TECHNICAL PROGRAMME

International Conference on Advancement in Functional Materials (ICAFM 2024)

February 8th to 10th,2024

Organized by

Prof. Rajendra Singh (Rajju Bhaiya) Institute of Physical Sciences for Study and Research Veer Bahadur Singh Purvanchal University, Jaunpur-222003, U.P., India

In collaboration with

Asian Polymer Society, New Delhi, India

DAY-I (8th February 2024)

08:00-09:45	**REGISTRATION (At Rajju Bhaiya Institute)** **&** **BREAKFAST**
10:00-11:30	**SESSION-I: INAGURATION (Aryabhata Auditorium, Rajju Bhaiya Institute)**
11:30-11:45	**HIGH TEA**
	SESSION-II: Session Chair- Dr. Mayank Dwivedi **Session Coordinator:** Prof. Devraj Singh
11:45-12:30	**Keynote Talk:** Development of functional materials @ UPES – **Prof. D.K. Avasthi**
12:30-01:00	**PL 005:** Functional Polymeric Materials and their Applications – **Dr. Dibyendu S. Bag**
01:00-01:30	**PL-008:** Structural and Interactional Complexity of Pseudopeptidic Molecular Systems **– Prof. Mrituanjay D. Pandey**
01:30-2:00	**PL-007** Inclusive Progress in Nano biotechnology: Steering Towards Achieving Net-Zero Objectives – **Prof. Ashutosh Tiwari**
02:00-03:00	**LUNCH**

	PARALLEL SESSION A (Aryabhata Auditorium)	PARALLEL SESSION B Venue: LH 101	PARALLEL SESSION C Venue: LH 102	HYBRID MODE Venue: Conference Hall (LH 001)
	SESSION-IIIA Session Chair: Prof. D.K. Avasthi Coordinator: Prof. Devraj Singh	SESSION-IIIB Session Chair: Prof. D. C. Tiwari Coordinator: Dr. Mithilesh Yadav	SESSION-IIIC Session Chair: Prof. Mrituanjay D. Pandey Coordinator: Dr. Ajeet Singh	SESSION-IIID Coordinator: Dr. Dhirendra K.Chaudhary
03:00-03:20	**IT-014** Enhancement of the efficiency of Flexible Organic Photo Voltaic Cells through columnar phases of a discotic mesophasic materials **Prof. Ravindra Dhar**	**IT-015** Functional Materials for Armour Applications **Dr. S. B. Yadav**	**IT-006** Structure based investigation of natural compounds as SARS-CoV-2 M^{pro} antagonists **Prof. Umesh Yadav**	**PL-002** Advancements in Ultrasonic Research at the Ultrasonics Laboratory at GT Europe – **Prof. Nico F. Declercq** **PL-006** Aluminum-based Wastes as Energy Carriers: Exploiting Electrochemical Corrosion to Produce Hydrogen **Prof. Patrizia Bocchetta** **IT-012** Organic Photovoltaic: Recent Emerging Applications - **Ram Datta** **IT-074** Amla: A Super Nano-Antioxident **Dr. Archana Kansal** **IT-022** Importance of Carbon based Electrodes for Supercapacitor Application **Dr. Meenal Gupta**
03:20-03:40	**IT-0031** Ion Induced Modifications in Transparent Conducting Oxide Thin Films for Emerging Solar Cell Technology **Prof. Lokendra Kumar**	**IT-073** Structural and Electrical Properties of Selenium Rich Chalcogenide Glassy-Alloys **Prof. Horesh Kumar**	**IT-038** Polyurethane An ionomers: Functional and Versatile Electrolytes for Quantum dots Sensitized Solar Cells **Dr. Sunil Kumar**	
03:40-04:00	**IT-020** Efficient Electrolyte Materials for Electrochemical Applications: Structural and Ion Transport Properties Study **Dr. A. L. Saroj**	**IT-009** Ultrasonic Applications and Characterization of Functional Materials **Dr. Yudhisther Kumar Yadav**	**IT-039** Intracellular application and logic gate behavior of a 'turn off-on-off' type probe for selective detection of Al^{3+} and F^- ions in pure aqueous medium **Dr. Divya Pratap Singh**	
04:00-04:15	**TEA**			
SESSION IV: Oral Presentations				
04:15- 06:00	**PARALLEL SESSION A (Aryabhata Auditorium)**	**PARALLEL SESSION B Venue: LH 101**	**PARALLEL SESSION C Venue: LH 102**	**PARALLEL SESSION D Venue: Conference Hall (LH 001)**
	SESSION-IVA **Session Chair:** Prof. Ravindra Dhar	SESSION-IVB **Session Chair:** Prof. Lokendra Kumar	SESSION-IVC **Session Chair**: Dr. D. K. Pandey	SESSION-IVD **Session Coordinator:** Dr. Dhirendra K. Chaudhary

