

All Sponsored Projects

SL. No.	Title & Scope of the R&D project	Name of the PI	Department	Funding Agency	Sanction Order Number	Duration	Total (Amount in Lakhs)	Status
1	Metal-catalyzed new cross-coupling reactions via C-H bond activation and Metallacycle formation	Dr. S. Mannathan	CHE	DST-INSPIRE	DST/INSPIRE/04/2015/002987	2016-22	60.00	COMPLETED
2	Elucidating the role of NHRs in C elegans aging and reproduction	Dr. Manjunatha	BIO	DST-INSPIRE	DST/INSPIRE/04/2015/002416	2016-21	96.00	COMPLETED
3	Mechanistic of CO Oxidation on Metal Free Catalyst and Property Package	Prof. Ranjit Thapa	PHY	DST-SERB EMR	SERB/EMR/2016/004689	2017-20	35.45	COMPLETED
4	Theoretical Insights on the critical factors that influence the performance of non-fullerene organic solar cells	Dr Mahesh Kumar Ravva	CHE	DST-INSPIRE	DST/INSPIRE/04/2017/001393	2018-23	107.00	COMPLETED
5	Studies upon Modification of High Entropy alloy for Thermal Barrier Coating Applications	Dr Sheela Singh	MECH	DST- SERB EMR	EMR/2016/001066	2017-20	52.20	COMPLETED
6	Development of liquid metal processing route for closed cell magnesium foam	Dr G S Vinod Kumar	MECH	DST- SERB EMR	EMR/2016/006207	2017-20	49.86103	COMPLETED
7	Probing Charge Transport in Molecular Junctions with Impedance Spectroscopy and Transition Voltage Spectroscopy Approach	Dr Sabyasachi Mukhopadhyay	PHY	DST- SERB ECR	SERB/ECR/2017/001937	2018-21	48.30	COMPLETED
8	Elucidating the role of FATP family of fatty acid transporters in C. elegans aging	Dr. Manjunatha	BIO	DST- SERB ECR	ECR/2017/000213	2017-20	44.52829	COMPLETED
9	Fabrication of efficient catalytic materials by physical methods	Dr. Mallikarjuna Rao Motapothula	PHY	DST-INSPIRE	DST/INSPIRE/04/2017/001392	2019-24	102.00	On-going
10	Evaluation of intrinsic piezoelectric coefficients and strain engineering near the morphotropic phase boundary in Pb-free oxides	Dr. Pranab Mandal	PHY	DST- SERB ECR	ECR/2018/001252	2019-22	48.79369	COMPLETED
11	First principles identification of descriptor for carbon based catalyst	Prof. Ranjit Thapa	PHY	DAE-BRNS (YSRA)	37(2)/20/14/2018- BRNS/37144	2018-21	28.15	COMPLETED
12	Development of Nano-Engineered Blue-Emitting Blinking Suppressed 'Giant' Quantum Dots	Dr. Nimai Mishra	CHE	DST-SERB TARE	TAR/2018/000732	2019-22	18.30	COMPLETED

