

SCHEME FOR TRANSFORMATIONAL AND ADVANCED RESEARCH IN SCIENCES
Recommended proposals in the second call for proposals (Jan 2023)

| S. No. | Proposal ID | Domain | Title | PI | PI Institution | City | State |
|--------|-------------|---------------------|---|---------------------------|-----------------------------|------------|-------------------------------------|
| 1 | 2023-0030 | Biological Sciences | Influence of morphology, rheology and bifurcations on pulsatile hemodynamics in clinically observed multiply afflicted human abdominal aortic arterial networks using non-invasive CT/MR imaging, conservation laws and numerical methods | Prof. B. V. Rathish Kumar | IIT Kanpur | Kanpur | Uttar Pradesh |
| 2 | 2023-0093 | Biological Sciences | Understanding AGC Family Kinases Involved in Endocytic Pathways as Drug Targets for Amebiasis | Dr. Somlata | Jamia Millia Islamia | New Delhi | The Government of NCT of Delhi (UT) |
| 3 | 2023-0096 | Biological Sciences | Mechanistic and structural studies on the allosteric regulation of phospho-mimetic variants of poly(ADP-ribose) polymerases 1 activities by DNA break, PAR and PARP inhibitors | Dr. Rajakumara Eerappa | IIT Hyderabad | Sangareddy | Telangana |
| 4 | 2023-0099 | Biological Sciences | Investigation of therapeutic potential of a novel engineered astrocyte specific ALBUMIN nano-composite in sporadic Alzheimer's Disease model | Dr. Sachin Suresh Tiwari | IIT Roorkee | Roorkee | Uttarakhand |
| 5 | 2023-0108 | Biological Sciences | Identification and characterisation of conserved microRNAs and target genes that regulate ageing in Drosophila | Dr. Jishy Varghese | IISER Thiruvananthapuram | Vithura | Kerala |
| 6 | 2023-0111 | Biological Sciences | Unravelling the molecular mechanisms underlying human ABO blood type preference by the virulence RIFIN variants in Plasmodium falciparum-infected erythrocyte rosettes. | Dr. Souvik Bhattacharjee | Jawaharlal Nehru University | New Delhi | The Government of NCT of Delhi (UT) |
| 7 | 2023-0116 | Biological Sciences | Characterization of host genetic and metabolic factors that modulate the efficacy of the cancer drug floxuridine | Dr. Jogender Singh | IISER Mohali | Mohali | Punjab |
| 8 | 2023-0162 | Biological Sciences | Investigating the potential of inositol phosphate kinase, ITPK1 in augmenting plant heat stress acclimation | Dr. Debabrata Laha | IISc Bangalore | Bangalore | Karnataka |

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| 9 | 2023-0172 | Biological Sciences | Molecular genetic dissection of the interorgan communication between the heart and fat cells in regulating obesity in Drosophila | Dr. Sudip Mandal | IISER Mohali | Mohali | Punjab |
| 10 | 2023-0191 | Biological Sciences | Microbially Induced Calcite Plugging to Develop Fly Ash-Geotextile Liner in Municipal Landfills | Dr. Arvind Kumar Jha | IIT Patna | Patna | Bihar |
| 11 | 2023-0209 | Biological Sciences | Structure-based discovery of antivirals against RNA viruses targeting host-virus protein-protein interactions (PPIs) | Prof. Pravindra Kumar | IIT Roorkee | Roorkee | Uttarakhand |
| 12 | 2023-0210 | Biological Sciences | Understanding the molecular basis of phenotypic overlap in MEDNIK syndrome and diseases of copper metabolism | Dr. Arnab Gupta | IISER Kolkata | Kolkata | West Bengal |
| 13 | 2023-0219 | Biological Sciences | Targeting oncogenic transcription factor ERG in prostate cancer by employing HBS- α -helicomimics technology. | Prof. Bushra Ateeq | IIT Kanpur | Kanpur | Uttar Pradesh |
| 14 | 2023-0229 | Biological Sciences | Mechanisms underlying microenvironmental regulation of mesenchymal stem cell (MSC) differentiation into cancer associated fibroblasts (CAFs) in breast cancer | Prof. Shamik Sen | IIT Bombay | Mumbai | Maharashtra |
| 15 | 2023-0249 | Biological Sciences | Single-cell quantitation of mRNA and protein expression of antigenic variation genes and tissue tropism characterization in Plasmodium falciparum | Dr. Krishanpal Karmodiya | IISER Pune | Pune | Maharashtra |
| 16 | 2023-0253 | Biological Sciences | Design of nano-RNA-based drug delivery vehicles and their screening using organ on-chip platform for cancer therapeutics | Prof. Swathi Sudhakar | IIT Madras | Chennai | Tamil Nadu |
| 17 | 2023-0260 | Biological Sciences | Development of nitric oxide releasing multifaceted biomaterial based-approach for infected diabetic wounds | Prof. Sandeep Verma | IIT Kanpur | Kanpur | Uttar Pradesh |

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| 18 | 2023-0284 | Biological Sciences | Investigation of the role of a novel interaction between T cell inhibitory molecule PD-1 and E-cadherin in peripheral tolerance and immune evasion by tumor cells | Dr. Gayatri Mukherjee | IIT Kharagpur | Kharagpur | West Bengal |
| 19 | 2023-0329 | Biological Sciences | Synthesis of sustained-releasing rifampicin crystalline formulation for patient compliant treatment of tuberculosis | Dr. Rachit Agarwal | IISc Bangalore | Bangalore | Karnataka |
| 20 | 2023-0343 | Biological Sciences | A Novel Strategy for the Discovery of exosome based Biomarker for Latent and Active Tuberculosis (TB). | Prof. Gobardhan Das | Jawaharlal Nehru University | New Delhi | The Government of NCT of Delhi (UT) |
| 21 | 2023-0373 | Biological Sciences | SARS-CoV-2 spike protein S1 subunit in muscle atrophy and neuromuscular junction program in type-2 diabetes: A molecular approach to understand the neuromuscular complications in COVID-19 in comorbid conditions | Dr. Vikas Yadav | Jawaharlal Nehru University | New Delhi | The Government of NCT of Delhi (UT) |
| 22 | 2023-0377 | Biological Sciences | An Intelligent Artificial Pancreas System for Type-1 Diabetic Patients of India | Prof. Radhakant Padhi | IISc Bangalore | Bangalore | Karnataka |
| 23 | 2023-0385 | Biological Sciences | MtDNA haplogroup modulation of Mycobacterium Tuberculosis infection variation and severity | Prof. Naresh Babu V. Sepuri | University of Hyderabad | Hyderabad | Telangana |
| 24 | 2023-0390 | Biological Sciences | Programmable DNA-Peptide Hybrid Nanodevices for High-Throughput Bioimaging: From Single Molecules to Live Cells and tissues | Dr. Dhiraj Bhatia | IIT Gandhinagar | Gandhinagar | Gujarat |
| 25 | 2023-0398 | Biological Sciences | Quantifying the effects of antibiotics on soil microbial communities and their impact on soil carbon sequestration | Prof. Sumanta Bagchi | IISc Bangalore | Bangalore | Karnataka |
| 26 | 2023-0434 | Biological Sciences | Slot machines in our pockets: Elucidating the neural effects of smartphone overuse on reward anticipation and reward processing | Prof. Saurabh Gandhi | IIT Delhi | New Delhi | The Government of NCT of Delhi (UT) |