	O1: Microwave Assisted Synthesis of Long-Term Stable Multi-Metallic Nanofluids- **Ajit Kumar Maddheshiya**	**O18:** Electrical Properties of Metamagnetic Eu_2CoMnO_6 **– Mohd Alama**	**O41:** Bio-friendly synthesis of Ag:ZnO nanoparticles using the extract of Achyrantus aspra L. and investigation of their structural, morphological and optical properties **- Raj Kamal Yadav**	**O28:** Concept of membrane-less electrolysis for green H production **– Niyamat Ullah Khan**
	O2: A DFT Study of Ni-Rich Cathode Material for Lithium-Ion Battery- **Sarva Shakti Singh**	**O19:** Modeling of Graphene like Structure by Utilizing Phenanthrocarbazole for Tailoring the Second-order Nonlinear Optical Properties **- Santosh Kumar Yadav**	**O43:** Carbon Nanodots - An Effective Fluorometric Sensor for Heavy Metal Ions **- Vikas Lahariya**	**O42:** Elastic, Mechanical and Ultrasonic Properties of ZrBeSi Ternary Compound Under High Pressure **– Prashant Srivastava**
	O3: Electrochemical Behavior of $La_{0.5}Sr_{0.5}Fe_{0.5}Ti_{0.5}O_3$ with A- and B-site co-substitutions in $LaFeO_3$**- Uma Sharma**	**O20:** Formation of NH OH through NH and NO2 in interstellar medium - **Shivani**	**O44:** 3D printed Thermoresponsive PNIPAM-based Nanocellulose-reinforced Composite Hydrogels **- Remit Goyal**	**O50:** Ultra-sensitive using Black Phosphorus Nanomaterial-Based Surface Plasmon resonance for Malaria Detection in blood Samples- **Nikhil Pratap Singh**
	O4: Structure, Magnetic and Transport Properties of Quarternary Heusler Alloy**- Srishti Dixit**	**O22:** Investigation of temperature dependent crystal structure and its effect on photo-physical property of mechanochemically synthesized $CH_3NH_3PbBr_3$ - **Souvik Mal**	**O45:** Synthesis and Characterization of Metal Organic Frameworks (MOFs) and Its Magnetic Applications **- Sachin Kumar**	**O62:** A Quantum Mechanical Study of APAPA (p-anisylidene paminophenylacetate) or MBA Liquid Crystal Molecule by Density Function Theory (DFT) Method **- Tikaram**
	O5: Study on structural, magnetic and transport properties of Mn-rich Heusler alloy thin film structures on Si (100) substrate **- Anadi Krishna Atul**	**O23:** Non-Destructive monitoring Approach of Aerosols over the Indo-Gangetic Basin During Massive Dust Storms **- Adwitiya Yadav**	**O46:** Synthesis, Characterization and Biological Activity of Ternary Complex of Ni (II) Ion with Glutamine and Pyrimidine-2,4 (1H,3H) **–dione - Ritu Ravi**	**O76:** Efficient use of Dye Sensitized Solar Cells by using various dyes **- Jyoti Maurya**
	O6: Dielectric and Electro-Optical Studies of Carbon Nanotubes Doped Nematic Liquid Crystal **– Rama Shanker Gupta**	**O24:** Nanocomposite of Zirconia with Reduce Graphene Oxide as Eco-friendly Lubricant Additives in Polyethylene Glycol **Satypal Prajapati**	**O47:** Design and Study of Ruthenium (II) Metal Complexes with Macrocyclic Ligands **- Prashant Kumar**	**O82:** Effect of Additives on Ion Transport Properties of Polymer Electrolytes **– Jitender Paul Sharma**
	O7: Synthesis and characterization of Calcium-Doped Cobalt Ferrite Nanomaterials - **Bala Bhardwaj**	**O26:** Femtomolar detection of Serotonin Using 2D MoS_2 Functionalized Gold electrode Electrochemically **- Deepti**	**O48:** Chitosan nanoparticle reinforced gellan gum/sodium alginate blended nanocomposite film for sustainable packaging applications **– Anil Kumar Maurya**	**O87:** The Evolution: Journey of 2D Materials in Medicine **- Shweta Singh**
	O8: Investigations of Optical and Magnetic properties of Strontium doped Zinc Ferrite Nanomaterial - **Prabhat Ranjan Tiwari**	**O29:** Synthesis and Characterisation of Oxide Double Perovskite Sm_2NiMnO_6 Nanostructures **- Suryakanta Sahoo**	**O49:** Applications of Acoustic Nonlinearity Parameter to Pure Ionic Liquids [bmim][NTf2]and [hmim][NTf2] in the Extended Range of Pressure at Different Temperatures **- Brijlesh Kumar Tiwari**	**O97:** A Green Approach for the Synthesis of Pharmaceutically Active 1, 4-Dropyrimidinones Derivatives through Oxidative Functionalization of Methyl Arenes / Benzyl Derivatives via in situ Generated Urea **- Vishal Singh**
	O9: Effect of cobalt doping on gas sensing properties of Praseodymium Orthoferrite Nanomaterials **– Keval Bharati**	**O31:** Investigation of the Effect of Temperature on Mechanical and thermal properties of hexagonal transition metal Disilicides - **Sachin Rai**	**O51:** Eosin-Y catalysed photoinduced synthesis of substituted isoxazolone **- Rohit Kumar**	**O98:** The structural, electronic and optical properties of novel germanene/GaAs heterostructure: A first principles Study **– Khan Ahmad Anas**
	O10: Ultrasonic Investigation of Nano-sized InX (X: P, As, Sb) Material at 300K –	**O32:** Designing and Simulation of Organic Anode Material for Sodium-ion Battery : A Theoretical Prospective **- Sucheta Mishra**	**O53:** Photocatalysed induced synthesis of oxazole via intermolecular C-N and C-O bond formation by using benzyl with	**O100:** Medicinal Applications of Transition Metals **- Arti Gupta**

