

## List of running sponsored Research Project/Schemes till 31.03.2025

Sl. No	Title of Project
1	Kinetics of self-assembly and structural transitions in complex soft materials across multiple length scales
2	Synthesis and characterization of interesting topological materials
3	Developing of a 3D non-kinematic dynamo model for the solar and stellar cycles
4	Developing calibration algorithm for HI intensity mapping with the Square Kilometer Array
5	Looking for novel skyrmion materials for spintronic applications
6	Development of magnetic materials for spin seebeck energy harvesting
7	Development of robust spin-photon hybrid quantum system for negative refraction
8	Learning assisted phase sensor for rapid screening of cells and automated decision making
9	Synthesis of movable monostatic radar mapping system for soil moisture retrieval
10	Surface modification of porous electrodes for energy storage systems
11	Targeting cytochrome bd oxidase (cyt-bd) inhibitor for the development of rational drug combination for complete sterilization of Mycobacterium tuberculosis
12	Pharmacological exploration & repurposing of an antimalarial-drug for the treatment of triple-negative breast cancer using bovine milk exosomes as a delivery vehicle
13	Multiepitope nanoglycoconjugate vaccine development against Mycobacterium tuberculosis
14	Folic acid functionalized drug cocktail loaded lipid nano constructs for ameliorating the triple negative breast cancer therapy
15	Exploiting synthetic lethality of type II NADH dehydrogenases for complete sterilization of mycobacterium tuberculosis
16	Development and evaluation of Intra-nasal nanocarriers for the treatment of Alzheimer's disease
17	Exploring naturally inspired piperine derivatives as multitarget directed ligands for the management of Alzheimer's disease

18	Development of regenerative nanofibrous bioactive conduit for treatment of spinal cord injury
19	Development of enzyme enhancement treatment for neuronopathic Gaucher disease
20	Design, synthesis and biological evaluation of mechanism-based novel theranostic agents for Alzheimer's disease
21	Targeting CDK9 by coumarin based inhibitors: Design, Preparation and Biological Evaluation
22	Development of exosome-based drug delivery system for naturally inspired novel multifunctional Neuroprotective molecules and their biological evaluation in Alzheimer's disease models
23	Development of L10-FeNi (tetrataenite,ordered phase) for permanent magnet applications
24	Microstructure and Crystallographic Texture dependence of cyclic deformation and corrosion behaviour in Extruded MG-AL-ZN-SN alloys
25	Structure-property correlation in creep-resistant squeeze-cast Mg-Al-Ca-Mn alloy-based nonocomposites
26	High temperature tribological studies of nanocomposite/multilayer coatings for dry sliding applications
27	Improving oxidative resistance of Carbo-graphite materials to be used in fabrication of mechanical seals for aero-engines
28	Development of stealth drones with camouflaging features for border surveillance using advanced designing and 4D printing
29	Development of catalytic integrated air-stream gasifier for the gasification of agriculture waste and valorization of gasified fly ash on concrete work
30	Averera Project (Development of connected vehicle technology for an urban concept autonomous vehicle)
31	A novel meso micro scale coupling approach for wind resource assessment
32	Efficient layer adapted methods for parabolic interface problems with boundary and interior layers
33	Approximation methods generalized strum-liouville problems
34	Approximation of runs in multi-state trials with appropriate distributions
35	Non smooth optimization and duality theory under variable dominance and interval uncertainty
36	Motives and algebro-geometric invariants of certain moduli spaces of connections

37	Mixed local-nonlocal double phase elliptic and parabolic problems
38	Study of runs in multi-state trials
39	Wavelets Adaptive Schemes for Tumor Growth Model
40	Instability mechanism of magnetohydrodynamic non-isothermal annular poiseuille flow: A numerical study
41	Exploring normally-on Ferroelectric Fin/FET devices for neuromorphic computing applications
42	Design and Analysis of OTFS-based Multiuser Terahertz Communication for 6G and Beyond
43	Demonstration of room-temperature electroluminescence from two-dimensional Semiconductor - Metal hybrid structures, towards the realization of nano-lasers
44	Design and development of antenna for surface acoustic wave (SAW) wireless temperature sensor
45	Knowledge partnership for digital metrology
46	Reconfigurable on board wired and wireless battery charger for electric vehicle
47	AI-Based platform for persons with visual impairment for effective social inclusion
48	Analyse the convergence bounds of federated learning with closer-to-practice constraints
49	Design and development of computer based intervention model for enhancing numerical of pupils of cope with mathematics curricula in primary school
50	Efficient Multiparty computation and applications
51	Efficient Multiparty Computation
52	A pilot project on LoRaWAN-enabled smart building at IIT(BHU)
53	Privacy-aware Federated Learning based Security Solutions for Beyond 5G Networks
54	Exploring prospects of shared e-micro mobility in Rural India
55	Coupled consolidation study of unsaturated soils from a numerical perspective
56	An experimental numerical approach to enhance the mechanical stability of nano graphene reinforced polymer composite in an in-situ environment emphasizing temperature
57	Development of an Efficient and Portable Bridge Weigh-In-motion System for In-service condition Monitoring

58	An experimental- numerical study of improved delamination toughness in polymer composite laminates through the incorporation of nano-graphene particles
59	Development of Integrated Low-Cost Identification and Alert system for overloading, over speeding, and lane discipline violation of vehicles operating on Expressways
60	Hydrological experiment and water fluxes modelling for SWOT and sentinel - 3A/3B missions: Ganga River
61	Photo-Triggered Catalyst-Free approach for C-Arylation and N-Arylation with Diazonium salt via Electron-Donor-Acceptor Complex (EDA)
62	Single-Molecule signature of knot formation in proteins
63	Development of new bioinspired catalysts based on Earth- Abundant transition metals and selenolate ligand for selective Hydrofunctionalization reactions
64	Synergetic Metal/Lewis base- catalyzed asymmetric annulations
65	Studies on development of low global warming potential (GWP) compounds and their blends as alternatives for common refrigerants and examination of their ozone depletion potential
66	Utilization of low grade coal for production of high quality graphene and carbon nano-particles for energy storage
67	Computational modelling and implementation of O <sub>2</sub> Evolution and phase change of positive electrodes in Li-ion Batteries
68	Development of a 10 kW membrane reformer prototype for production of fuel cell grade green hydrogen for power generation
69	Study of solid hydrodynamics in an elevated temperature gas-solid fluidized bed with secondary gas injection through side wall pneumatic nozzels
70	Solution spray processed SnO <sub>2</sub> based Electron transport layer (ETL) for perovskite solar cell (PSC)
71	Development of bio-resources for the generation of hepato-biliary tissues for mechanistic insights into liver regeneration
72	An immunoprotective hydrogel-based implantable construct containing xenogeneic islets for type 1 diabetes therapy
73	Engineering cell-based smart hydrogel patch for All-Round Rapid Wound Repair (ARRWR) in diabetic rats