13	Ion Beam Modification of Two Dimensional(2D) Layered Materials Heterostructures: Defect Engineering and Device Performances	Dr. Jatis Kumar Dash	PHY	UGC-DAE CSR	UGC-DAE-CSR- KC/CRS/19/IBMS04/1005/1036	2020-23	25.00	COMPLETED
14	Vector Vortex Beams and their Scattering for Communication Applications	Dr Gangi Reddy Salla	PHY	DST-SERB SRG	SERB/SRG/2019/000857	2019-22	26.17	COMPLETED
15	Development of Fast Fluoride Ion Conducting Solid Electrolytes for Rechargeable Solid State Fluoride Ion Batteries	Dr Laxminarayana Patro	PHY	DST-SERB SRG	SRG/2019/000767	2019-22	31.60	COMPLETED
16	Characterization of graphs by spectra of its distance and resistance matrix and some problems related to matrix theory and graph theory	Dr. Fouzul Atik	MATHS	DST-SERB SRG	SRG/2019/000839	2019-22	12.90	COMPLETED
17	Methane Emission from Tropical Aquatic Networks: Elucidating the underpinning mechanisms and landscape-level drivers	Dr. Shoji D. Thottathil	EVS	DST-SERB SRG	SRG/2019/000539	2019-22	30.22	COMPLETED
18	Design and Development of 'Fast Charging' Next-Generation Battery System and its Advanced Electronic Diagnostics	Dr. Sujith Kalluri	ECE	DST-SERB SRG	SRG/2019/000194	2019-22	29.58	COMPLETED
19	A scalable Secure Architecture Model for Privacy and Performance in IoT	Dr Ashok Kumar Pradhan	CSE	DST-SERB TARE	TAR/2019/000286	2019-23	18.30	COMPLETED
20	Development of novel methods for deconvolution and denoising of seismic reflection data	Dr. Karthikeyan	ECE	CRG-SERB	CRG/2019/001234	2020-23	25.90	COMPLETED
21	Mathematical analysis and Adjoint Based Stability for a Coupled Convection-Diffusion equation in Miscible Displacement	Dr. Tapan Kumar Hota	MATHS	DST-SERB SRG	SRG/2020/000713	2020-23	13.67	COMPLETED
22	Chemical modulator based microalgal biorefinery for the production of biofuels and bioproducts	Dr. Imran Y Pancha	BIO	DST-SERB SRG	SRG/2020/000165	2020-22	25.99	Project Transferred
23	Jumbo-phage as a model for ancient cell organization	Dr. Sutharsan	BIO	DBT-Wellcome Trust	IA/E/19/1/504958	2020-25	124.00	On-going

24	Targeting Kennedy pathway of cellular phosphatidylethanolamine biosynthesis as a common therapeutic strategy against protozoan parasites like Leishmania donovani, Trypanosoma brucei and Entamoeba histolytica	Dr. Writoban Basu	BIO	DST-SERB SRG	SRG/2020/001421	2021-23	26.10	COMPLETED
25	Intelligent Disturbance Observer based Adaptive Control of DC-DC Power Converter for Nonlinear Loads	Dr Tousif Khan	EEE	DST-SERB TARE	TAR_2020_000386	2020-23	18.30	On-going
26	Mechanistic understanding of bacterial cytoskeleton inhibition by antibiotics and novel bacteriophage proteins	Dr. Sutharsan	BIO	CRG-SERB	CRG_2020_003295	2021-24	51.81	On-going
27	Wall effects in Shock wave boundary layer interactions	Dr Satya Pramod Jammy	Mech	CRG-SERB	CRG/2020/003859	2021-24	39.00	On-going
28	Understanding the molecular basis for the extreme differential level of expression of genes from human and animal rotaviruses in gene-transfected cells: Implications for improving the growth of human vaccine strains	Dr C. Durga Rao	Bio	DBT	BT/PR32884/MED/2 9/1474/2019	2021-24	110.52	On-going
29	Imprints of Physics Beyond the Standard Model at the LHC and Future Colliders	Dr Amit Chakraborty	Phy	DST-INSPIRE	DST/INSPIRE/04/201 8/002972	2019-24	110.00	On-going
30	Developing Structure-Morphology-Performance Relationships in Organic Solar Cells	Dr Mahesh Kumar Ravva	CHE	DST-NSM	DST/NSM/R&D_HPC_Applications/2021/ 16	2021-23	19.93	COMPLETED
31	Catalysts for CO2 Reduction to C2 Product: Descriptor to Database	Dr Ranjit Thapa and Dr Biswas	Phy	DST-NSM	DST/NSM/R&D_HPC_Applications/2021/ 19.02	2021-23	48.02	COMPLETED
32	A Halide Perovskite Based Photoanode For Oxygen Evolution Reaction Using A Molecular Diode in a Hybrid Nanometer Scale Protection Layer	Dr Sabyasachi Mukhopadhyay	PHY	DST- Bilateral Project with Israel and IIT Bhilai	DST/INT/ISR/P- 28/2020(G)	2021-23	24.19	Fellowship
33	Targetted Delivery of Cobiantion drugs using exosome RNA nanotechnology for cancer treatment	Dr Sateesh Ellipilli	CHE	DST- Ramanujan Fellow Ship	RJF/2021/000066	2021-26	119.00	On-going