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| 27 | 2023-0438 | Biological Sciences | Understanding the cross-talk between autophagy and neurogenesis process in human neural stem cells through RNA-Seq analysis | Dr. Abhishek Kumar Singh | Amity University | Gautam Budh Nagar | Uttar Pradesh |
| 28 | 2023-0440 | Biological Sciences | Label-free multiple-beam excitation and plasmon enhanced Raman spectroscopy for rapid and label-free molecular detection of bacteria strains: A point-of-care fast and accurate molecular testing technique. | Prof. Dalip Singh Mehta | IIT Delhi | New Delhi | The Government of NCT of Delhi (UT) |
| 29 | 2023-0460 | Biological Sciences | Accelerated Clearance of SARS-CoV-2 using Hydrogen Sulfide gas | Prof. Amit Singh | IISc Bangalore | Bangalore | Karnataka |
| 30 | 2023-0464 | Biological Sciences | Decoding the pathogenic mechanisms of SARS-CoV-2 Delta variant Nucleocapsid mutations: Establishing novel molecular cues for predicting the pathogenic potential of new SARS-CoV-2 variants | Dr. Kesavardana Sannula | IISc Bangalore | Bangalore | Karnataka |
| 31 | 2023-0510 | Biological Sciences | Development of a bioelectronic sensor for non-destructive early detection of rice sheath blight: a serious destructive rice disease | Prof. Debabrata Sircar | IIT Roorkee | Roorkee | Uttarakhand |
| 32 | 2023-0516 | Biological Sciences | Investigating a possible role of higher iron acquisition with rapid emergence of drug resistance in clinical isolates of Leishmania donovani. | Dr. Budhaditya Mukherjee | IIT Kharagpur | Kharagpur | West Bengal |
| 33 | 2023-0527 | Biological Sciences | Design and Development of Biomechanical Therapeutics to Mitigate Osteoporosis in Postmenopausal Women with Diabetes Mellitus | Dr. Abhishek Kumar Tiwari | MNNIT Allahabad | Allahabad | Uttar Pradesh |
| 34 | 2023-0580 | Biological Sciences | CORD-M HEAL: A Magnetically Aligned 3D Photogel for Enhanced Neurovascular Guidance following Spinal Cord Injury | Dr. Greeshma Thrivikraman | IIT Madras | Chennai | Tamil Nadu |
| 35 | 2023-0598 | Biological Sciences | Plasma-activated water (PAW) a sustainable solution to cure bacterial infections | Prof. Lakshminarayana Rao | IISc Bangalore | Bangalore | Karnataka |

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| 36 | 2023-0603 | Biological Sciences | Nuclear lamins as mechanomodulators of chemoresistance | Prof. Kundan Sengupta | IISER Pune | Pune | Maharashtra |
| 37 | 2023-0640 | Biological Sciences | Mechanistic Insights into the Enhanced Permeability and Retention, Abscopal Effect, and Circadian Timekeeping Machinery for Improved Targeted Therapeutics for Colorectal Cancer | Dr. Aravind Kumar Rengan | IIT Hyderabad | Sangareddy | Telangana |
| 38 | 2023-0643 | Biological Sciences | ENSG00000223839, a novel inhibitor of p53: Deciphering the mechanism and developing new therapeutic strategy for targeting cancer stem cells | Prof. Kumar Somasundaram | IISc Bangalore | Bangalore | Karnataka |
| 39 | 2023-0683 | Biological Sciences | Investigation on the role of transferrin receptor-1 in glucose-induced lipogenesis in pre-adipocytes | Prof. Chinmay K. Mukhopadhyay | Jawaharlal Nehru University | New Delhi | The Government of NCT of Delhi (UT) |
| 40 | 2023-0707 | Biological Sciences | Wheat metallome analysis and development of mineral micronutrient-related gene-specific molecular markers for biofortification programs | Dr. Shailender Kumar Verma | University of Delhi | New Delhi | The Government of NCT of Delhi (UT) |
| 41 | 2023-0720 | Biological Sciences | Investigating the roles of DNA Methyltransferase 3B (DNMT3B) splice variants on the regulation of tumour suppressor genes and leukemic cell proliferation | Prof. Sudhakar Baluchamy | Pondicherry University | Puducherry | Puducherry (UT) |
| 42 | 2023-0764 | Biological Sciences | Investigating adaptive strategies of forest trees to temperature and water stress to inform climate-resilient forestation in central India | Dr. Robert John Chandran | IISER Kolkata | Kolkata | West Bengal |
| 43 | 2023-0811 | Biological Sciences | Climate change and water balance challenges in pollinator insects | Dr. Ullasa Kodandaramaiah | IISER Thiruvananthapuram | Vithura | Kerala |
| 44 | 2023-0821 | Biological Sciences | To assess the modulation of histone tails dynamics and chromatin structure by metallodrugs in context of cancer. | Prof. Ashutosh Kumar | IIT Bombay | Mumbai | Maharashtra |
| 45 | 2023-0843 | Biological Sciences | Investigating the role of RNA-Binding proteins (RBPs) in regulating the alternative splicing of Autophagy regulators in Breast cancer cells. | Dr. Sanjeev Shukla | IISER Bhopal | Bhopal | Madhya Pradesh |

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| 46 | 2023-0845 | Biological Sciences | Unravelling the role of T3SS translocon-chaperone complex of pathogenic Vibrio parahaemolyticus in toxin delivery to host cells | Dr. Krishna Kumar B | NITTE (Deemed to be university) | Mangaluru | Karnataka |
| 47 | 2023-0852 | Biological Sciences | Design of Synthetic Genetic Circuits: Robustness towards Change in the Growth Rate | Dr. Abhilash Patel | IIT Kanpur | Kanpur | Uttar Pradesh |
| 48 | 2023-0855 | Biological Sciences | Phthalocyanine-based photoacoustic contrast agents for the targeted diagnosis of triple-negative breast cancer metastases | Dr. Sanhita Sinharay | IISc Bangalore | Bangalore | Karnataka |
| 49 | 2023-0911 | Biological Sciences | Rapid climate change assessments using ecology of flowering phenology and machine learning on landscape images. | Dr. Vinita Gowda | IISER Bhopal | Bhopal | Madhya Pradesh |
| 50 | 2023-0930 | Biological Sciences | miR159 and miR319-regulated architecture and immunity development in plants | Prof. Ashis Kumar Nandi | Jawaharlal Nehru University | New Delhi | The Government of NCT of Delhi (UT) |
| 51 | 2023-0939 | Biological Sciences | Role of cell-matrix interaction associated signaling in metabolic reprogramming of macrophages during sepsis. | Dr. Pranita P. Sarangi | IIT Roorkee | Roorkee | Uttarakhand |
| 52 | 2023-0966 | Biological Sciences | Understanding the Mechanism of SARS-CoV-2 RNA Replication Initiation and Proofreading for Therapeutics | Prof. Saikrishnan Kayarat | IISER Pune | Pune | Maharashtra |
| 53 | 2023-1015 | Biological Sciences | Mechanistic investigations into the minimal cell division machinery of cell wall less bacteria | Dr. Gayathri Pananghat | IISER Pune | Pune | Maharashtra |
| 54 | 2023-1032 | Biological Sciences | Engineering CRISPR-based antimicrobials for selective targeting of drug resistant bacteria | Prof. B Anand | IIT Guwahati | Guwahati | Assam |
| 55 | 2023-0016 | Chemical Sciences | Formulation of low-cost and effective Self-cleaning Cement | Dr. Jatinder Kumar Ratan | NIT Jalandhar | Jalandhar | Punjab |
| 56 | 2023-0038 | Chemical Sciences | Development of new bifunctional heterogeneous catalysts for selective conversion of polyolefin plastic waste into liquid fuels | Dr. Sudarsanam Putla | IIT Madras | Chennai | Tamil Nadu |