74	Development of implantable hydrogels containing engineered cells secreting glucocerebrosidase for long-term treatment of Gaucher disease type 1
75	Development of Implantable Engineered-Cells-Nano-Polymer-hydrogel based immune therapeutic tools for pancreatic cancer
76	Novel Polymeric Nano medicine for Cancer therapy Based on the Bio-informatics and Data analysis
77	Investigation of Cell-of-origin of TNBCs and Luminal types of Breast Cancer and Development of targeted therapy.
78	Development of EEG-based biometric system to identify friend and foe in defence application
79	Engineering cell-based hydrogel patch for Diabetic Wound Repair
80	Reverse Engineering & high-throughput redesigning of double-y B-barrel core folded proteins: Comprehending their functional diversity for augmenting therapeutics
81	Scale-up studies of isoprene production from genetically engineered cyanobacteria for biofuel application
82	Understanding the molecular mechanism of anti-thyroid drug (propylthiouracil)-induced 'redox imbalance and epigenetic alteration
83	Transcriptome analysis of Cancer cell line treated with Gedunin and 2INC000045971961 as novel Bruton's tyrosine kinase (BTK) inhibitor
84	High solids anaerobic digestion for effective garbage disposal with forward linkage to power generation
85	Development of all natural silk protein-anthocyanin based restorative hair dye formulation
86	Socio economic impact of PM Awas Yojana (U) in Varanasi District
87	Application of sthapatya veda and vedic architecture in creating healthy indoor environment - study area Varanasi
88	Higgs physics within and beyond the standard model
89	Search for topological superconductor in Heusler family
90	Exploration of Indian Clays for the development of functional materials through surface modification
91	Quantum phase transition in X <sub>2</sub> LuIn (X=Pt, Pd) Heusler Alloys via chemical substitution
92	Experimental Investigation on machine learning aided cost-effective electromagnetic wave absorber coating using Microwave heat heterogenous Electronics waste

93	Development of stable & high luminescence colloidal quantum dots and its light emitting device application
94	Traditional Principles of settlement planning in heritage temple sites of Odisha/ erstwhile kalinga region
95	Flow and segregation of granular materials out of hoppers and two & three dimensional devices
96	Targeted drug delivery of methotrexate/gallic acid- folate conjugated Poly L-Lysine nanoparticles
97	Development of bi-functional electrochemical nanobiosensors for bacterial exotoxin detection: Implication towards screening of toxin producing bacterial isolates
98	Validation of Glutathione synthetase from Leishmaniadonovani as new drug target or discovery of new drug candidate
99	Characterization of indigenous cow's dung and urine for scientific advancement and development of utility items
100	Bioengineering of living materials to fabricate functionalized bacterial nanocellulose for high performance applications
101	Design and Validation of field deployable miniaturized Nano-Bio-Sensing System for Detection of the Parasitic liver fluke fasciolagigantica
102	Development and evaluation of an innovative poly herbal Bi layer wound dressing material
103	Metabolic engineering of rapid growing cyanobacteria for farnesene production and its scaleup studies
104	Complete utilization of banana from farm till its disposal: A step towards the agricultural circular economy for the growth of agriculture and farmers in UP
105	A Novel, Rapid, High-Throughput Characterization of Microbiome Dynamics through Cytomics and Machine Learning
106	Integrated computational and experimental studies to potential therapy of kala-azar targeting Dephosphocoenzyme A Kinase (LdDPCK) of the pathogen as a target
107	Human IL-2 fused leishmanial trypanothione synthesis (TS) as protein vaccine candidates
108	Neem seed based nanocapsules and nanomedicine for targeted drug delivery and cancer therapy

109	Functional-hollow-porous-bipolymer based Nanoformulations and Interventions for treatment of Cancer and prevention of Tuberculosis, concept of nanomedicine with multiple drugs for multiple diseases.
110	Development of Cardiac Model for Prediction of Human Heart Failure using Noninvasive medical imaging and Computational Fluid Dynamic techniques
111	Development of Microfluidic tools for neuromuscular synaptogenesis and nanotoxicological studies
112	Novel Electrode Materials for Reversible alkali –ion (Li+/Na+) capacitors and Pseudocapacitors
113	Development of High Alumina( $Al_2O_3$ ) & DOPED High Alumina materials for Ceramic Cartridge Applications
114	Development of high strength ceramic magnet for rotating machine applications
115	Seasonal study on photocatalysis experiments in India environment
116	Complex of online and onsite lectures on materials for hydrogen generation by solar water splitting
117	Development of high Through put Processing route for CIGS PV absorber films by spray pyrolysis of Pre-synthesised Nanoparticle Ink
118	Combined effect of dynamic electrical stimulation and surface charge on cellular functionality of electrovector and piezoelectrically toughened bioceramics
119	Pressure Assisted Flash Joining of Ceramic Materials
120	Cell laden 3-D bioprinted 2-dimensional (2-D) hydroxyapatite nanocrystals/alginate/collagen piezo-biocomposite scaffold for bone tissue engineering applications
121	Wafer-scale integration and interfacial engineering of 2D van der Waals superlattice for next-generation nano-scale devices
122	Development of nano bonded alumina magnesium borate refractory castable application for Indian petrochemical industry
123	Controlled synthesis of $MoO_3$ nanoparticles inside mesoporous materials for oxidative dehydrogenation of organic molecules with $CO_2$
124	Direct cooling of the Silicon Photovoltaic Module Enabled by an Array of Micro channel built in the backside EVA -Layer
125	Modelling & simulation of ultra-high temperature coating on substrate using CVD/CVI Process

