

List of accepted abstracts for poster presentation in SAMDeV - 2025

S. No.	NAME	Title of Abstract
ES-1	Arnab Dutta	Improving the barrier properties of thermoplastic starch in the PLA-TPS-PLA multilayer films
ES-2	Aman Negi	Detailed Study of the Various Textile Substrates for Optimizing the TENG Output
ES-3	Dr Rinky Sha	Development of Cu ₂ SnSe ₃ Nanomaterials for Supercapacitor Applications
ES-4	Shivalingadevaru S Hiremath	Synthesis of ZIF-67 MOF and Structural Optimization of TENGs for Enhanced Energy Harvesting
ES-5	Subhajit Mahapatra	Piezoelectric Response of Lysozyme-PVA Composite Films for Flexible and Biocompatible Energy Harvesting Applications
ES-6	Bodhishatwa Roy	Development of room temperature CO ₂ sensor using VLS grown Si-incorporated TiO ₂ film
ES-7	Alipsa Das	PVDF/α-MoO ₃ Nanowire Triboelectric Nanogenerators for Dual Energy Harvesting and Morse Code Signal Applications
ES-8	KALYANI PANIGRAHI	Active Noise Control: Evolution, Integration & Through Industry 4.0
ES-9	Anwesha Deb	ZnO nanorods fractionalized textile based triboelectric nanogenerator for self-powered volatile organic compound sensing application
ES-10	Binoy Das	Room temperature ammonia sensing using reduced graphene oxide(rGO)-tungsten sulphide (WS ₂) nanocomposites
ES-11	Anabadya Dash	Highly Sensitive and selective room temperature resistive CO sensor for Respiratory illnesses monitoring Applications
ES-12	Tikendra Kumar	One Stone Two Birds: Multifunctional Flexible Electrode for Glucose Sensing and Supercapacitor Application
ES-13	Atirah	Scalable Fabrication of Patternable Conducting Polymer Films for Electronic Sensing Applications
ES-14	Sourav Kumar Kajli	Influence of Nanowire Diameter on Gas Detection Performance in FIB-Fabricated Suspended CuO Nanostructures
ES-15*	Dr. Ankur Goswami	An electrochemical sensing on CYTOP electret surface
ES-16	Sk Shaharukh	Integration of metal-organic framework (MOF) embedded dielectrics in organic field-effect transistors for low-power neuromorphic computing applications
OPT-1	Shaona Bose	Harnessing Negative Potentiation in Mn-Doped CsPbI ₃ for Energy- Efficient Inhibitory Synaptic Devices
OPT-2	Saranya Das	A Study on the impact of dielectric screening on exciton physics in monolayer WSe ₂
OPT-3	Mousumi Pramanik	Enhanced Near-Infrared Photodetection Via Exciton-Plasmon coupling in Ag Nanoparticle Decorated MoS ₂ /Si-Nanowire Hybrid
OPT-4	Abir Mukherjee	Resolving Trion Emission and Achieving Tuneable Photo capacitance in RIE-Thinned WSe ₂ : A Path to Miniaturized Optoelectronics
OPT-5	DEEPAK KUMAR SAHU	Gold nanorods-decorated ternary alloy Mo _{0.5} W _{0.5} S ₂ -p Si vertical heterojunction high-performance photodetector
OPT-6	Subham Saha	Role of Different Trapping Layers on the Performance of All-Inorganic CsPbBr ₃ Nanocrystal-based Optical Synapses
OPT-7	SNEHA	Study of optoelectronic synaptic devices based on ferroelectric In ₂ Se ₃ /MoWS ₂ heterojunction
OPT-8	Santu Kumar Ghosh	Brain-inspired ferroelectric and resistive memory performances in PVDF/MoS ₂ heterojunction