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| 57 | 2023-0040 | Chemical Sciences | Investigations of Chromone Based Multi-target Directed Ligands as Potential Drug Candidates for the Treatment of Alzheimer's Disease | Dr. Vinod Kumar | Central University of Punjab | Bathinda | Punjab |
| 58 | 2023-0047 | Chemical Sciences | Multimodal Photocatalytic Therapy Based on NIR-Active Perovskite-Peptide Nanocomposites for Hard-To-Treat Lung Biofilm Infections | Dr. Amirul Islam Mallick | IISER Kolkata | Kolkata | West Bengal |
| 59 | 2023-0065 | Chemical Sciences | Post-synthetic modification of porous organic polymers for improved CO ₂ capture and its utilization for the synthesis of acrylic acid and its derivatives | Dr. Venkata Rao Kotagiri | IIT Hyderabad | Sangareddy | Telangana |
| 60 | 2023-0092 | Chemical Sciences | Bench-stable di/trifluoromethylating reagents and their applications in radical-based difunctionalization of alkenes | Dr. Veera Reddy Yatham | IISER Thiruvananthapuram | Vithura | Kerala |
| 61 | 2023-0109 | Chemical Sciences | Generating Energy Transfer Systems and Monitoring Catalytic Activities in Biomolecule-templated Nanostructures | Prof. Saptarshi Mukherjee | IISER Bhopal | Bhopal | Madhya Pradesh |
| 62 | 2023-0115 | Chemical Sciences | Metal-free low-cost POSS-based lumophores synthesized using hydrosilylation for OLED applications | Dr. Chinmoy Kumar Hazra | IIT Delhi | New Delhi | The Government of NCT of Delhi (UT) |
| 63 | 2023-0120 | Chemical Sciences | Design and Synthesis of Metal-Organic Frameworks with High CO ₂ Binding Site Density from Melamine Derivatives for CO ₂ Sequestration and Conversion | Prof. Saravanakumar Rajendran | Vellore Institute of Technology | Vellore | Tamil Nadu |
| 64 | 2023-0123 | Chemical Sciences | Development of novel ferrocene-based metal organic frameworks (MOFs) as heterogeneous catalysts for sustainable organic transformations | Dr. Meena Nemiwal | MNIT Jaipur | Jaipur | Rajasthan |
| 65 | 2023-0126 | Chemical Sciences | Chemical synthesis of Bleomycin carbohydrate-based tools for biomedical application | Dr. Abhijit | IIT Hyderabad | Sangareddy | Telangana |

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| 66 | 2023-0130 | Chemical Sciences | Complexes Containing Functionalized Pincer and Ambiphilic Ligands for Conversion of CO ₂ to valuable products without H ₂ Under Homogeneous and Heterogeneous Conditions | Prof. Ganesan Mani | IIT Kharagpur | Kharagpur | West Bengal |
| 67 | 2023-0147 | Chemical Sciences | Exploring Stable Organofluorophosphonium/Organofluoroammonium Salts as Difluoromethylation Reagents in Asymmetric Organic Synthesis | Dr. Basudev Sahoo | IISER Thiruvananthapuram | Vithura | Kerala |
| 68 | 2023-0158 | Chemical Sciences | Designing efficient and robust catalysts for the mitigation of CO ₂ and its conversion as C ₁ or C ₂ products | Prof. Maheswaran Shanmugam | IIT Bombay | Mumbai | Maharashtra |
| 69 | 2023-0179 | Chemical Sciences | Single-Molecule Studies of Multi-Component Biomolecular Condensates of TDP-43 | Prof. Samrat Mukhopadhyay | IISER Mohali | Mohali | Punjab |
| 70 | 2023-0186 | Chemical Sciences | Paired Electrocatalysis with Functional Materials: Electrochemical Synthesis of Value-Added Products | Prof. C. Retna Raj | IIT Kharagpur | Kharagpur | West Bengal |
| 71 | 2023-0195 | Chemical Sciences | Photochemistry with Plasmonic Materials: Taking the Heat Out of Plasmons for Translational Chemical Transformations | Prof. Pramod P. Pillai | IISER Pune | Pune | Maharashtra |
| 72 | 2023-0204 | Chemical Sciences | Resonance Raman Spectroscopic studies of red blood cells to identify biomarkers of inflammation | Prof. Siva Umapathy | IISc Bangalore | Bangalore | Karnataka |
| 73 | 2023-0206 | Chemical Sciences | N-Heterocyclic Carbene-Catalyzed Transformations for the Synthesis of Axially Chiral Molecules | Dr. Akkattu T Biju | IISc Bangalore | Bangalore | Karnataka |
| 74 | 2023-0215 | Chemical Sciences | Non-invasive Diagnosis of Renal Amyloidosis using Fluorescence Correlation Spectroscopy | Prof. Pratik Sen | IIT Kanpur | Kanpur | Uttar Pradesh |
| 75 | 2023-0218 | Chemical Sciences | In-depth computational and experimental studies for the development of cationic porous organic polymer (C-iPOPs) for anionic organic pollutants sequestration from water | Prof. Sujit Kumar Ghosh | IISER Pune | Pune | Maharashtra |

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| 76 | 2023-0222 | Chemical Sciences | A Core-shell Hybrid Sorbent for Efficient Marine Oil Spill Recovery | Prof. Kana M Sureshan | IISER Thiruvananthapuram | Vithura | Kerala |
| 77 | 2023-0232 | Chemical Sciences | Divergent catalytic approach to sustainable and affordable synthesis of chiral amines and pharmaceuticals | Prof. Ekambaram Balaraman | IISER Tirupati | Tirupati | Andhra Pradesh |
| 78 | 2023-0269 | Chemical Sciences | Understanding Ultrafast and Ultrasensitive Exciton Dynamics (Ensemble to Single Particle, Femtoseconds to Seconds) in Toxic Metal Free Quantum Dots and Perovskites Towards Colour Pure Highly Stable and Bright LEDs. | Prof. Prasun K. Mandal | IISER Kolkata | Kolkata | West Bengal |
| 79 | 2023-0293 | Chemical Sciences | Production of Hydrogen from Sea water electrolysis using Photovoltaic Wind energy hybrid systems using economically specialized membrane | Dr. M S Thakur | NITTE Meenakshi Institute of Technology | Bangalore | Karnataka |
| 80 | 2023-0297 | Chemical Sciences | Photoresponsive Chromonic Liquid Crystals and Designer Peptides for Emergent Applications | Dr. Shanker Govindaswamy | Bangalore University | Bangalore | Karnataka |
| 81 | 2023-0300 | Chemical Sciences | Real-time Monitoring of Lysosomal ATP: A generalized Biomarker for Point-of-Care Testing of Lysosomal storage diseases (LSDs) | Dr. Nilanjan Dey | Birla Institute of Technology & Science - Pilani | Pilani | Rajasthan |
| 82 | 2023-0301 | Chemical Sciences | Design of Single Ion Magnets with reduced Quantum Tunnelling of Magnetization for Higher Blocking Temperature | Prof. Sanjit Konar | IISER Bhopal | Bhopal | Madhya Pradesh |
| 83 | 2023-0311 | Chemical Sciences | Design and Development of Chemical and Electrochemical Methodologies for Fluorination Organic Molecules | Prof. Thilagar P | IISc Bangalore | Bangalore | Karnataka |
| 84 | 2023-0313 | Chemical Sciences | Novel Aggregation Induced Thermally Activated Delayed Fluorescent (AIE-DF) Organic Luminogens for Time-resolved Fluorescence Imaging and Efficient OLED Device Fabrication | Prof. Partha Hazra | IISER Pune | Pune | Maharashtra |
| 85 | 2023-0368 | Chemical Sciences | Electrochemical Routes to Synthesis the 2,5-Furandicarboxylic Acid from Biomass-Derived 5-Hydroxymethylfurfural | Dr. Muthukrishnan | IISER Thiruvananthapuram | Vithura | Kerala |