126	Detailed study on the effect of mining as well as Thermal Power Stations on Natural water bodies in Singrauli Region and Recommendation Thereof
127	Study the BioCNG production potential of different feed stocks
128	Production of high-purity methane from renewable biomass through anaerobic digestion
129	Preparation of Dense Palladium/ Palladium-alloy Membranes and Optimization of Multi-pass Membrane Separator to Generate Ultra-Pure Hydrogen for On-site Applications
130	Novel integrated engineering approach for effective carbon dioxide removal using biphasic amine blends for coal-based thermal power plant
131	Regional characterization of atmospheric aerosols at Varanasi Region
132	Design and development of a Membrane reformer prototype for production of ultra pure hydrogen from methanol for fuel cell based vehicle and power generators
133	NO <sub>x</sub> Removal from Diesel Exhaust by combined NO <sub>x</sub> storage Reduction and NH <sub>3</sub> SCR System
134	Development & Evaluation of Infrared Nanoparticles for Cellular-wide sensitive E-field Mapping
135	Pyrolysis of Biomass for the Production of Bio-oil: Experimental and Computational Study
136	Fabrication of low-cost High-through out Flow Cytometer using tunable nanolenses.
137	TIFAC-MSME Program
138	Effects of ceria support morphology for the synthesis of bimetallic catalysts for NO <sub>x</sub> reduction through H <sub>2</sub> -SCR
139	Crack modulation in dried colloidal films by soft additives
140	Design and development of kinetically stable electrolytes for next-gen Li-ion batteries (ElectroLilon)
141	Thermo-catalytic conversion of carbon dioxide into ethanol and higher alcohols
142	Catalyst development for reforming of biomass tar model compounds for hydrogen and syngas production
143	Production, characterization and combustion studies on sustainable aviation fuel
144	Evaluation and Optimisation of Biodiesel Production from Microalgae
145	Development of portable electrochemical sensor hydrogen peroxide



146	Detailed lecture based curriculum development for science subjects as part of Induction Programme in AICTE COLLEGES
147	Metal hexacyanoferrate modified screen printed electrodes for the removal of radio nuclides
148	Development of photoactivated transfer hydrogenation in catalysis for heat generation cancer transfer
149	Towards alkaline aqueous battery and fuel cell application: Synthesis, kinetics and Operando spectroelectrochemical studies of mixed metal selenide and polypyrrole composites as potential oxygen electrocatalysts
150	Development of magnetically recyclable visible light photocatalysts for H <sub>2</sub> O <sub>2</sub> Production
151	Development of transition metal based nanocatalysts for bioinspired water oxidation
152	Developing Superior Noble Metal free Oxygen Evolution Catalyst for electrochemical Water oxidation and Metal -Air Battery
153	Promoting water Oxidation Reaction with Electrochemically Synthesized ultrathin Layered double Hydroxide Nanosheets
154	Noble multimetallics/ZnO photocatalyst for hydrogen production from green sources
155	IKS at IIT(BHU) Varanasi
156	Mineral Acids in India prior to 15th CE: A Revisit Exploring Arthasastra and other 15th CE Rasa Sastra texts
157	Development of stable and tethered Os(II)-based catalysts for reductive stress mediated photo-catalytic anticancer activity
158	Proof of concept of developing in-cell reductive stress by Ir(III) transfer hydrogenation catalysts
159	Table Top Sem for CIF
160	Propagation & Mitigation model of mixed road traffic noise for planning of mid-sized Indian Cities
161	Studying few aspects of soil behaviour and In-corporation them in Limit Analysis
162	Smart & Integrated Pedestrian System Design
163	Investigation on dynamic response analysis of shallow foundation resting on pond ash deposits
164	Development and assessment of asphalt mastic from typical Indian and Austrian filler materials with a new test method

165	River Aquifer exchanges & hydrogeological study for watershed management of betwa river basin
166	Assessing the Suitability of warm mix asphalt (WMA) Technology Using Tribological and Performance Characteristics
167	Rheophysics of semi-rigid road building materials and optimization of their composites for the perception of heavy transport load
168	Safer Roads: Development of Mix Design Methodology for OGFC Mixes
169	Life cycle and performance of Waste Plastic roads
170	Life Cycle and performance assessment of cold mix roads
171	Understanding the engineering behaviour of unsaturated geomaterials and implementing it in limit analysis for solving geotechnical problems
172	Development of Performance based mix design process: A re-look at the Marshall Mix design process for the production of strong and durable
173	Factor affecting exhaust emissions of motorized two wheeler in an Indian Tier-II city: A case study of Varanasi
174	Improvement of delamination fracture toughness in nao-graphene particles reinforced polymer composite laminates: An experimental- numerical approach
175	Experimental and Numerical Investigation on Strength Behaviour of FRP Retrofitted Beam
176	A System for Quality Control and Certification of Geospatial Data for NSDI
177	Utilization of Industrial Wastes in Dense and Gap Graded Asphalt Mixes as Fillers
178	Development of algorithms for water quality monitoring using ground instrumentation and optical sensors onboard unmanned airborne vehicle and satellite data
179	Development of an inexpensive high-fidelity technique for the prediction of failure capacity of thin shell structures
180	Design and analysis of adaptive tow-steered laminates
181	A data driven toolkit for enabling multimodal freight transportation in India and Austria
182	A Robust medical image forensics system for smart healthcare
183	Research & Experiment in the area of advanced data structures and methodologies to represent and process large terrain datasets for efficient rendering
184	Intelligent system for computer assisted diagnosis (CAD) OF CANINE MAMMARY TUMORS

185	Multilingual document summarization in quasi stationary environment
186	Resource-optimized fog computing for smart healthcare application in IoT-enable heterogeneous networks
187	Investigation risk factors and predicting complications in COVID-19 patients with Machine Learning Algorithms
188	Optimal transport derivations in regularized wasserstein space for non-linear & linear transformations of deep neural networks
189	Incorporating Intelligence in Email System
190	Development of text based matching algorithms for bartering software
191	Development of an energy –efficient wireless sensor networks for precision agriculture
192	Developing novel therapeutic strategies for mitigating antimicrobial resistance
193	Design and development of machine learning based methods for plant disease detection
194	Development of an Intelligent Internet of Things (IIoT)-enabled Portable Device for Early Diagnosis of Foot and Mouth disease of Dairy Cows
195	Algorithms with provable guarantees for dynamic social networks
196	Artificial intelligence & IoT based smart vet ecosystem for animal health patient care & precision livestock farming
197	Revisiting traditional Indian agriculture practices against climate change vulnerabilities using machine learning techniques
198	Development of disaster response system for collecting & disseminating information through social media text processing
199	Development of a lightweight Android mobile software powered by Deep Learning for identification of plant leaf disease
200	Mix energy Source Electric Vehicle Charging System Design and its Impact on Indian Smart –distribution - grid
201	Design Modelling and simulation of linear Induction Drive for Propulsion Applications
202	Construction of Non-monotonic Lyapunov Function for the Dynamical Systems governed by differential inclusions
203	Virtual synchronous generator for microgrid applications
204	Output feed back controller design for linear parameter varying systems
205	Design and analysis of linear induction motor drive for electromagnetic aircraft launching system
206	Development of a standalone solar electric drive system for boats