	Chandreshvar Prasad Yadav		primary amines **- Mohd. Zaheeruddin Beg**	
	O11: Innovative Approaches to Synthesize Nanocrystalline High Entropy Alloys for Enhanced Hydrogen Storage Applications - **Yogesh Kumar Yadav**	**O33:** Experimental and theoretical study of heterostructure-based Bi_2Te_2Se and Sb_2Te_3 photodetectors with high responsivity and broadband photoresponse **- Sandeep Kumar Verma**	**O54:** Study of Vibrational Spectra and Hydrogen Bonding Interactions in Dimeric and Trimeric Model of Hydrochlorothiazide Pyrazinamide Cocrystal **- Arti Yadav**	**O112:** DMAP Catalysed Synthesis and Characterization of Biologically Active Tetrahydro-pyrano [2,3-C] Pyrazoles and Evaluation of its Antimicrobial Activity **- Vijay Pratap Singh**
	O12: Magneto-Transport and Thermal properties of Gd doped Bi_2Se_3 Single Crystal **- Swayangsiddha Ghosh**	**O35:** High Temperature Polymer Electrolyte Membrane Fuel Cell with Polybenzimidazole (PBI) / Tetravalant Metal Phosphonate (TMP) Electrolyte - **Jay N. Mishra**	**O55:** Tribological Activity of Nanocomposites of Zinc Oxide Nanoparticles with Polyaniline as Friction Modifiers **- Muskan Sahu**	**O117:** Design Factors Affecting Composite-to-Composite Adhesively Bonded Joints: A Review **- Mustofa Ali**
	O13: Evaluation of Thermal, Mechanical and Ultrasonic Properties of ZnO Nanotube by NDT Method - **Aadesh Kumar Prajapati**	**O38:** Structural, microstructure, spectroscopic and magnetic investigation of Vanadium doped $SrTiO_3$ perovskite ceramics **- Vedika Yadav**	**O56:** Coordination Polymers: Unveiling Structural Diversity and Multifunctional Applications **- Km. Poornim Singh**	**O125:** Graphene Quantum Dot-Based Optical Sensing Platform for Aflatoxin B1 Detection via the Resonance Energy Transfer Phenomenon **- Avinash Kumar Singh**
	O14: Investigation on Tribological Properties of Mg-ZnO/rGO Nanocomposites in Polyethylene Glycol (PEG) **- Somesh Singh**	**O39:** Temperature and concentration dependent thermal properties of $MnFe_2O_4$ Glycerol Nanofluids **- Avinash Chandra Rai**	**O57:** A simple and green protocol for the synthesis of 3, 4-dihydropyrimidin- 2(1H)-ones using bismuth chloride as a catalyst under ultrasound irradiation - **Surekha N. Deshmukh**	**O128:** A Numerical Study for Determination of Sugar Contents in Soft Drinks using Surface Plasmon Resonance (SPR)- based Sensing Technique **- Gaurav Dixit**
	O16: Ultrasound-assisted synthesis of 2,3-dihydroquinazolinones using KSF supported 10-molybdo-2-vandadophosphoric acid ($H_5PMo_{10}V_2O_{40}$/KSF) as a efficient catalyst **- Laxmikant D. Chavan**	**O40**: Development of faster-than-speed of Light Particles in Materialistic World **- Vivek Kumar Srivastava**	**O58:** Designing and Computational Investigation of Acceptor for Dye Sensitized Solar Cell and Nonlinear Optical Properties **- Priya Singh**	**O15:** Investigation of Structural and Elastic Parameters of Nickel Ferrite – **Gagan Dixit**
	O17: Fabrication of Gellan Gum/Mustard Oil Emulsion Films with Enhanced Antimicrobial, Mechanical and Barrier Characteristics for Food Packaging Applications **- Anam Fatima**	**O52:** Large Enhancement of Dielectric constant of PVDF by incorporating BTO–BHF nanocomposite **– Mukesh Kumar Yadav**	**O59:** Synthesis, characterization and computational investigation of transition metal complexes with imine derivative Ligands **- Vedprakash Arya**	**PP53:** Core−Shell Ni/$Ni(OH)_2$ Nanowire Array for Asymmetric Supercapacitors - **Yashvant Kashyap**
		O136: Designing of Functional Polypropylene for Biomedical Applications - **Chetna Verma**	**O60:** Computational Evaluation on Molecular Stability, Chemical Reactivity and Vibrational properties of Benznidazole by Quantum Chemical Techniques **– Tirth Raj Paneru**	**PP 18:** Polarizability and Hyperpolarizability of Oligocene : ADensity Functional Theory Study **- Narad Kumar Pandey**
06:00-7:00	**CULTURAL PROGRAMME**			
07:00-08:00	**DINNER**			