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| 86 | 2023-0372 | Chemical Sciences | Printed, wearable sensor array for non-invasive monitoring of diabetic complications and chronic kidney diseases | Dr. Suresh Kumar Garlapati | IIT Hyderabad | Sangareddy | Telangana |
| 87 | 2023-0374 | Chemical Sciences | A Mechanistic Insight into the Effect of Hetero-atom Substitution on the Metal- mediated Aldehyde Deformylation Reactions | Prof. Chivukula V. Sastri | IIT Guwahati | Guwahati | Assam |
| 88 | 2023-0379 | Chemical Sciences | Development of nanostructure decorated Quasi symmetrical electrodes for high performance fuel cell system | Prof. Suresh Babu K | Pondicherry University | Puducherry | Puducherry (UT) |
| 89 | 2023-0402 | Chemical Sciences | Gaining molecular insights into complex coacervation of food proteins using spectroscopic techniques | Dr. Mily Bhattacharya | Thapar Institute of Engineering and Technology (Deemed to be University) | Patiala | Punjab |
| 90 | 2023-0418 | Chemical Sciences | Metal-free Multichromophoric FRET Macrocycles as Multi-Stimuli Responsive Smart Materials for Multifunctional Sensing and Visible and NIR Photocatalysis | Dr. Sanchita sengupta | IISER Mohali | Mohali | Punjab |
| 91 | 2023-0450 | Chemical Sciences | Eco-Friendly and Economically Affordable Bio-Inspired Metal-Ligand Cooperative Approaches for Sustainable Synthesis of Biologically and Medicinally Active Molecules | Dr. Nanda Dulal Paul | IEST Shibpur | Howrah | West Bengal |
| 92 | 2023-0461 | Chemical Sciences | Development of multifunctional and recyclable elastomeric materials via dynamic crosslinking network | Dr. Chayan Das | VNIT Nagpur | Nagpur | Maharashtra |
| 93 | 2023-0465 | Chemical Sciences | Geometrical Shaping of Organic Crystals via Ion Beam Milling for Industrial Scale Production of Photonic Integrated Circuit Components | Prof. Rajadurai Chandrasekar | University of Hyderabad | Hyderabad | Telangana |
| 94 | 2023-0473 | Chemical Sciences | Single-molecule FRET Imaging for Real-time DNA Fingerprinting Analysis | Dr. Dibyendu Kumar Sasmal | IIT Jodhpur | Jodhpur | Rajasthan |

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| 95 | 2023-0474 | Chemical Sciences | A mechanistically-driven, photochemical approach towards the sustainable use of hydrogen feedstocks and carbon-di-oxide | Dr. Debashis Adhikari | IISER Mohali | Mohali | Punjab |
| 96 | 2023-0490 | Chemical Sciences | Deriving a Structure Property Correlation for Enhanced Chiral Light Emission from Functional Molecules and Supramolecular Assemblies: Towards Development of Circularly Polarized Organic Light Emitting Devices | Dr. Jatish Kumar | IISER Tirupati | Tirupati | Andhra Pradesh |
| 97 | 2023-0522 | Chemical Sciences | MOF-Nanocellulose Hybrid Composite Materials for CO2 Capture and Separation Applications | Dr. Thirumurugan Alagarsamy | IISER Thiruvananthapuram | Vithura | Kerala |
| 98 | 2023-0529 | Chemical Sciences | Non-Invasive Förster Resonance Energy Transfer (FRET) Operating Near-Infrared Benzothiazole-(Aza)Borondipyrromethene Based Fluorescent Probes for the Early Detection of Alzheimer's Disease | Dr. Raghu Chitta | NIT Warangal | Warangal | Telangana |
| 99 | 2023-0535 | Chemical Sciences | Development of energy-efficient nanoscale molecular memristors | Dr. Prakash Chandra Mondal | IIT Kanpur | Kanpur | Uttar Pradesh |
| 100 | 2023-0542 | Chemical Sciences | Ion transport dynamics in nanostructured cathode materials for Lithium and Sodium battery materials: Application of solid state MAS NMR and electrochemical methods | Dr. Samanwita Pal | IIT Jodhpur | Jodhpur | Rajasthan |
| 101 | 2023-0563 | Chemical Sciences | Utilization and conversion of carbon dioxide to value added fuels and simultaneous power generation via aqueous Zn-CO2 batteries | Dr. Tharamani C. Nagaiah | IIT Ropar | Ropar | Punjab |
| 102 | 2023-0635 | Chemical Sciences | AN INVESTIGATION INTO THE FEASIBILITY OF USING NANOFABRICATED PROTEIN DEVICES AS SOLID-STATE ELECTRONIC GAS SENSOR | Dr. Jerry Alfred Fereiro | IISER Thiruvananthapuram | Vithura | Kerala |
| 103 | 2023-0651 | Chemical Sciences | Design strategy for ideal thermally activated delayed fluorescence emitters for efficient and stable OLEDs | Dr. P Rajamalli | IISc Bangalore | Bangalore | Karnataka |

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| 104 | 2023-0657 | Chemical Sciences | Biochemical and mechanistic characterization of gougerotin biosynthesis: A promising dipeptidyl-nucleoside antibiotic with potential therapeutic applications | Dr. Nilkamal Mahanta | IIT Dharwad | Dharwad | Karnataka |
| 105 | 2023-0666 | Chemical Sciences | Carbene-Phosphinidenides as Stabilizing Ligands for the Isolation of Mixed-Valence Transition Metal Clusters and their Applications in Catalysis and Light Emitting Materials | Dr. Sudipta Roy | IISER Tirupati | Tirupati | Andhra Pradesh |
| 106 | 2023-0671 | Chemical Sciences | Exploiting the Frustrated Lewis Pair and Frustrated Brønsted Pair Catalysis for Metal Free Hydrogenation And Sustainable Hydrogen (Dehydrogenation) Release from Liquid Organic Hydrogen Carriers (LOHCs) and Towards Metal-free Silylation and C-F Bond Activation | Dr. Pavan K. Kancharla | IIT Guwahati | Guwahati | Assam |
| 107 | 2023-0682 | Chemical Sciences | Fluorescence as Well as Smart Phone Assisted RGB Sensing of Histamine in Commercial Fishes using highly Conjugated Tetrapodal-Metal Fluorescent Probes-A Tool to Measure Food Freshness | Dr. Jaspreet Kaur Rajput | NIT Jalandhar | Jalandhar | Punjab |
| 108 | 2023-0685 | Chemical Sciences | Mechanochemical Approach for Solvent-Free Synthesis of (Hetero)Aromatic Fluorides | Dr. Gandeepan P | IIT Tirupati | Tirupati | Andhra Pradesh |
| 109 | 2023-0689 | Chemical Sciences | Catalytic methods for the recycling commercial polyolefins using HAT-based processes | Prof. Sayam Sen Gupta | IISER Kolkata | Kolkata | West Bengal |
| 110 | 2023-0727 | Chemical Sciences | Membrane-bound, motile hydrogel-based dredgers for microplastic capture and remediation | Prof. Pavan Kumar B.V.V.S. | IIT Roorkee | Roorkee | Uttarakhand |
| 111 | 2023-0738 | Chemical Sciences | High Entropy Cathode Materials for Higher Energy Density Na-ion Batteries | Prof. Sagar Mitra | IIT Bombay | Mumbai | Maharashtra |
| 112 | 2023-0752 | Chemical Sciences | Peptide Nanotubes based Micro-Nanomotors for Advanced Functions via Complex Navigational Behavior | Dr. Dibyendu Das | IISER Kolkata | Kolkata | West Bengal |