34	Photoredox and Nickel Dual Catalyst for Reductive Coupling Reactions of Alkynes: An Atom- and Step-Economic Route to Functionalized Alkenes Synthesis	Dr. S. Mannathan	CHE	CRG-SERB	CRG/2021/007699	2021-24	44.11	On-going
35	Transparent, conducting, self-cleaning rGO (reduced Graphene Oxide) surface: large area and single step growth using Pulsed Laser Deposition	Dr Siddhardha Ghosh	PHY	DST-SERB SRG	SRG/2021/001465	2021-23	25.99	On-going
36	Design and development of "smart" and "hybrid" parallel microchannel cooling system to address the cooling challenges of electronic components	Dr. Lakshmi Sirisha Maganti	Mech	DST-SERB SRG	SRG/2021/000639	2021-23	28.97	Completed
37	Production of low-cost and high-performance fly ash based light weight block	Dr G V P Bhagath Singh	Civil	DST-SERB SRG	SRG/2021/000540	2021-23	18.85	On-going
38	Sensing in the dark: An automated off-focused points detection and removal from the photons starved 3D volumetric dataset	Dr Inbarasan Muniraj	ECE	DST-SERB SRG	SRG/2021/001464	2021-22	19.54	Project Transferred
39	Pilot-scale ultra-efficient fixative sewage dye-degradation by "3D mega catalyst" generated using intact eggshell-waste	Dr Anil K Suresh	Bio	DBT	BT/PR42263/PBD/26/831/2022	2022-24	26.72040	On-going
40	Efficient Algorithms for Dualization Problem for Subclasses of Boolean Functions	Dr Murali Krishna Enduri	CSE	DST-SERB TARE	TAR/2021/000342	2021-24	18.30	On-going
41	Data driven Mechanism for design Mechanism	Dr Udaya sankar	ECE	DST-SERB TARE	TAR/2021/000114	2021-24	18.30	On-going
42	Ethics of Tobacco Industry	Dr Aqsa Agha	History	Institute of Public Health	-	2021-22	4.66	COMPLETED
43	Tenancy and Credit: Exploring Facts below the Crust in AP	Dr Ganshyam Pandey	ECO	NABARD	R & D Project /711/P-357/2021-22	2022-23	14.85225	COMPLETED
44	Design Principle of Single Atom Catalyst for Nitrogen Fixation over HER: Energy Parameter, Electronic Descriptor and Database	Prof. Ranjit Thapa	Phy	CRG-SERB	CRG/2021/000620	2022-25	30.91	On-going
45	FIST Chemical Sciences Level B C or D- Project	Dept. of Chemistry	CHE	DST-FIST	SR/FST/CS-1/2021/219(C)	2022-27	220.00	On-going

46	Synthesis of High Indexed Faceted, Near Infra-Red (NIR) Active Hybrid Nanomaterials for (Photo)Catalysis	Dr Sabyasachi Chakraborty	CHE	UGC-DAE CSR	CRS/2021-22/02/513	2022-25	1.35	On-going
47	Development of Breast Cancer Detecting System Based on Microwave - Antenna - Array - Sensors and Implementation of Internet of Medical Things (IoMT)	Dr K M Divya Chaturvedi	ECE	SERB-POWER SPG	SPG/2021/002829-G	2022-25	26.63	On-going
48	Neutron diffraction studies on novel magnetoelectric oxides at the morphotropic phase boundary	Dr Pranab Mandal	PHY	UGC-DAE CSR	CRS/2021-22/03/562	2022-25	1.35	On-going
49	Comparative Study of Pavement Design Approaches Suitable to Maine Conditions	DR.Uma Maheswar Arepalli	CIVIL	Maine Department of Transportation	UMS1370	2022-23	7.62	COMPLETED
50	Sustainable Ash based Geosynthetic Clay Liners for MSW Landfills	Dr. Raviteja KVNS	CIVIL	DST- SERB SIR	SIR/2022/000374	2022-23	19.23	COMPLETED
51	Nalanda and Bodhgaya: Understanding the Past Environment and Transnational Networks of the World Heritage Sights	Dr Sharmishta Chatterjee	Histry	Indian National Science Academy (INSA)	-	2022-24	6.49	Project Transferred
52	Assessment and modelling of carbon and nitrogen dynamics in tropical forests of Eastern Ghats, Andhra Pradesh in response to climate change	Dr Javid Ahmad Dhar	EVS	DST-SERB SRG	SRG/2022/002286	2022-24	26.10	On-going
53	Design and implementation of High Capacity Reversible Data Hiding Schemes for Medical Image Transmission	Dr V M Manikandan	CSE	DST-SERB TARE	TAR/2022/000121	2022-25	18.30	On-going
54	Design & Development of Noninvasive Continuous Blood Glucose Monitoring SoC Based on Photoacoustic Spectroscopy	Dr. Pradyut Kumar Sanki	ECE	CRG-SERB	CRG/2022/007866	2022-25	26.31	On-going
55	Targeted Delivery Of Combinational Gene Therapeutics Using RNAi Nanoparticles To Treat Hepatocellular Carcinoma	Dr. Satish Ellipilli	CHE	CRG-SERB	CRG/2022/002814	2022-25	50.16	On-going
56	General descriptor of catalysts to find the activity towards OER using Quantum Mechanics/Machine Learning approach	Prof. Ranjit Thapa	Phy	CRG-SERB	CRG/2022/005423	2023-26	20.46	On-going
57	Developing Structure-Morphology-Performance Relationships in Organic Solar Cells, Phase II	Dr Mahesh Kumar Ravva	CHE	DST-NSM	DST/NSM/R&D_HPC_Applications/Extension Grant/2023/25	2023-24	9.46	On-going

