



## NATIONAL INSTITUTE OF TECHNOLOGY

**KURUKSHETRA-136119**

### List of Sponsored Research Projects Ongoing & Completed

As On 18.02.2024

Sr. No.	Year	Department	Faculty Name (PI & Co-PI)	Title of project	Agency	Amount (Rs.) in lakh	Sanctioned/ File order No.	Sanctioned Date	Status
1	2014-17	Chemistry	Dr. Amilan Jose D.	Supermolecular fluorescent probes for the selective detection of biological signaling molecule (H <sub>2</sub> S) and real time assay	SERB-DST	26.00	No. SB/FT/CS-195/2013	30.07.2013	Completed
2	2014-17	Chemistry	Dr. Amrita Ghosh	Development of polyoxometalate based light induced water oxidation catalysts	SERB-DST	25.00	No. SB/FT/CS-193/2013	12.09.2014	Completed
3	2014-19	Chemistry	Dr. Avijit Kumar Paul	New Magnetic Materials Applicable as Colored Pigments and Catalysts	DST-INSPIRE	35.00	No. 4081	23.07.2014	Completed
4	2014-17	Chemistry	Dr. Chetti Prabhakar	Design, Synthesis and Optoelectronic Properties of Thiophene Based Functional Organic Materials	SERB-DST	22.80	No. SB-FT/CS-101/2014	24.07.2015	Completed
5	2014-17	Chemistry	Dr. Ghule Vikas D	Quantum Chemical design, synthesis and energetic properties study on tetrazole based high energy materials	SERB-DST	26.29	No. SB/FT/CS-110/2014	29.05.2015	Completed
6	2015-18	Chemistry	Dr. Avijit Kumar Paul	Multifunctional Metal Organic Framework Construction by O/N Donor Ligands	SERB-DST	29.16	No. SB/FT/CS-098/2014	18.07.2015	Completed
7	2014-17	Chemistry	Dr. M. Senthil Kumar	Neutral and Cationic Ruthenium Complexes for Amidation and Related Reactions in Aqueous and Biphasic Medium	SERB-DST	26.00	No. SB/FT/CS-092/2014	18.07.2015	Completed
8	2014-17	Physics	Dr. R.P. Chauhan	Study of Ion Beam Induced Modifications in Semiconducting Nanostructures	IUAC	10.00	No. IUAC/XII.7/UFR-56303	22.8.2014	Completed
9	2014-17	Physics	Dr. C.R. Mariappan	Silver nano-particle embedded bio-glasses: Electrical polarization and assessment of their biocompatibility	SERB-DST	23.75	No. SB/FTP/PS-139/2013	05.05.2014	Completed
10	2014-17	Physics	Dr. Yashashchandra Dwivedi	Synthesis of Novel Random Laser Materials for Advance Photonic Applications	SERB-DST	26.23	No. SB/FTP/PS-093/2013	20.03.16	Completed
11	2014-17	Humanities & Social Sciences	Dr. Ashwani	Impact Assessment of Rice Varieties Developed by ICAR and SAUs in India	NCAER	1.50		31.12.2014	Completed
12	2016-19	Chemistry	Dr. Amilan Jose D	Nano-Scale Vesicles Modified Metal Complexes For Therapeutic Carbon Monoxide (CO) Delivery	CSIR-EMR	15.50	No. 01(2855)/16/EMR-II	12.05.2016	Completed
13	2016-18	Computer Applications	Dr. Sarika Jain	Intelligent Real Time Situation Awareness and Decision Support System for Indian Defense.	DR&IPR-DRDO	40.52	No. ERIP/ER/1506048/M/01/1611	13.05.2016	Completed