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|--------|-------------|-------------------|--|-----------------------------|--------------------------|-----------|----------------|
| 113 | 2023-0753 | Chemical Sciences | Total Syntheses of Antiviral Natural Products Isolated from Marine Sources: Dimeric Indolosesquiterpene Alkaloids Showcasing Rare N-N and C-N Atropoisomerism | Prof. Alakesh Bisai | IISER Kolkata | Kolkata | West Bengal |
| 114 | 2023-0770 | Chemical Sciences | Exploring the Mechanistic and Device Aspects of Spine Doped Aryl Diimides for Thermally Activated Delayed Fluorescence | Prof. Mahesh Hariharan | IISER Thiruvananthapuram | Vithura | Kerala |
| 115 | 2023-0828 | Chemical Sciences | Copper-Catalyzed Asymmetric Conjugate Addition Reactions of Fluorinated Pronucleophiles | Dr. Alagiri Kaliyamoorthy | IISER Thiruvananthapuram | Vithura | Kerala |
| 116 | 2023-0829 | Chemical Sciences | Dispersion Controlled in Silico Catalyst Design for the Chemical Hydrogen Battery | Dr. Rositha Kuniyil | IIT Palakkad | Palakkad | Kerala |
| 117 | 2023-0874 | Chemical Sciences | Ligand-Enabled Regioselective Cyclotrimerization of Alkynes Through Ion-Pairing and Other Weak Interactions | Dr. Ganesh Venkataraman | IIT Kharagpur | Kharagpur | West Bengal |
| 118 | 2023-0892 | Chemical Sciences | Design, Synthesis and Computational Analysis of Supramolecular Halogen Bonded Bent-core Azo-benzene Liquid Crystalline Systems for Photo-Responsive Property Study | Dr. Susanta Kumar Nayak | VNIT Nagpur | Nagpur | Maharashtra |
| 119 | 2023-0908 | Chemical Sciences | Cyclopropenium-based chiral organo-superbases and their conjugate acids for enantioselective transformations | Prof. Ramasamy Vijaya Anand | IISER Mohali | Mohali | Punjab |
| 120 | 2023-0920 | Chemical Sciences | Targeted Delivery of Synthetically Modified Stable Third Generation Tubulysin Inhibitors for Cancer Therapy | Prof. Venkatesh Chelvam | IIT Indore | Indore | Madhya Pradesh |
| 121 | 2023-0928 | Chemical Sciences | Investigation of Novel Therapeutic Compounds for Inhibitors of the Protein Kinase Family to Treat Cancer: Synthesis and Evaluation of Biological Activity | Dr. Chandi Charan Malakar | NIT Manipur | Imphal | Manipur |
| 122 | 2023-0982 | Chemical Sciences | [Fe]-Hydrogenase-Inspired Artificial Hydrogen Economy | Prof. Joyanta Choudhury | IISER Bhopal | Bhopal | Madhya Pradesh |

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| 123 | 2023-0992 | Chemical Sciences | Development of Enzymatic Cascade Process to Access Chiral Drug (S)-Duloxetine via Enantioselective Cross-Aldol Reaction | Dr. T. Saravanan | University of Hyderabad | Hyderabad | Telangana |
| 124 | 2023-0999 | Chemical Sciences | Organomercurials are More Neurotoxic than the Inorganic Mercury Compounds: A Detailed Investigation at Molecular and Cellular Levels to Understand the Mechanisms Underlying Extremely High Neurotoxicity of Organomercurials | Dr. Gouriprasanna Roy | IIT Tirupati | Tirupati | Andhra Pradesh |
| 125 | 2023-1003 | Chemical Sciences | Redox-Switchable Catalysis Stabilizing by First-Row (3d) Transition Metal Complexes for Reversible Hydrogen Storage and Synthesis of Fine Chemicals | Prof. Debasis Banerjee | IIT Roorkee | Roorkee | Uttarakhand |
| 126 | 2023-1009 | Chemical Sciences | Label-Free SERS multiplex detection and relative quantification of creatinine and uric acid | Prof. Yoosaf Karuvath | Cochin University of Science and Technology | Cochin | Kerala |
| 127 | 2023-1017 | Chemical Sciences | Exploring Cooperatively Assisted and Conformationally Constrained Bifunctional Organocatalysts for Enantioselective Mannich and Michael Addition Reactions | Dr. S. Easwar | Central University of Rajasthan | Ajmer | Rajasthan |
| 128 | 2023-1026 | Chemical Sciences | Phosphino Silyl Ligands Supported Metal Complexes; Design, Synthesis and Applications in Catalytic CO ₂ Reduction and Functionalization Reactions | Dr. Adinarayana Doddi | IISER Berhampur | Berhampur | Odisha |
| 129 | 2023-1035 | Chemical Sciences | Photo and Electro Catalytic Approaches Towards Carbon Heteroatom Bond generations | Dr. Debayan Sarkar | IIT Indore | Indore | Madhya Pradesh |
| 130 | 2023-0031 | Data Science and Mathematics | Real-time Trajectory Generation via Stochastic Sequential Quadratic and Linear Programming | Dr. Ketan Rajawat | IIT Kanpur | Kanpur | Uttar Pradesh |

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| 131 | 2023-0033 | Data Science and Mathematics | Development of AI/ML based predictive models for association analysis of risk factors and high granular forecasting for air pollutants | Prof. Sarbani Roy | Jadavpur University | Kolkata | West Bengal |
| 132 | 2023-0182 | Data Science and Mathematics | Data-Driven Cloud-based Control of Connected and Autonomous Vehicles | Dr. Narendra Kumar Dhar | IIT Mandi | Mandi | Himachal Pradesh |
| 133 | 2023-0184 | Data Science and Mathematics | Identification and Control of Instabilities in Natural Circulation Loops (NCLs) in Thermal and Nuclear Power Plants using Dynamical Systems Theory | Prof. Achintya Mukhopadhyay | Jadavpur University | Kolkata | West Bengal |
| 134 | 2023-0252 | Data Science and Mathematics | Efficient Algorithms for Large-Scale Public Transit Planning | Dr. Tarun Rambha | IISc Bangalore | Bangalore | Karnataka |
| 135 | 2023-0264 | Data Science and Mathematics | Modelling and Predicting the Hydro-Meteorological Disasters in Indian Himalayas | Dr. Raju Attada | IISER Mohali | Mohali | Punjab |
| 136 | 2023-0266 | Data Science and Mathematics | Development of an ultrasound-based medical imaging methodology with adaptive image processing algorithms for noninvasive early diagnosis of cancer: an in vitro study | Dr. Debabrata Ghosh | Thapar Institute of Engineering and Technology (Deemed to be University) | Patiala | Punjab |
| 137 | 2023-0414 | Data Science and Mathematics | Post-quantum Anonymous Authentication: Through the Lens of Lattice Cryptography | Dr. Maria Francis | IIT Hyderabad | Sangareddy | Telangana |
| 138 | 2023-0467 | Data Science and Mathematics | Estimation and optimal allocation of relief material during public health emergencies | Prof. Hemant Gehlot | IIT Kanpur | Kanpur | Uttar Pradesh |
| 139 | 2023-0476 | Data Science and Mathematics | Towards Predictive modeling of Indian Summer Monsoon considering Arctic teleconnections using the complexity-based approach. | Prof. Ankit Agarwal | IIT Roorkee | Roorkee | Uttarakhand |