OPT-9	Baidyanath Roy	Superior Photoconversion Efficiency of Nanocrystals-Sensitized Solar Cells Based on All-Inorganic CsPbX ₃ (X=Br, I) Perovskites
OPT-10	Sagarneel Ghoshal	From Vision to Reservoirs: Perovskite Films for Versatile Neural Hardware
OPT-11	Rajesh Mandal	Tailoring Photoresponse through Plasmonic Coupling in Ag-SnO ₂ Nanocomposite-Based Broadband Photodetectors
OPT-12	Didhiti Bhattacharya	Novel TMDC/Si Heterojunction Based Direct Current UV Sensitive Tribovoltaic Nanogenerator and Visual-Image Sensors
OPT-13	Rohit Satpathy	Optimizing Convolutional Neural Networks for Image Classification on Hardware-Based Optoelectronic Memristors
OPT-14	Satayender K. Sangwan	Morphological and Charge Transport Modulation in Ternary Organic Solar Cells Using Fluorescent Dye
OPT-15	Ajoy Biswas	Self-Powered Deep UV Photodetector Based on Si-doped n-(201) Ga ₂ O ₃ Grown on p-(0001) GaN/Sapphire Substrates using PLD
OPT-16	Soham Chatterjee	Electrically reconfigurable triple band light absorber and modulator based on ENZ n-InSb
OPT-17	Bindu	Geometrical Phases in $\chi(2)$ nonlinear process
OPT-18	Ritasree Sadhukhan	Transition Metal (Fe, Co, Ni) Doped MoS ₂ for High-Performance Photodetectors: A Comparative Analysis
OPT-19	SINJINI MISRA	Design and Simulation of On-Chip Terahertz Amplitude Modulator based on GaN-HEMT
OPT-20	Subham Mahanti	Asymmetric Contact Engineering for Enhanced Avalanche Multiplication in Sub-micron WSe ₂ FETs
OPT-21	Anirban Bhattacharyya	Development of UV Emitters and Detectors by PA-MBE: Effect of Compositional Inhomogeneities on device properties
OPT-22	Suryakant Singh	Ultrafast and Self-Powered MSIM Photodetector Featuring Organic Semiconductor/Dielectric Interfaces for High-Sensitivity Visible-to-NIR Communication
OPT-23	Abinash Pradhan	Effect of carrier gas on the structural, optical and electrical properties of ZnO thin film
OPT-24	Suman Dolai	In House Developed Cost-Effective Dry Transfer System for Controlled 2D Material Transfer in Optoelectronic Device
OPT-25	Rajana Rama Satya Sai Durga Prasad	Ultra-Wideband Log-Periodic Antenna on High-Resistivity Silicon for Terahertz Applications
OPT-26	PAPPU NASKAR	Supercontinuum Generation through Dispersive Wave Emission in GeAsSe-MgF ₂ Buried Rib Waveguides with two different Core Geometries
OPT-27	Atrayee Mishra	Wavelength Conversion in a Silicon-Core Optical Fiber Using Symmetric and Asymmetric Triangular Pulses
OPT-28	Sudipta Das	Photocatalytic dye degradation and photosensing properties of carbon quantum dots sensitized TiO ₂ nanotubes
OPT-29	Chandani Dubey	Temperature-Dependent Photocurrent and Stability Analysis of WS ₂ -Based 2D Photodetectors
OPT-30	Prabal Dweep Khanikar	Highly Sensitive FAPbI ₃ Photodetector with a Wide Linear Dynamic Range and Fast Response Speed
OPT-31	Arun Kumar Bag	Analysing Lead Based Perovskite Solar Cells (CH ₃ NH ₃ PbI ₃ -xCl _x) using SCAPS1-D

OPT-32	Subhradeep Pal	Design of a Visibly Transparent Radiative Cooler for Efficient Smart Window Cooling
OPT-33	Tithi Saha	Development of Efficient Solar-blind Photodetector Using MIST-CVD Grown β -(Al _{0.16} Ga _{0.84}) ₂ O ₃ Thin Film at Optimized Temperature
OPT-34	Sirsendu Ghosh	Exploring Photothermal Effects on Current Modulation in F8BT Thin Films
OPT-35	Sudarshan Singh	CdZnTe-based room temperature semiconductor detectors for X-ray detection and imaging
OPT-36	Sujan Sasmal	Molecular Beam Epitaxy (MBE)- grown 2H-MoSe ₂ /Highly Resistive -Si Heterostructure for Optically Pumped- THz Amplitude Modulation
OPT-37	Subhajit Roy Chowdhury	Photo and Electroluminescence from Nanostructured Silicon: A comparative study
OPT-38	Shayari Basu	Influence of Surface Oxidation on Temperature-Dependent Radiative Recombination in Nanostructured Silicon
OPT-39	TARA SHANKAR BHATTACHARYA	Tuning Light-Matter Interaction in 2D Bi ₂ Se ₃ through Plasmonic Particle Coupling
OPT-40	Somnath Pandit	Bloch Surface Wave Enhanced Emission in Perovskite Embedded Photonic Crystal
OPT-41	Biplab Dhara	Surface and Volume Nanopatterning by Holographic and Interference Lithography
OPT-42	Kritika Bhattacharya	Enhanced Light-Matter Interaction and Photodetection in TMDs using Distributed Bragg Reflectors (DBRs)
OPT-43	Saswata Goswami	Exceptionally High Nonlinear Optical Response in Two-dimensional Type II Dirac Semimetal Nickel di-Telluride (NiTe ₂)
OPT-44	Himadri Mullick	Optical and Dielectric Spectroscopy for Relaxation Study in Gum Acacia Biopolymer Modified by Natural Pigment Anthocyanin and Betalain of Fruit Exudates
MDM-1	Tuhin Mandal	White-light emitting self-assembled graphene quantum dots from coal soot
MDM-2	Bijoy Jana	Experimental and Theoretical Investigation of 3D MoSe ₂ /Graphene Flake Composites for Advanced Symmetric Supercapacitors
MDM-3	ASMITA PATRA	Study the effect of applied gate voltage on threshold potential and carrier transport behavior of three-terminal novel prototype device having configuration p-type Si/SiO ₂ /CuFeS ₂ /Al
MDM-4	Manoj Kangsabanik	Development of Cu ₂ ZnS ₄ (CZS ₄) thin films as a Sustainable Material for Photodetection and Resistive Memory Applications
MDM-5	Sayan Chakraborty	Sono-Chemically Engineered MoSe ₂ -PVDF Nanocomposites for Efficient Flexible Piezoelectric Energy Harvesting
MDM-6	PAPI SARKAR	Insights into synthesis temperature, molarity of LiF/HCl on structural quality of Ti ₃ C ₂ T _x -MXene films for advanced energy storage applications
MDM-7	Smita Srivastava	Study of Zn Diffusion Effects on Multiplication Layer and Breakdown Characteristics in InGaAs/InP SPADs
MDM-8	Soumyaranjan Swain	Flexible Binder-Free CNF@NiO _x Nanofibrous Electrodes for Next-Generation Supercapacitors