14	2016-19	Chemistry	Dr. M. Senthil Kumar (Anita Bhatia Ph.D. Scholar)	Synthesis of Water Soluble Cobalt Complexes and their Catalytic activities in Aqueous and Biphasic Medium	DST under Women Scientific Scheme	23.20	SR/WOS-A/CS1035/2015 G	01.06.2016	Completed
15	2016-19	Physics	Dr. Anurag Gaur	Investigations on Hexaferrites to search strong magnetoelectric compounds at room temperature	CSIR	18.90	No. 03/(1370)16/EMR-II	25.11.2016	Completed
16	2016-19	Computer Engg.	Dr. B.B. Gupta	Defending Distributed Denial of Service (DDoS) Attacks using Dynamic Resource Ownership and Economic Incentive Based Solution	SERB-DST	23.06	No. SB/FTP/ETA-131/2014	22.01.16	Completed
17	2017-19	Chemistry	Dr. Avijit Kumar Paul	Detailed investigations on crystal and magnetic structures of frustrated double perovskites $\text{Ca}_2\text{BRuO}_6$ (B=Ga, In, Y, Sc) and their Lanthanum composites	UGC-DAE-CSR	10.35	No. UDCSR/MUM/AO/CRS-M-262/2017/1157	14.03.2017	Completed
18	2017-20	Civil Engg.	Dr. Mahesh Pal, (PI), Department of Civil Engg., Dr. Mantosh, Biswas (Co-PI), Department of Computer Engg.,	Classification and feature selection of AVIRIS-NG airborne hyperspectral data for crop cover mapping/urban mapping	SAC (ISRO)	20.02	No. EPSA/4.20/2017	19.12.17	Completed
19	2017-20	Physics	Dr. J.K. Quamara & Dr. Anurag	Dielectric Relaxation Investigation in Swift Heavy Ion Irradiated Ferroelectric Ceramic/Polymer Nanocomposites	IUAC	5.79	No. IUAC/XIII.3A	12.01.2017	Completed
20	2017-18	MBA	Dr. Manish Kumar Jha	Students Perception About Introduction of Human Values and Professional Ethics As Compulsory Course In Engineering Education An Exploratory Study	ICPR	1.00	NO.F.4-2/17-18/P&R/ICPR	16.06.17	Completed
21	2017-20	Mechanical Engg.	Dr. Avadhesh Yadav	Design and development of solar assisted solid desiccant air conditioning system for India	SERB-DST	21.65	No. EMR/2016/006912	15.06.2017	Completed
22	2017-20	Civil Engg.	Dr. Mahesh Pal, (PI), Department of Civil Engg., Dr. Mantosh, Biswas (Co-PI), Department of Computer Engg.,	Fusion of Optical and Multi - frequency Multi - polarimetric SAR data for Enhanced Crop/Vegetation and Urban Mapping	SAC (ISRO)	17.44	No. EPSA/3.1.1/2017	16.11.2017	Completed
23	2017-20	Mechanical Engg.	Dr. J.P. Misra	Development of Ultrasonic Assisted Electrochemical Mechanical Finishing (UAECMF) Process with Modular Tooling System for Precision Finishing of Gears	SERB-DST	16.50	No. ECR/2017/000782	03.4.2017	Completed
24	2017-19	Electrical Engg.	Saurabh Chanana	Modelling and Simulation of Explosive Driven Helical Flux Compression Generator	TBRL-DRDO	9.80	No. TBRL/PCD/CARS/80/2017	25.7.2017	Completed
25	2017-19	Electronics & Comm. Engg.	Dr. Vikas Mittal (PI) Dr. Monika Mittal (Co-PI) Department of Electrical Engg	Data Fusion Algorithms for Vehicle Detection and Classification System	TBRL-DRDO	21.39	No. TBRL/PCD/CARS/84/2017	29.9.2017	Completed