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| 140 | 2023-0491 | Data Science and Mathematics | AI Empowered IoT based Miniaturized Lead-less and Patch less Sleep Disorder Monitoring System Design | Prof. Amit Acharyya | IIT Hyderabad | Sangareddy | Telangana |
| 141 | 2023-0552 | Data Science and Mathematics | Data-driven optimization of surgical fixation technique by fast detection of femur fracture type from X-ray images: An AI based framework | Dr. Souptick Chanda | IIT Guwahati | Guwahati | Assam |
| 142 | 2023-0587 | Data Science and Mathematics | Development of a scalable asynchronous finite-volume solver to study cumulus entrainment | Dr. S. Ravichandran | IIT Bombay | Mumbai | Maharashtra |
| 143 | 2023-0595 | Data Science and Mathematics | Modelling oceanic wave breaking using machine learning, theory and Direct Numerical Simulations (DNS) | Prof. Ratul Dasgupta | IIT Bombay | Mumbai | Maharashtra |
| 144 | 2023-0820 | Data Science and Mathematics | DEEP NEURAL NETWORK PATH TO MULTIPHYSICS MODELING OF HEAT TRANSFER IN POROUS MEDIA | Dr. Bandaru Mallikarjuna | B.M.S. College of Engineering | Bangalore | Karnataka |
| 145 | 2023-0825 | Data Science and Mathematics | Developing a post quantum lattice based block cipher | Dr. Srinivasan Krishnaswamy | IIT Guwahati | Guwahati | Assam |
| 146 | 2023-1053 | Data Science and Mathematics | Development of Intelligent Crop Management System for Recognizing and Supplementing the Crop Healthiness : iCroMaS | Dr. J. Krishnaiah | IIITD&M Kurnool | Kurnool | Andhra Pradesh |
| 147 | 2023-0059 | Earth Sciences | Monitoring of glaciers dynamics and snow deposition in the Himalaya | Prof. Gulab Singh | IIT Bombay | Mumbai | Maharashtra |
| 148 | 2023-0097 | Earth Sciences | Dynamic Stability Analysis of Caisson Foundation in Layered Soils | Dr. Kaustav Chatterjee | IIT Roorkee | Roorkee | Uttarakhand |
| 149 | 2023-0124 | Earth Sciences | SCALING-UP RISK ASSESSMENT OF GLACIERS AND HIGH-ALTITUDE LAKE IN THE ARUNACHAL PRADESH, THE WATER TOWER OF INDIA USING ADVANCED GEOSPATIAL TECHNIQUES AND MODELLING APPROACH | Prof. Ajanta Goswami | IIT Roorkee | Roorkee | Uttarakhand |

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| 150 | 2023-0135 | Earth Sciences | Crust and upper mantle shear velocity anisotropic structure in the Indo Burma Ranges and its geodynamic implication | Dr. Kajaljyoti Borah | IISER Kolkata | Kolkata | West Bengal |
| 151 | 2023-0167 | Earth Sciences | High resolution imaging of the seismogenic Dhubri-Chungthang Fault Zone, India: Understanding segmentation of the Himalayan collision zone. | Dr. Arun Singh | IIT Kharagpur | Kharagpur | West Bengal |
| 152 | 2023-0176 | Earth Sciences | Climate change impacts on glacio-fluvial and hydrogeomorphic flood vulnerability of the upper Bhagirathi catchment, West-Central Himalayas | Dr. Divyesh Varade | IIT Jammu | Jammu | Jammu & Kashmir (UT) |
| 153 | 2023-0199 | Earth Sciences | Landslide hazard assessment and mitigation – an integration of simulation techniques and machine learning algorithms in the Himachal Himalayas | Dr. Kripamoy Sarkar | IIT (ISM) Dhanbad | Dhanbad | Jharkhand |
| 154 | 2023-0303 | Earth Sciences | Isotopic and microbial approach to elucidate the anthropogenic influence on hydrology and nutrient cycles in the lower Ganga plain and estuary | Prof. Prasanta Sanyal | IISER Kolkata | Kolkata | West Bengal |
| 155 | 2023-0382 | Earth Sciences | Enhancement of the Stability of Engineered Slope by Vegetation: A Sustainable Approach | Dr. Subhadeep Metya | NIT Jamshedpur | Jamshedpur | Jharkhand |
| 156 | 2023-0389 | Earth Sciences | PHYSICS BASED DYNAMIC RESPONSE OF URBAN LAYER AND FREE FIELD GROUND MOTION SYNTHETICS FOR EARTHQUAKE RISK MITIGATION | Prof. J. P. Narayan | IIT Roorkee | Roorkee | Uttarakhand |
| 157 | 2023-0408 | Earth Sciences | Understanding the biogeochemistry of selenium cycling in the soil-porewater-plant system in the seleniferous soil of Punjab, India, to develop rice and wheat cultivation strategy for reducing selenium toxicity and grain accumulation | Dr. Ashis Biswas | IISER Bhopal | Bhopal | Madhya Pradesh |
| 158 | 2023-0557 | Earth Sciences | Development of adaptive machine learning based approach for robust calibration of hydrological models | Dr. Rajarshi Das Bhowmik | IISc Bangalore | Bangalore | Karnataka |

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| 159 | 2023-0614 | Earth Sciences | An investigation on the impacts of climate change and anthropogenic activities on terrestrial hydroclimate and agriculture using a convection-permitting climate model | Dr. Prasanth Valayamkunnath | IISER Thiruvananthapuram | Vithura | Kerala |
| 160 | 2023-0681 | Earth Sciences | Tectonic controls on river exits in the frontal Himalaya: Insights from the Kosi River exit, northern Bihar-Nepal Border, India | Dr. Vinee Srivastava | IISER Bhopal | Bhopal | Madhya Pradesh |
| 161 | 2023-0699 | Earth Sciences | Assessing the influence of saline water dynamics and seawater intrusion on the aquatic ecosystem of Gosaba islands, Sundarbans delta | Dr. Renji Remesan | IIT Kharagpur | Kharagpur | West Bengal |
| 162 | 2023-0704 | Earth Sciences | Spatial propagation of concurrent droughts and their risks under future climate change: A complex networks-based approach | Prof. Bellie Sivakumar | IIT Bombay | Mumbai | Maharashtra |
| 163 | 2023-0714 | Earth Sciences | Novel conjugated molecule-based solid-state sensors for Nitrate, Fluoride and Chromium in water bodies: Sensor and field study | Prof. Praveen C Ramamurthy | IISc Bangalore | Bangalore | Karnataka |
| 164 | 2023-0906 | Earth Sciences | Predictive modelling of sea level rise and saltwater intrusion into aquifers along the coastal zone of West Bengal and Odisha. | Dr. Pulak Kumar Patra | Visva Bharati | Kolkata | West Bengal |
| 165 | 2023-1043 | Earth Sciences | Understanding the impacts of Pre-Monsoon heat stress on Indian Summer Monsoon Precipitation in Arid regions of India under changing and anthropogenic climate | Dr. Saran Aadhar | IIT Jodhpur | Jodhpur | Rajasthan |
| 166 | 2023-0023 | Nano Sciences | In-Memory Computing Utilizing Ferroelectric Transistors | Prof. Yogesh Singh Chauhan | IIT Kanpur | Kanpur | Uttar Pradesh |
| 167 | 2023-0077 | Nano Sciences | Enabling solid-state nanopore based single-molecule DNA and RNA sequencing using dual force control | Prof. Manoj Varma | IISc Bangalore | Bangalore | Karnataka |
| 168 | 2023-0148 | Nano Sciences | Deep Ultraviolet Light Emitting Diodes Based on AlGaIn and InAlGaIn Thin Films and Nanorods for Skin-tolerant Pathogen Inactivation Applications | Dr. Anirban Bhattacharyya | University of Calcutta | Kolkata | West Bengal |