207	Design, development and demonstration of solar-IV integrated on board and off board electric rickshaw charging Infrastructure
208	Demonstrable Prototype of IoT enable DC/AC smart grid at Library Building, IIT(BHU), Varanasi with solar photovoltaic Integration
209	Data-driven battery sizing for standalone solar electric drive system for river boats
210	Design and development of Cybersecured Smart Power interface for Energy-Local Area Network (ELAN)
211	Development of a real-time cyber-attack detection module and its hardware-in-loop testing for an integrated power network
212	Development of energy efficient and compact electric drive train for fuel cell electric vehicle
213	Reliability evaluation and performance enhancement of grid integrated wind-solar-EV hybrid renewable energy systems
214	Li-ion based inverter for household appliances
215	Design and development of next generation cost effective reconfigurable on-board battery charger with health and fault monitoring
216	Electrolytic capacitor less six pulse DC link photovoltaic system connected to grid
217	Smart DC charging with integrated digital platform for CPOs and Power distribution companies
218	Silicon carbide devices based high voltage gain converter with novel current-source gate driver for electric vehicle powertrain
219	Centre for development of drone related technologies
220	Design Investigations of High Power MM Wave W Band Gyatron
221	“Design and development of miniaturized pattern/frequency reconfigurable MIMO antennas and its performance improvement using artificial electromagnetic material”
222	Development of Polymer and Quantum Dots Blended Tandem Solar Cells Using Low Cost Solution Processed Method
223	Physical Layer Security for LTE based Wireless Networks to increase Jamming Margins
224	Electromagnetic Analysis, Design and Simulation of Dual Frequency (S- and C-band ) Relativistic Backward wave Oscillator – A HPM Source
225	Development of Simulation Software for Spintronic Device & Circuit Simulation

226	Design development and characterization of Low loss frequency selective metamaterial waveguide coupler and antenna for 5 G Applications
227	Analysis and design of sub-millimetre wave tuneable gyrotron for DNP- NMR Spectroscopy application
228	Development of Hand Telerehabilitation Platform for Diagnostic and Therapeutic Purposes in Physiotherapy
229	Metasurface-based Sensor devices for mm-wave and sub-terahertz Applications
230	Design and Development of High Gain, Wide Bandwidth Beam Steered Reconfigurable Reflectarray Antennas for 5Gmm Wave Applications
231	Design and Development of Composition engineered toxic free organic inorganic Perovskite Quantum Dots Based Flexible Spectrum Tunable Photodetectors
232	Electromagnetic Analysis, Design and simulation of an X-band Gyro-Twyston Amplifier
233	Development of Variable data rate CCSDS compliant direct digital demodulator
234	Development of wearable internet of medical things for continuous health monitoring of astronauts
235	Development of graphene/CNT FET based sensors for space applications
236	Metasurface-based various components for applications in microwave and beyond
237	Design and development of reconfigurable reflect array antenna at X-band
238	Design and development of implantable and ingestible antennas for biomedical applications
239	Cognitive Linguistic study of perception verbs in Hindi and English: In the context of machine translation
240	Integrative Environment View (IEV) for Sustainable Hyper Local Temporal & Spatial Environmental Pollution Monitoring : Case of Air Quality in Varanasi City
241	Analytical study of sansad adarsh gram yojana of Jayapur and Nagapur in Varanasi District
242	Language Communicator Tool for End Users
243	NeetiShastras and Modernity : Understanding the reflective equilibrium between Hermeneutics of Normative Texts and Practice
244	NRDC Innovation Facilitation Centre

245	Schwarz waveform relaxation methods for singularly Perturbed Parabolic Problems
246	Study and analysis of Mathematical Models of Moving Boundary Problems
247	Approximation methods for problems in fractional calculus of variations
248	Existence and Stability analysis of periodic solution of variable time impulsive neural network
249	Study and analysis of interfacial cracks in composite media
250	Pseudo-differential operators in partial differential equations, distribution and machine learning?
251	Wavelets Adaptive Schemes for Singular Integral Equations
252	On Developing Polynomial-time Interior-Point Methods for Robust Multiobjective Convex Optimization Problems
253	Robust Adaptive Mesh Methods for Singularly Perturbed Problems in Ordinary and Partial Differential Equations
254	Development of solution methods for Abel's integral equations and generalized Abel's integral equation
255	On characterizing and Obtaining the Complete Efficient Solution Set of an Interval Optimization Problem under a D-Dominance and a variable Dominance Structure
256	Applications of Spectral graph theory in analysing the structural properties of large scale networks
257	Development of Cryptographically efficient lightweight MDS matrices and its extension to code-based PQC
258	Study of some Two dimensional fractional order nonlinear transport phenomena problems in porous media
259	L-functions associated to modular forms and non-vanishing of poincare series
260	Nanlocal elliptic equations with critical growth nonlinearities
261	A numerical study of some non-classical diffusion/heat equations with free boundaries
262	Investigation of size effects on vibration and thermoelastic damping in nano-electro-mechanical systems of piezoelectric materials
263	Adaptive computational approach for riesz fractional advection dispersion wave equations
264	Isoperimetiric bounds and obstacle placement problems for mixed steklov-Dirichleteigenvalues on Riemannian manifolds
265	Certain space of cusp forms spanned bt eat quotients and application