26	2017-20	Chemistry	Dr. Chetti Prabhakar (Ms. Vidya VM Ph.D. Scholar)	Computational Design, Synthesis and Optoelectronic Properties of Functionalized 1,3,5-Triazine compounds and their Metal Complexes	DST under Women Scientific Scheme	16.80	No. SR/WOS-A/CS-46/2017	.05.12.2017	Completed
27	2017-19	Electronics & Comm. Engg.	Dr. Ashutosh Nandi	Physics Based Accurate Analytical Modeling of AlGaIn/GaN High Electron Mobility Transistors	DRDO	9.27	No. 1115/CARS-61/TS/SPL/17	16.11.2017	Completed
28	2017-20	Physics	Dr. Prakash Chand	Development of Novel Electrode Material for Supercapacitor Applications	SERB-DST	41.32	No. EEQ/2017/000038	29.11.2017	Completed
29	2017-20	Mechanical Engg.	Dr. Rajneesh	Design and Development of a Hybrid Powered Liquid Desiccant System for Air Conditioning and Fresh Water Production	SERB-DST	20.00	No. EEQ/2017/000227	29.11.17	Completed
30	2017-20	Computer Engg.	Dr. Virender Ranga	Partition Recovery of Wireless Sensor Networks with the integration of Unmanned Aerial Vehicles (UAVs)	SERB-DST	13.68	No. EEQ/2017/000037	29.11.2017	Completed
31	2017-20	Mechanical Engg.	Dr. Gulshan Sachdeva	Performance Enhancement of Vapor Compression Refrigeration System Using Ejector as an Expansion Device	SERB-DST	14.32	No. DST/TDT/DDP-07/2017 (C)	26.10.2017	Completed
32	2017-18	Computer Engg.	Dr. Jitender Kumar Chhabra	Design and Development of a Novel Approach for Secure Storage on External Media and Lossless Retrieval	JCB-DRDO	6.20	No. JCB/11934/CARS/2017/003	15.2.2018	Completed
33	2017-19	Computer Engg.	Dr. Brij Bhooshan Gupta	Implementation of Security Features in Smart Cards	JCB-DRDO	9.37	No. JCB/11934/CARS/2017/003	12.09.2018	Completed
34	2017-21	Physics	Dr. R.P. Chauhan	Modifications in the Properties of II-VI Semiconducting Nanostructures By Ion Beam	IUAC-UGC	10.11	No. IUAC/XIII.7/UFR-63305	21.2.2018	Completed
35	2017-21	Chemistry	Dr. Amilan Jose D., PI, Department of Chemistry & Dr. C.R. Mariappan, Co-PI, Department Physics	Photoinduced release of therapeutic Nitric Oxide (NO) from functionalized self-assembled nanovesicles.	DBT	44.44	No. 102/IFD/SAN/5162/2017-18 dt. 23.3.18	23.3.2018	Completed
36	2018-19	Physics	Dr. Yashashchandra Dwivedi	Feasibility of Development of Spectrally Selective Absorbing Materials for Laser Absorbing Coatings	DRDO	9.13	No. DLJ/TC1025/I50	4.4.2018	Completed
37	2018-21	Physics	Dr. Anurag Gaur (-PI), Dr. Ashok Kumar (Co-PI), Dr. Dipti Gupta (Co-PI), IIT, Bombay, Powai	Nanomaterials for stable and high efficiency inorganic-organic perovskite- tandem solar cells	CSIR	20.00	No. 22 (0778)/18/EMR-II	2.5.2018	Completed
38	2018-21	Chemistry	Dr. Chetti Prabhakar	Design Synthesis and Optoelectronic Properties of Squaraine and Croconine based Functional Organic Materials	CSIR	23.96	No. 02(0339)/18/EMR-II	06.06.2018	Completed
39	2018-21	Physics	Dr. Neena Jaggi	Localized Surface Plasmon Resonance effect of metal nanoparticles (Au,Ag etc.) on the optical properties of nanophosphors for Plasmon Enhanced Fluorescence sensors	CSIR	19.90	No. 03(1440)/18/EMR-II	24.04.2018	Completed