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| 169 | 2023-0175 | Nano Sciences | Experimental investigation of solar-driven self-powered seawater photo-electrocatalytic hydrogen production using nano-hybrid materials | Dr. Subhasis Roy | University of Calcutta | Kolkata | West Bengal |
| 170 | 2023-0213 | Nano Sciences | Tailoring Na-Anodes for Stable and Efficient Na-Metal Batteries: Na-S as the Test Case | Dr. Rosy | IIT (BHU) Varanasi | Varanasi | Uttar Pradesh |
| 171 | 2023-0228 | Nano Sciences | Design and Development of Compocast Street Light LED heat sinks out of Al-Si-MWCNT alloy composite. | Dr. Prosenjit Das | IISc Bangalore | Bangalore | Karnataka |
| 172 | 2023-0257 | Nano Sciences | Neuromorphic and Ising Computing using Spintronic Nano-Oscillators for Machine Learning and Optimization Applications: Experiments and Modelling | Prof. Debanjan Bhowmik | IIT Bombay | Mumbai | Maharashtra |
| 173 | 2023-0265 | Nano Sciences | Creating 2D to 3D van der Waals material stacks using an automated transfer system | Dr. Akshay Singh | IISc Bangalore | Bangalore | Karnataka |
| 174 | 2023-0318 | Nano Sciences | Development of Implantable Engineered-Cells-Nano-Polymer-hydrogel based immune therapeutic tool for pancreatic cancer | Dr. Pradip Paik | IIT (BHU) Varanasi | Varanasi | Uttar Pradesh |
| 175 | 2023-0327 | Nano Sciences | Flexible Electronics for Compact Self-powered Paper-based Analytical Device for Uric Acid Sensing in Human Urine | Dr. Pydi Ganga M. Bahubalindrani | IISER Bhopal | Bhopal | Madhya Pradesh |
| 176 | 2023-0340 | Nano Sciences | Development of Upconversion Nanoparticles Conjugated Carbon Dots as Amplified Singlet Oxygen Generator for Synergistic Photodynamic Therapy | Dr. Sumanta Kumar Sahu | IIT (ISM) Dhanbad | Dhanbad | Jharkhand |
| 177 | 2023-0355 | Nano Sciences | Lithium-mediated electrochemical ammonia production through nano-engineering of solid-electrolyte interface | Prof. Ankit Jain | IIT Bombay | Mumbai | Maharashtra |
| 178 | 2023-0365 | Nano Sciences | Development of Mixed Phase Layered Oxide Cathodes for Sodium-Ion Batteries | Prof. Sunil Kumar | IIT Indore | Indore | Madhya Pradesh |

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| 179 | 2023-0401 | Nano Sciences | Experimental and Theoretical Investigation of Lead-Free CsAB3 (A=Sn, Ge; B=I, Cl, Br) Perovskite Solar Cells for Photo Conversion Efficiency and Stability Enhancement | Dr. Dip Prakash Samajdar | PDPM-IIITD&M Jabalpur | Jabalpur | Madhya Pradesh |
| 180 | 2023-0424 | Nano Sciences | Analog Dot product Engines using Molecular Memristive Hardware for Artificial Intelligence | Dr. Sreetosh Goswami | IISc Bangalore | Bangalore | Karnataka |
| 181 | 2023-0586 | Nano Sciences | Investigation of Graphene Hexagonal Boron Nitride nanocomposites for electromagnetic shielding interference application using THz Time domain spectroscopy | Dr. Jayeeta Lahiri | Banaras Hindu University | Varanasi | Uttar Pradesh |
| 182 | 2023-0589 | Nano Sciences | On-chip FET based tunable ultra-micro supercapacitor array for a large potential window | Prof. Abha Misra | IISc Bangalore | Bangalore | Karnataka |
| 183 | 2023-0590 | Nano Sciences | Carbon dioxide-fuelled Janus Nano Flask Motors for Targeted Delivery of Therapeutic Cargo in Helicobacter pylori Infection | Prof. Swati Biswas | Birla Institute of Technology & Science - Pilani | Pilani | Rajasthan |
| 184 | 2023-0620 | Nano Sciences | Bioactive Microbubbles as Autonomous Targeted Drug Delivery Carriers | Dr. Krishna Kanti Dey | IIT Gandhinagar | Gandhinagar | Gujarat |
| 185 | 2023-0621 | Nano Sciences | Design and Development of 2D Materials Avalanche Phototransistor with Distributed Bragg Reflectors | Dr. Samaresh Das | IIT Delhi | New Delhi | The Government of NCT of Delhi (UT) |
| 186 | 2023-0642 | Nano Sciences | Interlayer exchange coupling based robust, non-volatile, scalable and reconfigurable PUF hardware | Dr. Tanmay Dutta | IIT Guwahati | Guwahati | Assam |
| 187 | 2023-0665 | Nano Sciences | Micro-nano structured urinary catheters to minimize catheter-associated urinary tract infections (CAUTI) | Prof. Deepak Deelip Patil | NIT Tiruchirappalli | Tiruchirappalli | Tamil Nadu |
| 188 | 2023-0676 | Nano Sciences | Self-assembled vertically aligned nanocomposites for memory and neuromorphic computing applications | Dr. Abhijeet Laxman Sangle | IIT Bombay | Mumbai | Maharashtra |

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| 189 | 2023-0736 | Nano Sciences | Novel Perovskite Based Optoelectronic Neuromorphic Devices for Next Generation Human-Machine Interfaces | Dr. Aditya Sadhanala | IISc Bangalore | Bangalore | Karnataka |
| 190 | 2023-0754 | Nano Sciences | Application of biogenic nanoparticles for improved microalgae growth and fuel grade chemicals production | Dr. Sanjeev Kumar Prajapati | IIT Roorkee | Roorkee | Uttarakhand |
| 191 | 2023-0834 | Nano Sciences | Development of miniature lithium ion batteries for on-chip energy storage | Prof. M. M. Shaijumon | IISER Thiruvananthapuram | Vithura | Kerala |
| 192 | 2023-0880 | Nano Sciences | Phase and Bandgap Engineering of III-Oxides in Quest of Interfacial 2DEG | Dr. Ankush Bag | IIT Guwahati | Guwahati | Assam |
| 193 | 2023-0957 | Nano Sciences | Scalable laser writing of spin-defects two-D materials and diamond for quantum technologies – sensing and photonics | Prof. Sivarama Krishnan | IIT Madras | Chennai | Tamil Nadu |
| 194 | 2023-1012 | Nano Sciences | Harnessing Direct and Indirect Excitons in TMDCs for photo-stimulated device applications. | Prof. Joy Mitra | IISER Thiruvananthapuram | Vithura | Kerala |
| 195 | 2023-1024 | Nano Sciences | Synthesizing Pristine Metal Diboride Nanosheets and their Nanoparticle Hybrids as Catalysts for Hydrogen Evolution and Nitrogen Activation | Prof. Kabeer Jasuja | IIT Gandhinagar | Gandhinagar | Gujarat |
| 196 | 2023-0019 | Physical Sciences | Utilising the Mullins-Sekerka Instability to Design Layered Polymer Composites | Dr. Sumesh P Thampi | IIT Madras | Chennai | Tamil Nadu |
| 197 | 2023-0048 | Physical Sciences | Ferroelectric topologies- integrated to silicon and application to high energy storage, neuromorphic network and broadband telecommunication | Dr. Sujit Das | IISc Bangalore | Bangalore | Karnataka |
| 198 | 2023-0114 | Physical Sciences | A solar-battery based smart and modular power supply integrated with local grid system | Dr. Anubrata Dey | IIT Roorkee | Roorkee | Uttarakhand |
| 199 | 2023-0128 | Physical Sciences | A Low-complexity Quantum Simulation Framework for Efficient Spectrum Estimation and Detection in Large Antenna Array Communication System | Dr. Amit Kumar Dutta | IIT Kharagpur | Kharagpur | West Bengal |
| 200 | 2023-0161 | Physical Sciences | Exploring Hybrid Circuit QED Systems for Quantum Technology | Prof. Amarendra Kumar Sarma | IIT Guwahati | Guwahati | Assam |