DAY-II (9th February 2024)

08:00-09:30	**BREAKFAST**			
	SESSION-V **Session Chair: Prof. Raja Ram Yadav, Former VC VBS Purvanchal University, Jaunpur**			
09:30-10:00 **10:00- 10:30** **10:30-11:00**	**PL 011:** Utilization of Waste Polymers for the Development of 2D Materials for Energy Applications – **Prof. O.P. Pandey** **PL 012:** Advancements in Cathode Material Performance for Automotive Energy Storage Enhancement – **Prof. R.K. Singh** **PL-015:** Development of functionalized azo pigments from industrial waste lignosulphonate and their application to epoxy-polyamine composite coating –**Prof. Satyendra Mishra**			
11:00-11:15	**TEA**			
	PARALLEL SESSION A **(Aryabhata Auditorium)**	**PARALLEL SESSION B** **Venue: LH 101**	**PARALLEL SESSION C** **Venue: LH 102**	**HYBRID MODE** **Venue: Conference Hall (LH 001)**
	SESSION-VIA **Session Chair:** Prof. Ram Kripal	**SESSION-VIB** **Session Chair:** Dr. T. P. Yadav	**SESSION-VIC** **Session Chair:** Dr. S.B. Yadav	**SESSION-VID** **Coordinator:** Dr. Dhirendra K. Chaudhary
11:15-11:35	**IT-029** Dielectric Polymeric Materials and Their Applications **Dr. Gobardhan Lal**	**IT-072** SiO_2-Based Functionalized Catalysts: Advancements and Applications **Dr. Shailendra Singh**	**IT-075** Molecular Relaxations Phenomena in Liquid Crystals **Dr. Anoop K. Srivastava**	**PL-003** Tetrapods based Smart Materials for Advanced Technologies **Dr. Yogendra Kumar Mishra** **IT-063** Silk Fibroin-Coated MgO Nanospheres: Advancing Noninvasive Bioimaging **Dr. Rajni Verma**

11:35-11:55	**IT-004** Fabrication of Fast Response Nanocomposite Gas Sensor for Detection of DMMP **Prof. D. C. Tiwari**	**IT-010** Porous Graphene-Based Materials containing 3D Engineered Defect Morphology for Electrochemical Energy Storage **Dr. Rajesh Kumar**	**IT-027** Non-magnetic adsorbent functionalized magnetism and spin filtering in a two-dimensional GaN monolayer **Prof. P. S. Yadav**	**IT-019** Revealing a highly sensitive sub-ppb-level NO_2 gas sensing capability of novel architect 2D/ 0D MoS_2/SnS heterostructures with DFT interpretation **Dr. Utkarsh Kumar** **IT-021** Electrochemical Degradation of Methylene Blue by Ti mesh-based Electrodes **Dr. Navneet Yadav** **IT-045** Study of the degradation of wastewater pollutants under visible light and dark conditions using Ag-ZnO nanostructures **Dr. Yogendra K. Gautam** **IT-007** Advanced High-Performance Lightweight and Flexible Nanocomposites for Electromagnetic Interference Shielding and Microwave Absorption **Dr. Raghvendra Singh Yadav** **IT-67** Synthesis of Neem leaves Activated Carbon (Ac), based Ac@ZnO/RGO ternary composite for photocatalytic degradation of water pollutant dye in visible light **Dr. Mohd Omaish Ansari**
11:55-12:15	**IT-068** Advanced Electrode Materials, Electrolytes and Configurations for Electrochemical Capacitors **Dr. Yogesh Kumar**	**IT-018** Enhanced Electrochemical Performance of Supercapacitor Electrode with Ordered Microstructure **Dr. Sachindranath Das**	**IT-64** Study of Wave Interactions in Two Species Ion-Implanted Semiconductor Plasmas **Dr. Nishchhal Yadav**	
12:15-12:35	**IT-023** Polysaccharide Based Nano-fertilizers: A Boon for Agriculture **Dr. Tulika Malviya**	**IT-066** Carbon Quantum Dots for CO Conversion **Prof. Ram Manohar Yadav**	**IT-059** Red and Green Emission rare earth doped Zinc Molybdate for Optical Application **Dr. Jai Singh**	
12:35-01:30	**Session VII: Poster Session (P 1 to P 91)**			
01:30-02:00	**LUNCH**			
	PARALLEL SESSION A **(Aryabhata Auditorium)**	**PARALLEL SESSION B** **Venue: LH 101**	**PARALLEL SESSION C** **Venue: LH 102**	**HYBRID MODE** **Venue: Conference Hall (LH 001)**