MDM-9	Prabhat Kumar	Design and Performance Analysis of Drain-Extended NMOS for ESD Applications
MDM-10	pooja rani	Low Temperature and Solution processed Flesible organic solar cells based on PM6:Y6
MDM-11	SUMAN SAHA	Multi-Layer Hexaferrite-Graphene Derivative Incorporated PVDF Nanocomposite Films for Enhanced Microwave Absorption in the X-Band Frequency Region
MDM-12	Priyanka Biswas	Surface Engineering of Sputter-Deposited HfO ₂ Films on SiO ₂ /Si Substrates by Controlled Etching of the Intermediate SiO ₂ Layer for Hydrophobic Surface Fabrication
MDM-13	Rishabh Sahoo	Miniaturized UV-Visible Computational spectrometer with a van der Waals Heterojunction
MDM-14	Saraswati Mandi	Silver Nanoparticle-Enhanced 2D CuO Nanoflakes for Simultaneous Solar-Driven Photocatalysis and Antimicrobial Activity
MDM-15	Saheb Bera	MXene Alloy-Based Metal-Semiconductor Contact for Low-Resistive Field-Effect Transistors
MDM-16	Swapnadeep Goswami	Modulation of thermoelectric performance in off-stoichiometric Sb ₂ Te ₃
MDM-17	Puja	Interface Engineering and Band Alignment Studies of Cu Doped NiO as a Hole Transport Layer for Triple Cationic Perovskite Solar Cells
MDM-18	Subhrojit Dutta	Piezo-Responsive Flexo-electric Er ³⁺ -ZnO/PVDF Nanocomposites for Sustainable Energy Harvesting and Motion Sensing
MDM-19	Ishrat Bashir	InGaAs QD as a Single-Photon Source for Quantum Technologies
MDM-20	Aliva Saha	Multilayered W-Type Hexaferrite / PVDF Nanocomposites: An Investigation of Size Dependent EMI Shielding Performance
MDM-21	Avijit Ghosh	Integrated Influence of Geometry, Material, and Surrounding Medium on Casimir Force
MDM-22	Mihir Ranjan Bera	Efficient dye degradation performance of Fe ₃ O ₄ -rGO nanocomposite.
MDM-23	Sameen Azhar	Self-Rectifying Resistive Switching in Au/ZnO/ITO/PET Flexible Devices
MDM-24*	Sourabh Roy	Designing and Performance Evaluation of Hybrid Silicon-HfO ₂ -ITO based Electro-Optic Modulator
MDM-25	Madhupriya Samanta	Impact of various Anti-Reflection Coating materials on GaInP solar cell performances
QMD-1	Kajal Sharma	High Negative Differential Resistance in MBE grown Tri-layer MoTe ₂ based Resonant Tunneling Devices
QMD-2	Umakanta Patra	Understanding the role of environment and dielectric capping on the electrical properties of WS ₂ monolayers grown by Chemical vapour deposition technique
QMD-3	Animesh Mandal	2D Mo _{0.5} W _{0.5} S ₂ Ternary Alloy Micro-Supercapacitors for Flexible High- Energy Storage Devices
QMD-4	PRITAM MONDAL	Controlled Growth of Two-Dimensional Transition Metal Dichalcogenide (MoS ₂) Thin Films Using Chemical Vapor Deposition Technique
QMD-5	Nilayan Paul	Studying the quantum dot position induced variability in the multi-threshold transfer characteristics of a Double Quantum Dot Nanowire Field-Effect-Transistor (DQD-FET)
QMD-6	Dr. Shubh Shankar Singha	Tuning the structural phase transition of Mn intercalated MoS ₂ under high pressure