40	2018-21	Chemistry	Dr. Amilan Jose D.	Development of Highly Sensitive Colorimetric and Fluorescent Moisture Sensors, Based on Small Molecules, Chemically Modified Paper and Electrospun Nanofibrous Materials	SERB-DST	31.86	No. EMR/2017/004085	14.06.2018	Completed
41	2018-21	Mechanical	Dr. Punit Kumar, PI PI, Dr. Lalit Thakur (Co-PI)	Synthesis and Characterization of Ceramic-Metal Multilayer Functionally Graded Armor Materials with Improved Ballistic Performance	DRDO (ARMREB) Engineer-in- Chief, Haryana PWD B&R, Chandigarh	34.51	No. ARMREB/CDSW/2018/201	23.07.2018	Completed
42	2018-19	Civil	Dr. S.N. Sachdeva	Research Project for Soil Strength Mapping & Stabilization	ONGC Energy Centre Trust	3.00	No. 146221/NH	07.09.2018	Completed
43	2018-19	Mechanical	Dr. Avadhesh Yadav	Development of Low Cost Scheffler Solar Concentrator for Domestic Indoor Cooking and Heating Application for Rural Areas	ONGC Energy Centre Trust	7.29	IN-DL6505026866094 6Q	21.08.2018	Completed
44	2018-21	Mechanical	Dr. M.P. Maiya PI, IIT Madras, Dr. Saourav Mitra, Co-PI, IIT Kharagpur  Dr. Avadhesh Yadav Co-PI, NIT KKR	Desiccant Solar Still	IMPRINT-II SERB-DST	60.02	MEE1819424MIM PMPRA		Completed
45	2018-21	Electronics & Comm. Engg.	Dr. Gargi Dixit, Prof. Brahmjit Singh, Mentor/Guide)	Performance and Improvement Study of Bi-Frequency MILO	DST under Women Scientific Scheme A (WOS-A)	26.80	SR/WOS/A/ET- 26/2018	17.10.2018	Completed
46	2018-21	Electrical	Dr Bhanu Pratap, , Electrical Engg. Deptt., PI, Dr Punit Kumar Co-PI, Mechanical Engg. Deptt., and Dr Pankaj Chandna Co-PI Mechanical Engg. Deptt.	Design, Fabrication & Testing Of Active Magnetic Bearing For Centrifugal Pumps With VFD	Indian Navy	29.97	EG/6201/INTB	03.12.2018	Completed
47	2018-21	Physics	Dr. C.R. Marriappan	Development of spinel-type metal oxide/reduced, graphene oxide novel nanocomposites for NO <sub>x</sub> gas sensing application	UGC-DAE CSR	8.00	No. CSR-KN/CSR- 119/2018-19/1057	26.12.2018	Completed
48	2018-21	Chemistry	Dr. Ghule Vikas D. PI Dr. Ram Kumar Tittal Co-PI Chemistry Deptt	Development of Insensitive High Energy Materials Containing Heterocyclic Backbone Substituted with Amino, Azido and Nitro Explosophores	DRDO (ARMREB)	36.36	ARMREB/CDSW/ 2019/211	14.01.2019	Completed
49	2018-21	Mathematics	Dr. Smita Sonker	Study of Degree of Approximation and Absolute Summability Factors of Infinite Series	SERB-DST	17.71	EEO/2018/000393	15.02.2019	Completed
50	2018-21	Physics	Dr. Anurag Gaur, PI, Physics Deptt. &Dr. Amrish Panwar, Co-PI AP Physics DTU Delhi	Utilization of agricultural waste as an electrode material for energy storage devices	SERB-DST	41.49	CRG/2018/001694	11.03.2019	Completed