	SESSION-VIIIA **Session Chair:** Prof. N. G. Shimpi	SESSION-VIIIB **Session Chair:** Dr. Yogesh Kumar	SESSION-VIIIC **Session Chair:** Prof. Ram Manohar Yadav	SESSION-VIIID **Coordinator:** Dr. Dhirendra K. Chaudhary
02:00-02:20	**IT-008** Functional Materials for Hydrogen Energy Harvesting **Dr. Thakur Prasad Yadav**	**IT-042** Metal decorated ZnO nanostructures as a gas sensing agent for acetone and cetaldehyde gas at variable temperatures with selectivity study – **Dr. N. G. Shimpi**	**IT-030** Unlocking Nature's Secrets: Efficient Solar Synthesis of Biginelli End Products and CO_2 Fixation through Biomimetic Photo-catalysis **Dr. Rajesh K. Yadav**	**PL-009** Exploring the Versatility of Phosphors: From Luminescence to Multi-Functional Applications **Prof. Sanjay J. Dhoble** **IT-040** A Case Study of Municipal Solid Waste Management of Jammu City, J&K **Dr. Pankaj Mehta** **IT-043** Two-Dimensional Carbon Nanomaterial (Graphene Oxide) Material for Energy **Dr. Kalpana Awasthi** **IT-047** Optimization of ETL in Perovskite Solar Cell using SCAPs-1D **Dr. Darshan Sharma** **IT-017** Characterization of Microstructures in Advance Materials by Ultrasonic Techniques **Prof. P. Palanichamy**
02:20-02:40	**IT-054** Superhalogens: Atomic Clusters with Unique Properties **Dr. Ambrish Kumar Srivastava**	**IT-053** Conductivity and electrochemical performance of solid biopolymer electrolyte based on Co_2FeO_4-dispersed potato starch for energy applications **Dr. Manindra Kumar**	**IT-056** Ruddlesden Popper Oxide Ceramics and its Application **Dr. Upendra Kumar**	
02:40-03:00	**IT-032** Additive's Impact on Ionic Solids' Crystal Habit: An Experimental and Computational Investigation **Dr. Ajeet Singh**	**IT-016** Nematic Liquid Crystals-Nanostructure Composites **Dr. M.B. Pandey**	**IT-036** Ultrasonic NDE of HCP Wurtzite Structured Semiconducting Materials at Different Physical Conditions **Dr. Dharmendra Kumar Pandey**	
03:00-03:15	**TEA**			
	PARALLEL SESSION A **(Aryabhata Auditorium)**	**PARALLEL SESSION B** **Venue: LH 101**	**PARALLEL SESSION C** **Venue: LH 102**	**PARALLEL SESSION D** **Venue: Conference Hall (LH 001)**
	SESSION-IXA **Session Chair:** Dr. K.N. Pandey	SESSION-IXB **Session Chair:** Prof. P.S. Yadav	SESSION-IXC **Session Chair:** Dr. A. K. Tiwari	SESSION-IXD **Session Chair:** Dr. T. P. Yadav
03:15-03:35	**IT-062** EPR and Optical Properties of CdS, TiO and CdS-TiO Nanocomposite: A Comparative Study	**IT-052** Molecular-Level Understanding of Solute-Solvent Interactions in different Polymer Blends for their further	**IT-065** Quasi-Solid-State Supercapacitor Performance based on Redox Additive in Polymer Electrolyte and Carbon Electrode **Dr. Manoj K. Singh**	**IT-066** Interplay of Porous Silica Matrices, Metal-Organic Frameworks, and Ionic Liquids: Unraveling Reciprocal

