thickness on Optical Properties of MoS <sub>2</sub> Thin Films Obtained from Chemical Vapor Deposition                                  | 2D Materials and Devices                        |
| 295 | 417 | Mr. Hemant Kumar Sharma          | Rutherford Back Scattering (RBS) Studies on Mg Ion Implanted InSb Single Crystal Substrates   | Compound Semiconductors and Devices             |
| 296 | 420 | Mr. Anurag Dehingia              | A Computational Study on A Novel Perovskite Solar Cell Design with C <sub>60</sub> And CuSbS <sub>2</sub> as Electron and Hole Transport Material | Device Simulation and Modeling                  |
| 297 | 427 | Ms. Sneha Nair                   | Silicon Nanowires and Reduced Graphene Oxide-Based Sensing Platforms for Detection of Pathogenic Organisms in Water                               | 2D Materials and Devices                        |
| 298 | 428 | Prof. Manoj Saxena               | Comparative Investigation of Single and Double Channel AlGaIn/GaN HEMTs For LNAs  | Compound Semiconductors and Devices             |
| 299 | 429 | Dr. Marsha Parmar                | Fabrication And Characterization of InAs/AlSb Hall Sensors  | Compound Semiconductors and Devices             |
| 300 | 430 | Mr. Dibyajyoti Mukherjee         | Miniaturized Ultra-Wideband Rf Amplifier Design for Rf Energy Harvester in IMD Application Using 0.18 $\mu$ m CMOS Process                        | Photovoltaics and Energy Harvesting             |
| 301 | 432 | Ms. Ashritha Salian              | Development Of Low Temperature Processed High Dielectric Constant High Entropy Oxide for Electronic Applications                                  | Oxide Semiconductors and Devices                |
| 302 | 433 | Mr. Hurmal Saren                 | Heavy Metal Layer Dependent Electronic Transport Properties of Sputter-Deposited Co <sub>25</sub> Fe <sub>75</sub> Based Multilayer Structures    | Semiconductor Devices for Quantum Technologies  |
| 303 | 434 | Mrs. Monika Gandhi               | Bismuth Telluride Alloy Based Nanocomposites with Multiwalled-CNT Nano-inclusions for Thermoelectric Applications                                 | Compound Semiconductors and Devices             |
| 304 | 435 | Mr. Nilesh Kumar Jaiswal         | A Vertical GaN Split Gate Trench MOSFET Device with Reduced Switching Energy Losses   | III-Nitrides: Materials and Devices             |
| 305 | 440 | Mr. Imran Ahmad                  | A Capacitive Transducer for Film Thickness Measurement  | MEMS and NEMS Devices                           |
| 306 | 441 | Mr. Sourav Das                   | Electrical Transport and Optoelectronics Study Of N-ZnO/N-SnS <sub>2</sub> Heterojunction for UV Photodetector                                    | Compound Semiconductors and Devices             |

|     |     |                            |  |   |
|-----|-----|----------------------------|--|---|
| 307 | 442 | Dr. Manjari Garg           | Exploring Thermoelectric Transport in Twisted-Bilayer Graphene with Higher Twist Angle                               | 2D Materials and Devices                                  |
| 308 | 13  | Ms. Bisma Bilal            | Computational Analysis of Antireflection Coatings for Semiconductor Solar Cells                                      | Photovoltaics and Energy Harvesting                       |
| 309 | 72  | Dr. Saurabh Kumar Pandey   | Impact of Various Device Parameters on the Series Resistance of Perovskite Solar Cell                                | Device Simulation and Modeling                            |
| 310 | 213 | Mr. Ajoy Mandal            | Soft ferroelectric nature of CsPbBr <sub>3</sub> perovskite and its application towards Piezoelectric Nano generator | Photovoltaics and Energy Harvesting                       |
| 311 | 294 | Mr. Dibyajyoti Mukherjee   | A parallel-SSHI Interface Circuit for Piezoelectric Energy Harvesting  | Photovoltaics and Energy Harvesting                       |
| 312 | 418 | Mrs. Monika Gandhi         | Fabrication of Electrical contacts on p-type and n-type Bismuth Telluride Alloy based Nanocomposites                 | Compound Semiconductors and Devices                       |
| 313 | 218 | Mr. Dibyajyoti Mukherjee   | Experimental Validation of chip-sized Magnetolectric WPT in IMDs   | MEMS and NEMS Devices                                     |
| 314 | 403 | Dr. Ambesh Dixit           | Thermally Treated Low Cost CuxO based Random Resistive Access Memory Device  | Emerging Memory & Logic Devices for Storage and Computing |
| 315 | 181 | Mr. Indranil Mal           | Bandgap Tailoring of InSbBi for Long Wavelength Infrared Applications using Density Functional Theory                | Compound Semiconductors and Devices                       |
| 316 | 402 | Prof. S. Sundar Kumar Iyer | Lower Drying Temperature Process for Hole Transport Layer PEDOT: PSS in PCDTBT: PCBM Devices                         | Organic Semiconductors and Flexible Electronics           |
| 317 | 268 | Mr. Imran Ahmad            | Parylene membrane transfer on PDMS microchannel for microvalve fabrication   | MEMS and NEMS Devices                                     |
| 318 | 374 | Dr. Tarapasanna Dash       | A TCAD-based Approach for 3D Gate All Around Nanosheet Transistor at sub-2.1nm Technology Nodes                      | Device Simulation and Modeling                            |
| 319 | 339 | Prof. Manoj Saxena         | Investigation of Intrinsic Parameters of a Field Plate HEMT  | Device Simulation and Modeling                            |
| 320 | 89  | Prof. Mridula Gupta        | Impact of pocket doped Mg <sub>2</sub> Si/Si heterojunction Ge gated TFET for low optical power detection at 1550nm  | Device Simulation and Modeling                            |
| 321 | 115 | Mr. Anweshan Chakrabarti   | A surface potential based current model for Suspended Gate Field Effect Transistor prior to pull-in                  | Device Simulation and Modelling                           |
| 322 | 248 | Prof. Mridula Gupta        | RF Analysis of Tapered Angle Hetero-junction Dopingless TFET for low power applications                              | Device Simulation and Modeling                            |
| 323 | 339 | Prof. Manoj Saxena         | Investigation of Intrinsic Parameters of a Field Plate HEMT  | Device Simulation and Modeling                            |
| 324 | 374 | Dr. Tarapasanna Dash       | A TCAD-based Approach for 3D Gate All Around Nanosheet Transistor at sub-2.1nm Technology Nodes                      | Device Simulation and Modeling                            |
| 325 | 72  | Dr. Saurabh Kumar Pandey   | Impact of Various Device Parameters on the Series Resistance of Perovskite Solar Cell                                | Device Simulation and Modelling                           |

|     |     |                |  |                          |
|-----|-----|----------------|--|--------------------------|
| 326 | 86  | Mr. Ragul S    | Modeling the transfer characteristics of graphene transistors around the charge neutrality point captured as the effect of inhomogeneous doping distribution | 2D Materials and Devices |
| 327 | 177 | Mr. Ajay Kumar | MoS2 Layers Grown by CVD Technique for Application in Flexible Electronics   | 2D Materials and Devices |
| 328 | 86  | Mr. Ragul S    | Modeling the transfer characteristics of graphene transistors around the charge neutrality point captured as the effect of inhomogeneous doping distribution | 2D Materials and Devices |
| 329 | 319 |                |  |                          |