266	Design & Development of Combined Cooling and Power Generation system
267	Development of an intelligent evaporative cooler for composite climate
268	Development of Ti alloy based composites by mechanical alloying and stirrer casting route for dental applications
269	Photonic radiative cooler for passive sub-ambient cooling
270	Development of complex Aluminium Shell Part High pressure die-casting
271	Development of ORC technology for waste heat utilization for the generation of electricity
272	Assessment of Structural Vulnerability through Characterisation of Tornado for a NPP Site
273	Pathology on a Spinning Disc
274	Impact of a microspray on a bio-mimicking surface
275	Effect of Jet Pulsation on Reacting Jet in Crossflow
276	Assessment of Vulnerability of structures in Regard to Cyclonic Wind loads
277	3D Computational and experimental study on layer dynamics and prediction of critical power law scales in double-diffusive finger convection
278	Development of a Rubber based sheet Hydro forming setup
279	Development of a multiplex portable spinning disc for effective monitoring of women's health during different stages of pregnancy
280	Development of Sheet Hydro-forming Process for missile Components
281	Technology and Fabrication of Tabletop CNC Machine for Micro-Tubular Hydro forming Setup
282	Assessment of residual stress upon friction stir welding of steel
283	Characterization and validation of Schlieren Technique for Capturing Shock Wave
284	Study of tool wear in Diamond turn Machining & Micro Machining Process
285	On the augmentation of heat transfer from external downward facing Convex surface of Calendric
286	Modelling of advanced polycrystalline materials for crystal plasticity simulations of machining processes
287	Blowoff Dynamics of Afterburner Flame
288	Experimental investigation of stability limits, NOx emissions and blowout phenomenon of ammonia - hydrogen-nitrogen air mixtures in a non-premixed swirl combustor

289	Graphite Aerosol studies in High Temperature Aerosol Facility for nuclear reactor applications
290	Hybrid Solar Wind Driven Combined Heat and Power System using Organic Rankine Cycle. (P.I.D.-1747)
291	Manufacturing of complex titanium assembly part for missile using fabrication, simulation, testing & prototyping studies
292	Art, science and technology of traditional "Koftgari" metal work in India
293	Study on effect of temperature and mean stress on fatigue strength of turbine aerofoil alloy
294	Development of industrial waste as mold material for sustainable development of developing countries
295	DST-INSPIRE Fellow
296	Development and structural characterization of $\text{Bi}_{2-x}\text{M}_x\text{S}_{3+(y-3)/2}$ coating for protection against coolant & sensors
297	Development of Electropulsing Facility for Synthesis of Bulk Nanostructured Materials
298	In situ electron microscopy at atomic scale for understanding nucleation growth and interfaces of omega phase
299	Role of short range ordering in designing high entropy alloys
300	Cyclic thermochemical fuel generation
301	Development of a unified physical model for hot deformation and creep to support the development of high temperature materials
302	Wearer corrosion and biocompatibility of Tantalum (Ta) coated 316 L, Stainless steel for Orthopaedic Applications
303	Development of Functionally Graded Armour Composites (FGACs) Materials
304	Mechanical behaviour of advanced high strength steel processed by additive manufacturing
305	Tunable surface plasmon optical sensing behaviour of M-MoS <sub>2</sub> (M=Cu, Ag, Au) Alloy Nanostructures
306	Creep and corrosion behaviour of Novel MRI2300 Magnesium Alloy with Nanoparticles Addition
307	In -situ microscopy study of age hardening in dispersion strengthened cast magnesium alloys and its ex-situ correlation with mechanical properties
308	High performance rare earth free nanocomposites permanent magnet for advanced motor and alternative energy applications



309	Stability of Nanostucture and Residual Stress Developed through Ultrasonic Shot Peening in Superalloy IN718 at Elevated Temp.
310	Emergent phases in 2D quantum materials and Heterostructures
311	Designing metallic glass composites with immiscible elements as alloying elements for improved plasticity
312	Electronics repairing and E-waste collection system
313	Development and processing of magnetocaloric thin sheets for enhanced thermomagnetic energy harvesting applications
314	Development of high-strength vanadium microalloyed steels for heavy gauge plate
315	Design, development and microstructural engineering of ultra-strong managing medium entropy alloys
316	Meter Scale Granite block Smectic clay barriers experiment and associated TMH modeling for Indian Pit mode reference geological Disposal System
317	Development and validation of coupled Thermo-Hydro-Mechanical (THM) models for radioactive waste repositories in fractured rocks
318	Landslide stability analysis in subzero environment around Kinnaur district of Himachal Pradesh, India
319	Design and development of Micro Seismic based technique for monitoring and prediction of slope failure in Pandoh, Himachal Pradesh, India
320	National Geotechnical Conclave on “Development of Early warning system (EAWS) for Landslide Hazard Mitigation on 21-22 March, 2019
321	Stability Evaluation of Dump Slopes and Developing Slope Stability Models for Design of Long Term Stable Sump Slopes through Proper Benching and Vegetation – Part B
322	Slope stability monitoring and analysis using hyperspectral imaging
323	Forewarning System for Landslide Prediction along Mangan and Chungthang road, Sikkim India
324	Development of Laboratory Scale Bio-Grout Technology for Landslide Mitigation
325	Development of prototype of early warning systems on impending goaf for underground coal mining.
326	Inverse estimation of uncertainty in intact rocks properties at meso-scale using full-field strain measurements
327	Assessment of Safe Parting Thickness and Optimum Goaf Edge Support Requirement for Extraction of Pillars under Soft Cover

328	Assessment of Work Posture of Mine Equipment Operators in Relation to Whole-Body Vibration Exposure-Using RULA, REBA and Human Modelling Approach
329	Pharmacological evaluation of anti-diabetic effects of some natural drugs
330	Exploring Anti-ineffective potential of Panchagavya : Metabolomics and Proteomics Approaches
331	Design and development of Molecular hybrids on a multifunctional framework for regulating Cholinesterases, $\beta$ - secretase 1, Amyloid- $\beta$ , and Oxidative Stress Against Alzheimer's Disease
332	Development of toolkit for prediction of blood brain-barrier permeability using deep learning to expedite CNS drug discovery
333	Safety & Efficacy of the "PL05" capsule/tablet in Animal in the treatment of gastric acidity
334	Pharmacology of Natural drugs in obesity and eating disorders
335	Novel Milk Exosomes for the combination therapy by using selected natural medicine (Paclitaxel & Colchicine) for the efficient management of breast cancer
336	Bioluminescence based monitoring of tumor progression and treatment by apoptotic pathway
337	AMWATCH: Defining the AMR Burden of Antimicrobial Manufacturing Waste in Puducherry and Chennai
338	Development & evaluation of nanocarrier for enhanced anti-microbial activity of anacardic acid against human and plant pathogens
339	Evaluation of some compounds in experimental Alzheimer Disease
340	Pharmacological Effect of novel formulation in experimental allergic encephalomyelitis rodent model
341	Dissecting brain reward circuitry and CNS comorbidities in chronic neuropathic pain
342	Phytochemical and pharmacological evaluations of bioactivity guided fractions of medicinal plants of Tripura
343	Natural Template Based Novel Neuroprotective Molecules for the management of Alzheimer's Disease
344	Development of novel near infrared fluorescence imaging probes for detecting amyloid beta species in eyes of Alzheimer's disease animal model
345	Design and development of potential multifunctional molecular hybrid for the treatment of Alzheimer's disease