	Prof. Ram Kripal	Applications **Dr. Krishna Kumar Pandey**		Effects for Advanced Materials Design **Dr. Manish Pratap Singh** **IT-057** Bio-Nanocomposite: Synthesis, Characterization and their Application as Anticorrosive Nanofillers for EpoxyCoatings **Dr. Obaid ur Rahman** **IT-76** Electrical Double-Layer Capacitors Using Corn Husk derived Activated Carbon Electrodes and Flexible Gel Polymer Electrolyte Incorporating Ionic Liquid **Dr. Mohd. Suleman** **IT-037** Development and characterization of a novel nano-liposomal formulation of famotidine-loaded nano-sized liposomal with biodegradable polymer **Dr. Alok Kumar Dash** **IT-058** **Phenanthrene Imidazole Derivatives for Detecting Nitro Aromatic Compounds** **Dr. Ruby Ahmed** **IT-026** Fast response highly sensitive room temperature liquefied petroleum gas (LPG) sensor based on titanium dioxide (TiO2)-reduced graphene oxide (r-GO) composite **Dr. Navin Chaurasiya** **IT- 34** Designing next generation thermoelectric materials through computational methods **Alok Kumar Verma**
03:35-3:55	**IT-013** RNA-based therapeutics and nanomedicine: Opportunities and Challenges **Prof. Pradeep Kumar**	**IT-061** Synthesis of Metal Oxide Nanoparticles using Plant Extracts for Novel Applications **Dr. Anil Kumar Yadav**	**IT-048** Synthetic and applied aspects of tin(IV) and organotin(IV) compounds **Dr. Avadhesh Pratap Singh**	
	SESSION X: Oral Sessions			
04:0-06:30	**PARALLEL SESSION A** **(Aryabhata Auditorium)**	**PARALLEL SESSION B** **Venue: LH 101**	**PARALLEL SESSION C** **Venue: LH 102**	
	SESSION-XA **Session Chair:** Dr. Gobardhan Lal	**SESSION-XB** **Session Chair:** Prof. Pradeep Kumar	**SESSION-XC** **Session Chair:** Dr. Sachindranath Das	
	O61: Analytical method development and method validation for the Assay of 5-chloro- 2, 3- dihydroinden-1-one by high performance liquid chromatography (HPLC) **- Sunil Kumar Pandey**	**O77:** Unraveling the Dynamics and Conformational Changes of the d(GGGGTTTTGGGG)4 DNA Quadruplex through MD Simulation **- Jwala ji Prajapati**	**O91:** Synthesis, characterization, computational studies and biological application of transition metal complexes **- Alok Kumar Maurya**	
	O63: Gum Acacia capped Cu-Ag bimetallic nanoparticles : An Effective Nanofertilizer for Cicer arietinum L **- Mani Prabha**	**O78:** PEO Based Solid Polymer Electrolyte for Dye Sensitized Solar Cell **- Kumari Pooja**	**O92:** Antibacterial Activity of 1,2,4-Triazole Derivatives **- Jitendra Kumar**	
	O64: Structure-property relationship in Zinc OrthoTitanate for Bioimaging **- Ankit Sharma**	**O79:** Metal- based nanoparticle for wastewater treatment **- Anshu Maurya**	**O93:** $CoFe_2O_4$/rGO Nanohybrid for Electrochemical Impedance Monitoring of Adrenaline: A Promising Biosensor for Neurodegenerative Disorders **- Rahul Verma**	
	O65: Numerical Simulation of Quantum Dot Solar Cell Using SCAPS 1D Software : A Review **-** Adarsh Pandey	**O80:** Development of hybrid battery-supercapacitor (BatCap) electrochemical device fabricated with proton-battery anode and gel polymer electrolyte **- Vivek Chaurasiya**	**O94:** Nanomaterials in Cancer therapy **- Prachi Singh**	
	O66: Numerical Simulation of all-Inorganic Perovskite Solar Cells using SCAPS 1D Software : A Review **- Pramod Kumar**	**O81:** Epitaxial Growth of GeSn by MBE : Temperature Repercussions in GeSn during Raman Study **- Dushyant Singh**	**O95:** Synthesis and Evaluation of Antibacterial and Antifungal Activities of Triazole Derivatives **- Neelottma Singh**	