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| 201 | 2023-0208 | Physical Sciences | ULTRAFast TERAHERTZ SUPER-SPINTRONICS | Dr. Yogesh Kumar Srivastava | IIT Hyderabad | Sangareddy | Telangana |
| 202 | 2023-0233 | Physical Sciences | Laser Driven Bright X ray Sources for Imaging | Dr. Bhuvanesh Ramakrishna | IIT Hyderabad | Sangareddy | Telangana |
| 203 | 2023-0302 | Physical Sciences | Exploring the novel piezoelectric ternary nitride system for realizing efficient high-temperature Ultrasonic Transducer and AE sensors | Dr. Mangalampalli S R N Kiran | SRM Institute of Science and Technology | Chennai | Tamil Nadu |
| 204 | 2023-0309 | Physical Sciences | Development of strain-sensitive experimental platforms for tunable 2D moiré devices | Dr. Chandni U. | IISc Bangalore | Bangalore | Karnataka |
| 205 | 2023-0346 | Physical Sciences | Self-organization of Non-spherical and Soft Colloids via Controlled Evaporation | Prof. Madivala G. Basavaraj | IIT Madras | Chennai | Tamil Nadu |
| 206 | 2023-0407 | Physical Sciences | Development of radiation resistant high entropy alloys for energy applications | Dr. Pawan Kumar Kulriya | Jawaharlal Nehru University | New Delhi | The Government of NCT of Delhi (UT) |
| 207 | 2023-0415 | Physical Sciences | Microwave photonic phase shifter and high-resolution frequency measurement exploiting coherent Brillouin interactions | Dr. Ravi Pant | IISER Thiruvananthapuram | Vithura | Kerala |
| 208 | 2023-0437 | Physical Sciences | Controlling skyrmion hall effect in Multiferroic/Ferromagnet/heavy-metal heterostructure | Dr. Mohammad Waseem Akhtar | Jamia Millia Islamia | New Delhi | The Government of NCT of Delhi (UT) |
| 209 | 2023-0439 | Physical Sciences | Realizing Electron Hydrodynamics at Room Temperature in van der Waals heterostructure for practical applications | Dr. Chandan Kumar | IISc Bangalore | Bangalore | Karnataka |
| 210 | 2023-0479 | Physical Sciences | Development of near room temperature superconductor by environmentally stable Ag-Au mesoscopic thin film | Dr. Bhola Nath Pal | IIT (BHU) Varanasi | Varanasi | Uttar Pradesh |
| 211 | 2023-0486 | Physical Sciences | Investigating the Potential of Cavity Optomechanics in Microwave Oscillation and Frequency Comb Generation | Dr. Shivakiran Bhaktha B N | IIT Kharagpur | Kharagpur | West Bengal |

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| 212 | 2023-0496 | Physical Sciences | Magnetic field-free switching in spin-filter tunnel junctions for high speed, high endurance, and high-density memory and big data applications | Prof. Bhagwati Prasad | IISc Bangalore | Bangalore | Karnataka |
| 213 | 2023-0558 | Physical Sciences | Multifunctional nanorobots for targeted delivery and on-demand photo-thermal applications | Dr. Dhruv Pratap Singh | IIT Bhilai | Datrenga | Chhattisgarh |
| 214 | 2023-0571 | Physical Sciences | Cavity Embedded GaAs Quantum Dots as Single Photon Emitters for 700–780 nm Wavelength | Prof. Santanu Manna | IIT Delhi | New Delhi | The Government of NCT of Delhi (UT) |
| 215 | 2023-0715 | Physical Sciences | Room Temperature Single Atom Transistors and High Temperature Quantum Bits Using Nitrogen Deep Dopant in Silicon | Dr. Arup Samanta | IIT Roorkee | Roorkee | Uttarakhand |
| 216 | 2023-0716 | Physical Sciences | Higher Orbital Topological Photonics | Dr. Seababrata Mukherjee | IISc Bangalore | Bangalore | Karnataka |
| 217 | 2023-0773 | Physical Sciences | Fundamental and Applied Aspects of Ultra-Low Interfacial Tension (ULIT) Fluids | Prof. Krishnacharya | IIT Kanpur | Kanpur | Uttar Pradesh |
| 218 | 2023-0809 | Physical Sciences | Quantum information processing from distinguishability of physical processes | Dr. Debashis Saha | IISER Thiruvananthapuram | Vithura | Kerala |
| 219 | 2023-0812 | Physical Sciences | Study of droplet dynamics and phase change on soft materials towards enhanced atmospheric water harvesting | Dr. Chander Shekhar Sharma | IIT Ropar | Ropar | Punjab |
| 220 | 2023-0814 | Physical Sciences | Multiscale approach for understanding the front propagation of swarming bacterial colonies | Dr. Sivasurender Chandran | IIT Kanpur | Kanpur | Uttar Pradesh |
| 221 | 2023-0850 | Physical Sciences | An AI-based diagnostic pipeline for chronic immunoinflammatory diseases based on lymphocyte immunological synapse architecture and signaling | Prof. Sumantra Sarkar | IISc Bangalore | Bangalore | Karnataka |
| 222 | 2023-0909 | Physical Sciences | Nonequilibrium self-assembly of colloidal particles in living fluids | Dr. Vijayakumar Chikkadi | IISER Pune | Pune | Maharashtra |

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| 223 | 2023-0912 | Physical Sciences | Towards exciton-based valleytronic technologies using 2D semiconductor/magnet heterostructures: high-performance magneto-optics and magneto-ellipsometry investigations | Prof. Ashish Arora | IISER Pune | Pune | Maharashtra |
| 224 | 2023-0944 | Physical Sciences | Experimental investigations of Transport and Modal Properties in non-Hermitian coupled Photonic Systems | Prof. Anjani Kumar Tiwari | IIT Roorkee | Roorkee | Uttarakhand |
| 225 | 2023-0998 | Physical Sciences | Lithographically Patternable Mesoscopic Oxide Electronics on surface doped SrTiO ₃ | Dr. Ananth Venkatesan | IISER Mohali | Mohali | Punjab |
| 226 | 2023-1036 | Physical Sciences | Low Noise Supercontinuum Source for Hyperspectral Imaging | Dr. Arun Surendran | IIT Bombay | Mumbai | Maharashtra |
| 227 | 2023-1055 | Physical Sciences | Terahertz-light driven Ultrafast Magnon Polaritons dynamics in Antiferromagnetic Materials | Dr. Manukumara Manjappa | IISc Bangalore | Bangalore | Karnataka |

Reference: MoE-STARS/STARS2 dt. 08-05-2023