58	Catalysts for CO2 Reduction to C2 Product: Descriptor to Database, Phase II	Dr Ranjit Thapa and Dr Biswas	PHY	DST-NSM	DST/NSM/R&D_HPC_Applications/Extension Grant/2023	2023-24	22.97	On-going
59	Cradle-to-Cradle Industrial Process Development for Green Recycling of Critical Metals from Spent Li-ion Batteries using Hydro-metallurgical Technique (Technology Transfer)	Dr. Pankaj Pathak and Dr. Pardha Saradhi Maram	EVS & CHE	DST		2023-26	61.31	On-going
60	Framework for updating the Layer Coefficients in AASHTO1993 Flexible Pavement Design	Dr. Uma maheswar Arepalli	Civil	Maine Department of Transportation		2022-23	10.45	Completed
61	Development of Software Package for Conformal Array Analysis	Prof. Rupesh Kumar	ECE	Indian Space Research Organisation	ISRO/RES/3/949/22-23	2023-25	20.07	On-going
62	Mobile Wellness Program for the Rural Population	Dr. K A Sunitha	ECE	IGCAR	IGCAR/RESG/RESD/RAMS/SRM/2023/01	2023	22.98	On-going
63	Evaluation of advanced pothole patching materials and methods for bituminous pavements	Dr. Uma Maheswar Arepalli	CIVIL	DST-SERB SURE	SUR/2022/003147	2023-26	22.55	On-going
64	Deciphering protein – DNA interaction using molecular modeling approach	Dr. Debabrata Pramanik	PHY	DST-SERB SURE	SUR/2022/004576	2023-26	23.43260	On-going
65	Development of Cu-Nanoclusters - Carbon dots Nano-hybrid for Multimodal Catalytic Activity	Dr. Sabyasachi Chakraborty	CHE	DST-SERB SURE	SUR/2022/001424	2023-26	26.66	On-going
66	Spatially varying polarization profiles for secure optical information processing	Dr. Ravi Kumar	PHY	DST-SERB SURE	SUR/2022/000910	2023-26	28.92670	On-going
67	Investigation and development of wavelet transform and its applications in the framework of fractional Dunkl transform	Dr. Sandeep Kumar Verma	MATHS	DST-SERB SURE	SUR/2022/005678	2023-26	14.78400	On-going
68	Terrestrially derived groundwater pollutant discharge to the Bay of Bengal and its potential threat in changing hydroclimatic conditions	Dr. Kousik Das	EVS	DST-SERB SURE	SUR/2022/001932	2023-26	25.77210	On-going
69	"Simulating Photophysics and Photochemistry on Noisy Intermediate-Scale Quantum Computers"	Dr. Baswanth Oruganti V S	CHE	DST-SERB SURE	SUR/2022/001766	2023-26	24.97260	On-going