	O67: Synthesis of Neem leaves Activated Carbon (Ac), based Ac@ZnO/RGO ternary composite for photocatalytic degradation of water pollutant dye in visible light **- Avaneesh prajapati**	**O83:** Cultivation of Oyster Mushroom Pleurotus Florida on Agriculture Residue of Wheat Straw and Rice Straw **- Roshan Lal Gautam**	**O96:** Green synthesis, Antidiabetic and Antioxidant Properties of Silver Nanoparticles **- Sonam Mishra**	**IT-046** Spectrally Selective Surfaces for Mid-Temperature Solar Thermal Technology **Dr. Belal Usmani**
	O68: Utilizing DFT to Develop Sustainable Energy Materials for Green hydrogen production **– A. Tewary**	**O84:** Biocompatible Metal Nanoparticles in Biomedical Frontiers **- Monika Singh**	**O99:** Design, Synthesis and computational investigation with biological and catalytic application of transition metal complexes with N, O donor Schiff base ligands **– Km Pooja**	
	O69: Enhanced Visible Light Photocatalysis of LDH via Polyaniline and Graphene Doping: Synthesis and Characterization of PANI@rGO/FeNi LDH for Water Pollutant Dye Degradation **- Satish Yadav**	**O85:** A highly responsive and selective acetone sensor based on $MoO_3/Ti_3C_2T_x$ Nanocomposite **- Monu Gupta**	**O101:** Molecular study of candidate genes polymorphism for alcoholism risk **- Amrita Chaudhary**	
	O70: Bio-waste derived multifunctional carbon : Synthesis and Characterizations **- Chandra Jeet Verma**	**O86:** Appraisal of Green and Blue Water Footprint for Rice Production in Uttar Pradesh, India **- Afreen Fatima**	**O102:** Nanorobotics : Revolution in Medicine and its Prospects - **Tannu Pandey**	
	O71: Hydro-tunable CZTO/SWCNT/PVA/PDMS hybrid composites for smart green EMI shielding **- Prem Pal Singh**	**O88:** TiO_2/Epoxy Nanocomposite-Based Triboelectric Nanogenerator **- Prabhakar Yadav**	**O103:** Natural product based Nanomedicine and Drug delivery **- Sarojani Singh**	
	O72: Reduction of Oxygen with Superalkalis **- Harshita Srivastava**	**O89:** Water Footprint of Bioenergy Crops **- Deepa Srivastava**	**O104:** Nano-Scale Metal Organic Frameworks as Drug Delivery and Bioactive Materials **- Deepanjali Pandey**	
	O73: Spectral and Conformational Analysis of Discotic Liquid Crystal during Phase Transition using Vibrational Spectroscopy and DFT **- Rajni Chaudhary**	**O90:** Nanoparticles in Oral Cancer diagnosis and therapy **- Abhishek Kannojiya**	**O105:** Biodecoloration of synthetic textile Direct red 81 dye employing Bacillus cereus SSC **- Shweta Singh**	
	O74: Tailoring $ZnFe_2O_3$ /MWCNT/BiOBr Ternary Composite for Improved Visible Light-Driven Degradation of Tetracycline **- Iftekhar Ahmad**			
	O75: Nano Zero Valent Iron-Biochar (nZVI-BC) Nanocomposite adsorbent material for Methylene Blue Dye removal from aqueous solutions **- Virendra Singh**			
07:00-08:00	**DINNER**			

DAY-III (10th February 2024)

08:00-09:30	**BREAKFAST**			
	SESSION-XI **Session Chair-** Prof. O.P. Pandey			
09:30-10:15 **10:15- 11:00** **11:00-11:30** **11:30-12:00**	**Keynote Talk:** Single nano-particle magnetism using micron size superconducting quantum interference devices - **Anjan Kumar Gupta** **Keynote Talk:** Materials for Sustainable Technology and Circular Economy – **Prof. Avanish Kumar Srivastava** **PL 11:** Organic-Inorganic Hybrids: Man Made Nanocomposite Materials – **Prof. Vilas A. Tabhane** **PL-12:** Emerging trends in self-healable nanomaterials for triboelectric nanogenerators relevant to self-powered sensor applications – **Prof. B. C. Yadav**			
12:00-12:15	**TEA**			
	PARALLEL SESSION A **(Aryabhata Auditorium)**	**PARALLEL SESSION B** **Venue: LH 101**	**PARALLEL SESSION C** **Venue: LH 102**	**PARALLEL SESSION D** **Venue: Conference Hall (LH 001)**
	SESSION-XIIA **Session Chair:** Prof. A. K. Gupta	**SESSION-XIIB** **Session Chair:** Prof. B. C. Yadav	**SESSION-XIIC** **Session Chair:** Dr. Tulika Malviya	**SESSION-XIID** **Session Chair**: Dr. A. K. Yadav **Session Coordinator:** Dr. Dhirendra K. Chaudhary
12:15-12:35	**PL-013** Folate in human health, disease risk and drug delivery: A Nanotechnology Perspective **– Prof. Vandana Rai**	**IT-028** Ultrasonic Attenuation in metallic alloys due to Phonon-Phonon Interaction **Dr. Arvind Kumar Tiwari**	**IT-044** Hybrid Nanocatalyst for Green Hydrogen Evaluation Reaction **Dr. Bishnu K. Pandey**	**IT-051** Oxide ion conduction study of a few Hexagonal perovskites based materials for SOFC applications **Dr. Raghvendra Pandey**