QMD-7	Nalinikanta Swain	Deterministic Positioning of Quantum Dots in Circular Bragg Gratings for Bright Single Photon Source
QMD-8	Sudip Naskar	Pyroelectric Response of Highly Ordered PVDF Ultrathin Films Mediated by Gold Plasmonics
QMD-9	Sunidhi Mishra	Improved Charge Retention in Chemically Tailored Cellulose Triboelectret Aerogels for High-Performance, Sustainable, Self- Powered Tactile Sensors
QMD-10	Utsa Sarkar	Photo-Induced Phase Modulation in Ferroelectric Polymer: A Pathway to Next-Generation Electroactive Devices
QMD-11	TAMAL DEY	Spatiotemporal Interactions in Nickelates Neural Networks: Imaging and Neuromorphic Applications
QMD-12	Anisa Mukherjee	Investigating the impact of Au-nanoparticle modified interface on the electrical and photo-electrical performance of Al/ZnO/p-Si MOS structure
QMD-13	PRITAM SINHA	Ni-Doped CuCo ₂ O ₄ Spinel Nanostructures for Enhanced Supercapacitor and Oxygen Evolution Reaction Performance: An Experimental and Theoretical Insight
QMD-14	Suvadip Masanta	Alloying as a new route to generating interlayer excitons
QMD-15	SIMANCHALO PANIGRAHI	Topological Quantum Bits (Qubit)
QMD-16	SIMANCHALO PANIGRAHI	Potential Qubit Realization in a 2D van der Waals Magnet $\{(Co_{0.5}Fe_{0.5})_{5-x}GeTe_2\}$
QMD-17	Bhuimula Kirtipratyush Pattanaik	Performance Analysis of Graphene Nanoribbon Interconnect
QMD-18	Parvathy Ravindranath	Modelling and Optimizing Flexible Multimodal Nanogenerators Using Thevenin's Theorem
QMD-19	Sounak Samanta	Gate-Defined Few-Electron/Hole Quantum Dots: An Indigenous Effort towards Developing a Spin Quantum Computing Architecture
QMD-20	Tanima Lai	Enhanced cathodoluminescence in hBN-encapsulated two-dimensional WS ₂ alloy
QMD-21	Archisman Maity	Simulation of InAs/InP Quantum Dot Photonic Cavities for Telecom C-band Fiber Communication
QMD-22	Neesha Yadav	Skyrmionic phase in thin film metallic multilayers and two-dimensional van der Waals magnetic heterostructures
QMD-23	Subhrajyoti Koley	Direct verification of Charge Density Wave State in Cu _{2-x} Te single crystal: A Scanning Tunneling Microscopic study
QMD-24	Shubhrasish Mukherjee	Understanding of Rich Defect Dynamics in ReS ₂ Field Effect Transistors Using Nearly Barrier-Free Van der Waals Contacts
QMD-25	Saddam Khan	Formation of Quantum Pyramids in Electrochemically Etched Nanostructured Silicon Powder
QMD-26	SIMANCHALO PANIGRAHI	Two Dimensional Multiferroic Spintronics Quantum Devices: An Overview
QMD-27	AYUB SEKH	Engineering Optical Properties in 2D Material using Nanoparticle-on-Mirror (NPoM) Cavities
QMD-28	Susmita Das	Magnetization Dynamics in Co ₉₀ Fe ₁₀ Thin Films and Square Artificial Spin Ice Probed by TRMOKE Microscopy
QMD-29	Soumava Mondal	Temperature dependent magnetization dynamics of van der waals Ferromagnet Fe ₅ GeTe ₂ .
QMD-30	Chirag	

		PVDF-PBAT Blends Film and Fibers for Energy Harvesting and Sensing
QMD-31	Rajkumar Singha	The study of neodymium (Nd) doping on structural, dielectric, magnetic, and magnetodielectric properties of BiFeO_3 (BFO) multiferroic nanoparticles
QMD-32	Dayal Das	Room-Temperature Near-Infrared Excitons and Optoelectronics in 2D/Organic Heterostructures via Spontaneous Epitaxial Growth
QMD-33	Premananda Chatterjee	Noise Spectroscopic Signatures of the Metal–Insulator Transition in 1T-TaS ₂
QMD-34	Mohana Roy	Hydrothermally Synthesized Quasi-2D Tellurium Flakes and Quasi-1D Nanowires: Structure, Fabrication, and Transport Properties
QMD-35	Biplab Biswas	Optimization of CoSi ₂ -based weak-link Josephson junction fabrication using focused ion beam
QMD-36	Ayan Kumar Ghosh	Optimization of Reactive Ion Etching process for CoSi ₂ -based superconducting microwave co-planar waveguide development

* MDM-24 and ES-15 are considered for Oral Presentation