346	Study on therapeutic and preventive efficacies of linoleic acid in hamster model of visceral leishmaniasis
347	Development of peripherally acting Nanoformulation of opioids for the treatment of neuropathic pain
348	Preparation & characterization of natural products derived self-surface functionalized carbon dots for oral cancer theranostics
349	Animal studies to establish the efficacy of surface polarized sodium potassium niobates for orthopaedic implant application
350	DST/INSPIRE Faculty Award (IFA-12-PH-21)
351	IFA-12-Ph-22 DST/INSPIRE FACULTY Award/2012 INPIRE FACULTY AWARD
352	Study of Magnetospheric Wave-Particle interaction, Aurora, Airglow and Conductivities on Planets and their Satellites
353	Observations and Modelling of solar transients & space weather candidates
354	Electronic Structure evolution across quantum critical point in $\text{Li}(\text{Ti}_{1-x}\text{V}_x)_2\text{O}_4$ $\text{Li}_{1-x}\text{Zn}_x\text{V}_2\text{O}_4$
355	Collection of self-propelled particles in inhomogeneous environment : numerical & analytical Studies
356	The sun under the microscope – An integrated research activity to maximize the science return from a new generation of missions to study the sun
357	Modelling self assembly and phase separation kinetics in the complex soft materials
358	Ramanujan Fellowship
359	Investigations of new lead free perovskite materials for solar cells
360	Tuning self assembly of fluorescent Protein Nanodots for Melanoma Skin Cancer
361	On understanding the solar activity and preparing for space weather prediction using a state of the art dynamo model
362	Multiple reversals of the Sun's polar- field and their physical causes
363	Spatially resolved digital holography polarization microscope for diagnosis applications
364	Tailoring correlations of light using plasmonic and nano structure
365	Development of perovskite oxides $\text{SrCeO}_3$ and $\text{SrCeO}_4$ as high temperature thermal barrier coating (TBC) material for aerospace application

366	Analytical study of hydrodynamic theory of wet active fluid
367	Experimental study of anisotropy in nuclear charge and current distribution that results in interplay of electric and magnetic rotation in Xe nuclei
368	Active polar flock in quasi two-dimensional geometry: role of confinement and boundary condition
369	Study of quantum chaos and multipartite entanglement using quantum circuits
370	Tailoring properties by altering long and short-range structures in eco-friendly, Pb-free ferroelectric perovskite oxides for energy harvesting
371	DST-INSPIRE Faculty Award (IFA-13 PH 54) understanding structure and dynamics of the Interstellar medium
372	Novel observations and modelling of the heating and dynamical plasma processes in the localized solar atmosphere
373	Development of microwave scattering algorithms for retrieval of crop biophysical parameters and soil moisture using polarimetric SAR satellite data
374	Novel and efficient hybrid material of CsPbBr <sub>3</sub> , Nanocrystals and organic complexes for multi-stimuli and dynamic optical encryption and decryption
375	Development of rare-earth-free metal vanadate phosphors for latent fingerprint detection
376	A new paradigm for flavour problems
377	Enhancement of detection capability of Pyroelectric detectors in Infrared (IR) and Terahertz (THz) region
378	J.C. Bose Fellowship
379	Polymeric Nanobiohybrids for Tissue Engineering and Drug Delivery
380	Development of low voltage, low power, colloidal quantum dot light-emitting transistors for next generation display technology
381	Development of low cost sodium ion battery: Fabrication and application of NASICON based electrodes
382	Understanding the mechanism of action through cell biology and upgradation of herbal drug in solution and biodegradable patch for the treatment of diabetic foot ulcer
383	Elastocaloric effect measurement setup to study caloric effect in shape memory alloys
384	Development of anticorrosive paints

385	Mott transistors based Neuromorphic memory device
386	Minimizing hysteresis in magnetic shape memory Heusler alloys for reversible magnetocaloric effect
387	Low cost ammonia gas sensor based on polymer/polymer nanocomposite device formed by novel floating film transfer (FTM) technique
388	Nanoscale interfacial magnetic skyrmions and its applications in memory devices
389	Chemical modification of Gaur Gum to improve its properties
390	Aging studies and estimation of thermal properties of Liner Materials
391	Impact of Carbon Nanomaterial based Photocatalyst on Microalgae Growth and Lipid for improved Biodiesel
392	3 D Bio Steeolithography for Engineering functional Tissues
393	Development of nanoink for anti-counterfeit products and solution
394	Defence analyses of Compound Semi-Conductor Wafer
395	Fabrication of low power consuming inverted near-infra red AMOLED
396	Multifunctional Nanostructured Mn/Fe doped CeCrO <sub>3</sub> for Photocatalyst and Magnetic Switching
397	Investigation of Anomalous Nernst Effect in Shape Memory Heusler Alloys
398	Demonstration and reproduction with scientific validation of some Ceramic Materials Knowledge System of Ancient India
399	Development of advanced Medical Textiles
400	Correlation studies of copper artifacts (2500-200 BCE) from Varanasi region and copper mining and smelting in tribal areas of Singhbhum
401	Effect of composition and microstructural alteration on constant and dynamic loading response of Al-Mg-Si alloys for electric vehicle application
402	Investigation of processing techniques for the development of PPEK and Thermoplastic prepreg technologies
403	Study of composition and thermo-mechanical processing of 4-8% Cu Al alloy for fabricating the fuselage skins and frames for aerospace application
404	DNN- Derived Innovative Flexible Frequency Selective Surfaces for Stealth and 5G Electromagnetic Shielding Applications
405	Nano-ion Chromatograph in Action - Sustainable and scalable quantum dots paves a Facile route for Rare Earth Ions Separation Through Advanced Hydrometallurgy
406	Development of Aluminosilicate based Glass-ceramics for Radome Applications