51	2019-22	MBA	Dr. Neeraj Kaushik, PI, Dr. Rajender Kumar, Co-PI	Correlation between Psychological and Physiological Parameters of Stress Among Staff and Students-AN Empirical Study	LSRB (DRDO)	36.64	No. O/o DG (TM/81/48222/LSR B-350/PEE &BS/2019	26.11.2019	Completed
52	2019-22	Civil Engg.	Dr. Shailu Dalal Guin, Prof. Surinder Deswal (Mentor/Guide)	Removal of organic and inorganic toxins from electronic waste using isolated bacterial species and competent phytoremediators	DST under Women Scientific Scheme A (WOS-A)	28.57	No. SR/WOS-A/LS-479/2018 (G)	17.09.2019	Completed
53	2019-22	Physics	Dr. C.R. Mariappan	"Development of novel solid lithium ionic conductors for advanced lithium ion battery applications"	Alexander von Humboldt Foundation, Germany	42.00	D-53173 Bonn	23.05.2019	Completed
54	2019-22	Civil Engg.	Praveen Aggarwal, PI	"Performance Assessment of Roads Constructed Using Waste Plastics	NRIDA	20.50	DO No. NRRDA-PO10 (15)/2018-Dir (P-II)/2541	09.09.2019	Completed
55	2019-22	Physics	Dr. R.P. Chauhan	"Behavior of Indoor radon-thoron decay products: CFD Simulations and Validation through measurement "	BRNS	33.58	No. 51/14/14/2019-BRNS/36244	03.12.2019	Ongoing
56	2021-22	Mechanical Engg.	Dr. Gian Bhushan -PI, Dr. Pankaj Chandna-Co-PI	Design and Analysis of Jet Deflector and its Support Structure	SPIC (DRDO)	9.84	SP-9000/06/002	07.06.2021	Completed
57	2021-22	Mechanical Engg.	Dr. Pankaj Chandna-PI Dr. Gian Bhushan -Co-PI	Design of a light weight container for transportation and storage of a store	SPIC (DRDO)	12.90	SP-9000/07/052	13.09.2021	Completed
58	2021-24	Electrical Engg.	Dr. Preet Lata PI, Dr. Shelly Vadhera, Mentor	Waste Management in North Indian Villages by Developing Reliability based Microgrid with Solar and Biomass Energy	WOS-B Scheme Under DST	23.90	DST/WOS-B/ER/2021 (G)	29.09.2021	Ongoing
59	2021-24	Physics	Dr. Ashavani Kumar PI Dr. Prakash Chand Co-PI	Development of synergetic dielectric and magnetic loss materials composite for high performance microwave absorption applications	DRDO	31.21	ERIP/ER/20220202/M/01/1794	23.03.2022	Ongoing
60	2022-25	Chemistry	Dr. Amilan Jose D. PI Dr. Vikas D. Ghule Co-PI	Smartphone assisted portable chemical sensor for the detection to toxic Heavy Metals and Pesticides in water bodies of Haryana	DST Haryana	18.14	HSCSIT/R&D/2022/2948	29.11.2022	Ongoing
61	2022-25	Chemistry	Dr. Avijit Kumar Paul	New Perovskite Oxides for Application in Energy Generation and Storage Purpose	UGC-DAE-CSR	1.35	CRS/2021-22/03/564	24.06.2022	Ongoing
62	2022-25	Chemistry	Dr. Avijit Kumar Paul	Boosting of Energy Generation and Storage Properties by the Composite Materials of Multinary Metal Oxides and Carbon Allotropes Synthesized from Agricultural Bio-Wastes	SERB-DST	29.63	CRG/2022/002797	08.12.2022	Ongoing
63	2022-25	Chemistry	Dr. Amilan Jose D.	Supramolecular organic-inorganic hybrid gels for the light-activated therapeutic carbon monoxide (CO) delivery	SERB-DST	34.96	CRG/2022/004990	08.12.2022	Ongoing
64	2022-25	Chemistry	Dr. M. Senthikumar	Ruthenium Catalysed Dehydrogenation Reaction as a Platform for Hydrogen Storage Materials	SERB-DST	27.10	CRG/2022/006324	12.12.2022	Ongoing
65	2022-25	Electronics & Comm. Engg.	Dr. Ghanapriya Singh PI, Dr. Pankaj Kumar Pal , Co-PI NIT Uttarakhand	IoT-based Multifunctional Scalable Real Time Farm Monitoring System for Smart Agriculture	IIT Ropar Hub (AWaDH)	16.93	AWaDH-SplNe/IITRPR/2022/P10003	28.07.2022	Ongoing