70	"Role of disorder on the nonlinear transport/optical properties of topological quantum materials using Quantum Kinetic Approach"	Dr. Pankaj Bhalla	PHY	DST-SERB SURE	SUR/2022/000289	2023-26	24.20260	On-going
71	"Comprehensive antimicrobial resistance (AMR) profiling of ESKAPE pathogen Acinetobacter baumannii isolated from environment, veterinary, and humans in Mangalagiri mandal, Andhra Pradesh"	Prof. Jayaseelan Murugaiyan	BIO	DST-SERB SURE	SUR/2022/003160	2023-26	21.16	On-going
72	Development of wearable IoT electronic device for at-home assessment and monitoring of Parkinson's disease	Dr. K A Sunitha	ECE	DST-SERB SCP	SCP/2022/000704	2023-26	19.90	On-going
73	Efficient Parameterized Algorithms for Dualization Problem for Subclasses of Boolean Functions	Dr. Murali Krishna Enduri	CSE	DST- SERB SIR	SIR/2022/001512	2023	16.64994	On-going
74	Sindhi Sanchaya: Building a Comprehensive and Interactive Database of a Partitioned Literature	Dr. Soni Wadhwa	Literature and Languages	Jaya Prakash Narayan National Centre of Excellence in the Humanities, IIT Indore	IITI/JPNC/PRJ/2023/12/P007	2023-25	5.00	On-going
75	Religious Deities and Saints/Legends/Heroes Changing Geographic belongingness and Cultural Economy among the Four Tribal Communities (Chenchus, Kondareddis, Koyas and Lambadi's) of Telangana and Andhra Pradesh	Dr. Bikku	Liberal Arts	Indian Council of Social Science Research (ICSSR)	02/162/2022-23/ST/TS/RP	2023-25	10.00	On-going
76	Engineering and surface functionalization of Janus two-dimensional (2D) materials for efficient sensors and flexible energy devices	Dr. Jatis Kumar Dash	Physics	UGC-DAE CSR	CRS/2022-23/1092	2023	1.35	On-going
77	PM Krishi Sinchai Yojana- A Step ahead to Achieve Sustainable Development Goal: A Study of Select Areas of AP, Tamil Nadu and Maharashtra	Dr. Ghanshyam Pandey, Dr Deep Raj (EVS)	Economics / EVS	ICSSR, New Delhi	ICSSR-CRP-2023-463	2023	16.00	On-going

78	Impact of atmospheric forcing (atmospheric depression and tropical cyclone) on surface water-groundwater interaction dynamics and implications to safe drinking water vulnerability and predictability"	Dr. Kousik Das	EVS	SRG SERB - DST	SRG/2023/002100	2023	30.00	On-going
79	Theme 1: Development of Magnesium foam and Magnesium Foam Sandwich (MFS) for light weight automobile and aerospace structures and crash resistant components Theme 2: Light weight design and validation of battery compartment, crash box and structural reinforcements with Magnesium Foam Sandwich (MFS) for Battery Electric Vehicles	HOD, Mechanical	Mechanical	DST-FIST	SR/FST/ET-I/2023/1255	2023	140.00	On-going
80	Machine Learning Assisted Optical Communication using Optical Angular Momentum	Dr. Gangireddy Salla (PI) Dr. Satish Analamudi (Co-PI)	Physics / CSE	ISRO		2023	30.00	Approved
81	RIS aided Multi-Target Localization with a Single Receiver Passive Radar and 5G NR Signals: A PoC	Prof. Rupesh Kumar	ECE	NTU, Singapore	TLSP23-19	2024-2025	-	On-going
82	Computational Screening of Organic Photocatalysts: Deliberate Tuning of Redox Potentials and Photochemical Properties	Dr. Mahesh Kumar Ravva	Chemistry	CRG-SERB	CRG/2023/003353	2023-2026	20.36284	Approved
83	Investigation of Ion induced defect density and alloying dopants for catalyst development for CO2 reduction	Dr. Mallikarjuna Rao Motapothula	Physics	UGC-DAE CSR		2023-2026	1.35	On-going
84	Developing a Dynamic, Transitive and Energy Efficient Access Control Mechanism Using Blockchain for Large Scale IoT Network	Dr. Amit Kumar Mandal	CSE	DST SERB-TARE		2023-2024	18.30	Approved

85	Design and Development of Parallel and Distributed Algorithms for Link Prediction in Hyper Complex Networks	Dr. Jaya Lakshmi Tangirala	CSE	DST SERB-TARE	TAR/2023/000291	2023-2024	18.30	Approved
86	Organic Memory Beyond Silicon: Utilizing Novel Synthetic Semiconducting Polymers for High-Performance Logic Operations	Dr. Sabyasachi Mukhopadhyay	Physics	DST SERB-CRG		2023-2026	40.35	Approved