407	Evaluation of coded drug Ayush Rasayana B for treatment of high-altitude sickness using multi-dimensional drug recovery approach
408	development of W-Ni-Co alloys and modelling the deformation behaviour employing the computational approaches
409	compact pulse power supply using sequentially controlled PFN based on silicon carbide high gain modular converter
410	development of aluminium composite powders for additive manufacturing
411	Design and development of maraging based medium entropy alloys using additive manufacturing
412	Numerical studies on the deformation behavior of different FCC-BCC alloys subjected to quasi-static loading and ballistic impact
413	Development of Tungsten heavy alloy hybrid structure using microwave sintering for long rod kinetic energy penetrators
414	Transparent thermal regulating radiative coating development for smart windows
415	Polymer-Mangiferin-Inorganic-Nano antibiotic” combination for eliminating Intracellular and Intraperitoneal drug resistant microbial infections
416	Control & operation of Networked DC Microgrid
417	Preserving India's rich cultural heritage:a study of role of the national mission for manuscripts
418	Development of mesoporous hybrid carbonaceous support catalyst for high-performance electrocatalytic electrodes for PEM Electrolyzers
419	Non conventional water treatment & monitoring for reuse in agriculture
420	To establish the synthesis route for the development of high purity $\alpha$ -Si <sub>3</sub> N <sub>4</sub> powder
421	Improved lightweight design of variable stiffness composite aircraft panels enabled by Tow-steering and machine learning
422	Microplastic mitigation via anaerobic digester & a novel technology for the detection of microplastic via cytometric fingerprinting & machine learning (CFML)
423	Investigate the mechanical properties of W-Ni-Co heavy alloy by stabilizing the binder phase , W-precipitates and intermetallic B-phase
424	Design and development of an indigenous inert gas atomization-based powder production equipment

425	Design of S- and X- Band High Power Microwave Source - Relativistic Backward Wave Oscillator (RBWO)
426	Development of Zirconia-based Dental Ceramic Implant with Minimum Fibrosis
427	Lignocellulose based scalable luminous photonic biopolymers for sustainable films and coatings
428	Development and assessment of printability of indigenous Additive Manufacturing (AM) grade metal and alloy powders
429	Biochemical transformation of natural products into functional bioactive cosmetics
430	Capacity Building of Tribal Population in Agriculture and Allied Sectors
431	Proof of concept of developing Mn(I) tricarbonyls for simultaneous ultrasound-triggered CO release and ROS generation for next-generation cancer treatment
432	Development of high-performance fully 3D printed lithium (Li)-ion battery system using advanced Cu-Zn alloy-based ordered porous current collectors with deposited Li as anode and ordered porous Li iron phosphate as cathode
433	Development of a multi-scale radar vegetation index using full polarimetric Eigenvalue-based decomposition for different crop types monitoring
434	Tailoring Na-Anodes for Stable and Efficient Na-Metal Batteries: Na-S as the Test Case
435	Investigation of Graphene Hexagonal Boron Nitride nanocomposites for electromagnetic shielding interference application using THz Time domain spectroscopy
436	Modulation of Metal-Metal Interaction and Coordination Sites of Dual-Atom Catalysts for the Electrochemical Oxidation of Benzylic Substrates to Value-Added Products
437	2-Mercaptobenzothiazole amides as inhibitors of type II NADH dehydrogenase with bactericidal activity against Mycobacterium tuberculosis
438	Development of near room temperature superconductor by environmentally stable Ag-Au mesoscopic thin film
439	Sanskrit Knowledge Accessor' under project 'National Language Translation Mission (NLTM): BHASHINI"

440	Development of a novel spray system to reduce cross-contamination in dentistry
441	Urban Commercial Freight Demand Mapping for Last-Mile Traffic Interventions
442	Development of an artificial intelligence system to detect early shared neural biomarkers of ASD and ADHD from multi-modal neuroimaging
443	IRS-Aided OTFS framework for integrated terrestrial & non-terrestrial networks for seamless connectivity
444	Designing a Cybersecured LoRAWAN Framework-Enhancing Jamming Mitigation and Device Authentication
445	Development of laboratory scale process for albumin nanomedicine for breast cancer therapy
446	Design & development of skin inspired electronic sole (E-sole) for tactile feedback in lower limb prosthetics
447	Coal Mine Overburden Alkali-activated Composites (CMOAAC) for Pre-Fabricated 3D Volumetric Construction Elements & System thereof (3DVCES)
448	Hindu Worldview vis-a-vis UNDP-SDGs in the context of Fourth Industrial Revolution: a study of VUCA-coping cultural mechanisms of Hindus in Varanasi and the Netherlands
449	Study of the different types and grades and performance parameters of rubber floor tiles and sheets manufactured and/or available in Indian market (CED 0121)
450	Laser powder bed fusion processing of high-strength metastable $\beta$ -titanium alloy Ti5553
451	Nanotechnology-driven advanced tribological solutions to reduce global energy consumption and carbon footprint - A radical step in the design of new-generation lubricants towards meeting the UN sustainability goals 2030
452	Enhancing Environmental Disaster Monitoring through Geo-Tagged SOS: A Satellite IoT System Approach
453	Development of Implantable hydrogel based immunotherapeutic patch for Treatment of Oral cancer and associated microbial infections through Cell therapy approach
454	Preparation of Comprehensive Action Plan for the revival of Assi River
455	Smart Laboratory for Clean Rivers (SLCR)



456	Revolutionizing Healthcare waste for Artificial Intelligence-Infused 5G Substrate with Safe & Eco-Friendly Microwave Technology
457	Fabrication and Characterization of Hybrid Carbon-based Nanomaterial-Polymer Thin Film Transistors for Poisonous Gas Sensing Application
458	Development of Prototype assistive listening device by incorporation a microphone array and haptic stimulation
459	Technology to Detect Effect of Blasting on Propagation of Cracks in Structures
460	Study on the various testing methods used for determination of the concentration of suspended particulate matter in air
461	Ultralow power negative capacitance field effect transistors with amorphous oxide semiconductors for display backplane
462	Vacuum cum Ultrasonic assisted Warm Incremental Sheet Forming of Titanium Alloys: Process Development and Experiments
463	KEEPALIVE: LoRa enabled Secure Long Range Communications
464	Integrated sensing and communication for V2X Networks in Sub- THz band: Analytical modelling and prototype implementation of Air Interface
465	Machine Learning - Driven Capacity Assessment for Lightweight shell structures
466	Developing a Life Cycle Assessment (LCA) Framework for Waste Management Technologies in India
467	Courses on Indian Chemistry, Material Science and Metallurgy
468	Machine Learning Enabled Next-Generation IoT Communications
469	Jalnidhi Bitumen Specialities Pvt. Ltd. (MoU)
470	Study of advanced testing methods and procedures for three phase squirrel cage induction motor for centrifugal pumps for Agriculture application
471	Design and Development of IoT accessed secure E-Finance Platform for managing severe acute malnutrition among vulnerable tribes population in Chattisgarh
472	IPSA-Kumbh: Mapping the Impact of Floating Population on Sewerage during Maha Kumbh 2025
473	Ultra sound assisted crystallization of anti-hypertensive drugs to improve their solubility and industrial processability
474	Development of customized spinel and garnet ferrite using locally sourced raw materials for circulator applications: A step towards advancing indigenous technology for sustainable raw material management