66	2022-25	Mechanical Engg.	Dr. Ravi Pratap Singh	Design Development and Performance Analysis of Hybrid Abrasive Assisted Micro Electrochemical Machining (HAAMECM) Process	SERB-DST	7.38	EEQ/2021/000031	21.02.2022	Ongoing
67	2022-25	Physics	Dr. Yashashchandra Dwivedi	Development of High-yield multicolor persistent luminescent ink for safety signage	DST Haryana	7.75	HSCSIT/R&D/2022-23/4507	31.03.2023	Ongoing
68	2022-24	ECE	Dr. Brahmjit Singh, PI Dr. Poonam Jindal, Co-PI Dr. Pankaj Verma, Co-PI	Development of deep learning enabled algorithm for automatic modulation recognition in blind RF environment	ISRO	19.38	RAC-S/2022/05	21.10.2022	Ongoing
69	2022-25	Computer Engg.	Dr. Priyanka Ahlawat, PI Dr. Mayank Dave, Co-PI	Key management for secure multicast applications in space terrestrial integrated network	ISRO	22.43	RAC-S/2022/04	21.10.2022	Ongoing
70	2023-24	Computer Applications	Dr. Sandeep Kumar Sood-PI Dr. Munish Bhatia, Co-PI	Quantum Computing-inspired Vehicular Route Optimization for Industrial Applications	Ministry of Electronics & Information Technology (MeitY)	8.00		25.04.2023	Ongoing
71	2023-26	Chemistry	Dr. Amilan Jose D.	Near-infrared (NIR) responsive liposomal nano-system composed of organolanthanide complexes for the sensing and biomaging of gaseous signaling molecule hydrogen sulfide (H <sub>2</sub> S)	CSIR	23.39	01/3127/23/EMR-II	08.07.2023	Ongoing
72	2023-28	Electrical Engg.	Dr. Lillie Dewan (EED) Chief Investigator Dr. Mahesh Pal (CED), Co-Chief Investigators Dr. Ritu Garg, (CoE) Dr. V.G. Durgarao Rayudu, (EED)	Capacity Building for Human Resource Development in Unmanned Aircraft System (Drone and related Technology)	Ministry of Electronics & Information Technology (MeitY) Through IITDM Kurnool or CDAC Hyderabad	200.00	F No. L-14011/29/2021-HRD	01.08.2023	Ongoing
73	2023-24	Computer Engg.	Dr. Lillie Dewan (EED) Chief Investigator Dr. Mahesh Pal (CED), Co-Chief Investigators Dr. Ritu Garg, (CoE) Dr. V.G. Durgarao Rayudu, (EED)	<b>UAV based Urban Mapping of NIT Campus using Deep Neural Network</b> under Capacity Building for Human Resource Development in Unmanned Aircraft System (Drone and related Technology)	Ministry of Electronics & Information Technology (MeitY) Through IITDM Kurnool or CDAC Hyderabad	2.50	IITDMK/PMU/POC/2023/018	06.08.2023	Ongoing

74	2023-24	Humanities & Social Sciences	Humanities Deptt. NITKKR Dr. Blessy Sarah Mathew, Co-PI, LPU, Punjab, Dr. Nittymol Antony, Co-PI Bengaluru and Dr. Dr. Sarwdaman Kashyap, Co-PI, Bihar	Impact Assessment of PM Kisan Samman Nidhi Scheme	ICSSR	14.00	F No. 25/CRP-2023-1091/PMKSN/SCD	03.10.2023	Ongoing
75	2023-25	Physics	Dr. Tanmay Maji, PI	Soft-collinear effective theory approach to precision angularity event shapes at high energy scattering experiments	SERB-SRG	17.00	F No. SRG/2023/001093	04.09.2023	Ongoing
76	2023-26	Electronics & Comm. Engg.	Dr. Shweta Meena, PI	Development of Layered Mxene Heterostructure for Hydrogen Storage: High Capacity Sustainable Material	SERB-DST	30.00	EEQ/2023/000312	01.12.2023	Ongoing
77	2023-24	Humanities & Social Sciences	Dr. Ashwani	Macroeconomics Forecasting Framework for Vision Policy Document"	NITI Aayog	2.00	O-15012/13/23	01.01.2024	Ongoing