12:35-12:55	**IT-070** Challenges in Dye Sensitized Solar Cells **Prof. B. Bhattacharya**	**IT-071** Potential of Nanomaterials Revolutionizing Biosensors in Clinical Applications **Dr. Jay Singh**	**IT-069** Synthesis, Characterization and antiwear antifriction properties of PANI@Cu@C **Dr. Bharat Kumar**	**IT-035** Recent Advances of Photocatalysis in Organic Synthesis **Dr. Pravin Kumar Singh**
01:00-02:00	**LUNCH**			
	PARALLEL SESSION A	**PARALLEL SESSION B**	**PARALLEL SESSION C**	
	SESSION-XIIIA **Session Chair**: Prof. B. Bhattacharya	**SESSION-XIIIB** **Session Chair:** Dr. Jay Singh	**SESSION-XIIIC** **Session Chair:** Dr. Raghvendra Pandey	
02:00-02:20	**IT-055** Revolutionizing Material Characterization: Unraveling the Future of with AI and ML **Dr. Sudhanshu Tripathi**	**IT-026** New-age Nanomaterials as Electrodes for Photoelectrochemical Water Splitting- **Dr. Kajal Kumar Dey**	**IT-041** Selenium Dioxide Promoted α-Keto N-Acylation of Sulfoximines under Mild Reaction Conditions - **Dr. Siddharth Baranwal**	
02:20-3:30	**O106:** Performance Analysis of Reconfigurable Rectangular Microstrip Patch Antenna at Selective value with Passive Components- **Priti Sharma**	**O116:** Computation of Cohesive forces and Heat of Vapourization of Liquid Metal Alloys – **Subhash Chandra Shrivastava**	**O126:** Tight Binding Hamiltonian and Density of electronic states of single layer graphene – **Km. Mamta**	
	O107: Early Stage Heart attack predication system using and Artificial Neural Networks **- Rajeev Trivedi**	**O118:** Lattice Dynamical Study of Thorium selenide – **U. C. Srivastava**	**O127:** BioDADPep: An Enhanced Bioinformatics Database for AntiDiabetic Peptides – **Susanta Roy**	
	O108: Mushroom Growth Promoting Bacteria Isolated from the Compost Prepared for Button Mushroom Cultivation - **Prameel Kumar**	**O119:** Tunable Nonlinear Current Density Generation by Beating of Two High Power Laser Beams in Plasma Embedded with Nanocluster – **M.K. Vishwakarma**	**O129:** Study of Structural, Optical, and Thermal Properties of Flexible ZnO/PEDOT:PSS Composite Thin Film – **Shivam K. Singh**	
	O109: Study of Some Transition Metal Complexes : [Binding Energies (eV)] - **Dharmendra Kumar Sahu**	**O120:** A Theoretical Analysis of the Stability of Square and Hexagonal Phases - **Arshad Kamal**	**O130:** The Growth of Cs3Bi2I9 based Lead-free Perovskite Single Crystal Thin film Via a space-limited solvent evaporation crystallization method for Solar cell Devices - **Anil K. Sharma**	

	O110: Effect on Stability of GC Base Pair in Their Neutral and Ionized States: A novel approach to investigate the cause of altered base pairing - **Md Ashraf Ayub**	**O121:** Synthesis and Characterization of Manganese Doped Zinc Ferrite for its Structural and Magnetic Properties - **Avinash Chand Yadav**	**O131:** Investigation of Temperature-Dependent Polaron Hopping and Dielectric Relaxation in $Cs_2AgFeCl_6$ double perovskite single crystal - **Jitendra Yadav**
	O111: A Review of Recent advances in functional materials for the Extraction of Rare Earth Elements - **Shashi Kant Yadav**	**O122:** Synthesis and Characterization of Pd Decorated Hybrid Tungsten Disulfide and its Application as a Photodetector - **Alka Rani**	**O132:** Potent Antimicrobial Efficacy of some Copper Nanoparticles : A Novel Approach – **Kapil Kumar Yadav**
	O113: Application of Nanotechnology in controlling Surface Water Pollution – **Dolly Yadav**	**O123:** Machine Learning in Material Science - **Priyanka Jaiswal**	**O133:** Synthesis and Characterisation of Hg (II) Complexes with Macrocyclic Ligands – **Anil Kumar Pal**
	O114: Evaluation of the Water Footprint in the Paper and Pulp Industries - Sadanand Yadav	**O124:** Enhanced photo catalytic degradation of methyl orange in visible light by synthesized ternary composites of Ag@PANI/Ac - **Ray Sahab Yadav**	**O134:** Analysis of two cascaded optic Fiber Surface Plasmon Resonance Sensor – **Sushil Kumar**
	O115: Computational Strategies for Designing of Bent Benjo-bisimidazole Based Molecules with Large First Hyperpolarizability - **Rajneesh Kumar**		**O135:** High Ionic and Electronic Conducting CeO2 as Solid electrolyte for ITSOFCs Application **Raj Kumar**
03:30-04:30	**VALIDICTORY FUNCTION**		
04:30	**HIGH TEA**		