475	Development of biopolymer based peptide and flavonoid co-loaded chitosan oral nanosuspension: A novel dual drug therapy approach to manage Type 2 Diabetes
476	Metal Oxide based RRAM Device for Neuromorphic computing applications
477	A new approach for anticounterfeiting using hybrid nanostructure
478	Designing Novel Superconducting Qubits
479	Hybrid Nanomaterials of polymer-graphene/AgNP for customized 3D/4D printed diabetic wound dressing
480	Precise inference of the Galactic helium-to- metal enrichment ratio using asteroseismology
481	Development of polymer fiber composites for Hydrogen storage
482	Design of materials for Hydrogen storage tank
483	End functionalized cellulose nanocrystals using integrated microfluids for product ion of high performance optically active coatings and fibers
484	Generation of Green Hydrogen through Sea Water Electrolysis
485	Characterization of emerging pollutants & fingerprint analysis
486	Development of catalytic structured reactor for carbon dioxide methanation
487	Establishment of Secretariat for Smart Laboratory for Clean Rivers (SLCR) in Varanasi
488	Hydrogeological model of varuna basin for recharge sites
489	Decision Support System for Water Resource Management
490	A study to evaluate the feasibility of direct metal laser sintering for the fabrication of Haynes 282 superalloy based thin-walled structures for gas turbine applications
491	Giant magnetoresistance (GMR) sensors for space applications
492	Study the metabolic biomarkers as predictive response to radiation exposure : Rapid assessment of radiation signatures in biological fluid (plasma) to enhance astronaut safety and performance
493	3D Bioprintable Hydrogel Implant Containing Engineering Cells for Long-Term Treatment of Amyotrophic Lateral Sclerosis
494	Globally supported radial basis function based fractional order mesh free fast algorithms for image denoising and enhancement
495	Lead optimization and in vivo proof-of-concept studies of novel alpha-ketoamide based protein aggregation modulators for Alzheimer's Disease

496	Soy Heal: Development of Superabsorbent Soy Protein Isolate Cryogel based Wouond Dressings with Shape Memory Properties for Non-compressible Hemorrhage Control and Diabetic Wound Healing
497	DAFL: Development and Analysis of Cognitive Federated Learning Framework over Edge Networks for Defence Applications
498	Understanding and predicting the emergences of solar active regions and forecasting their impacts on space
499	Developing a reliable and secure processing system for telemedicine in space using space based Wireless Sensor network (SB-WSN)
500	Recycling of CFRP (Production of Composite Filaments using reclaimed carbon fibre from CFRP waste and fabrication and performance analysis of 3D parts thereof
501	Surface bioengineering of nanoporous cellulose templates for developing value-added products
502	Pilot of Digital Twin for Chemical Plant and Urban Smart Solutions Program
503	Structural stability assessment of railway lines within 45m of mining activities
504	An integrated protein design, machine learning and QM/MM- based pipeline to decipher antibiotic resistance in UPEC-associated urinary tract infections
505	Review of Randomization in Online Card Games
506	Herbominerals - Preparation, characterization and activity studies of herbo-mineral formulation from Siddha and Ayurveda (With particular focus on Pb) aimed as preservation of Indian cultural heritage
507	Commuter-Centric Mobile Application for Public Electric Bicycle Sharing Ssystem (CC-MAP)
508	To detect the speckle reflected at source end and develop methodology for adaptive optics control
509	Development of nanostructured graphene oxide/polydopamine coated nanobiosensor monitoring GPC1 for the early diagnosis of pancreatic cancer
510	Electric Bus Charging and Operations Optimization
511	Rational design, synthesis and evaluation of novel nitrogen-bearing heterocyclic hybrids as allosteric SH-2 domain-containing protein tyrosine phosphatase-2 inhibitors for cancer therapy

512	Development and Biological Evaluation of Microbial Cocktail Formulation Targeting Gut Microbiota for the Treatment of Neuropathic Pain
513	Development of Doped-Zirconia Coating on Titanium Surface for Dental Implant Application
514	Algorithms for Stokes parameters and polarization Imaging
515	Innovative 3D Printed Fluid Antennas: Advancing Bharat's 6G Initiative with Novel Materials and Structures
516	Development of Antibacterial Bionanozyme-Infused Hydrogels for enhanced Wound Healing
517	Scalable production of graphitic carbon structure using agro waste like corn husk
518	IRMA(Indian Refractory Makers Association)
519	UNNAT BHARAT ABHIYAN
520	RKVY-RAFTAAR, Agribusiness Incubators (R-ABI) under RKVY-RAFTAAR Scheme
521	Pandit Madan Mohan Malviya National Mission on Teachers and Teaching
522	Malviya Chair for Railway Technology
523	Advanced Research Centre for Iron & Steel (ARCIS)
524	Design Innovation Center (DIC)
525	Defence Corridor
526	MoRTH Chair
527	GR Infraprojects Private Ltd.
528	DC MSME & IIT (BHU)
529	Machine Tool Design (CoE MTD)
530	DIA-CoE
531	IPR Chair (SPRIHA Scheme)
532	MMTTC
533	BIS Standardization Chair Professor
534	CoE for Tunelling & Underground Space Engineering
535	Software Innovation Lab and Chair Professor (Jay Chaudhary)
536	Joint Incubation Centre (JIC)
537	Regional Centre for Space, ISRO (RAC-ISRO)
538	IFFCO Chair

## List of closed/completed Sponsored projects/Schemes during F.Y. 2024-25

1	Technology intervention for creative economy
2	Electromagnetic Analysis, Design and Simulation of Dual Frequency (S- and C-band ) Relativistic Backward wave Oscillator – A HPM Source
3	A Novel, Rapid, High-Throughput Characterization of Microbiome Dynamics through Cytomics and Machine Learning
4	Novel Milk Exosomes for the combination therapy by using selected natural medicine (Paclitaxel & Colchicine) for the efficient management of breast cancer
5	Traditional Principles of settlement planning in heritage temple sites of Odisha/ erstwhile kalinga region
6	Correlation studies of copper artifacts (2500-200 BCE) from Varanasi region and copper mining and smelting in tribal areas of Singhbhum