



# NATIONAL INSTITUTE OF TECHNOLOGY

## KURUKSHETRA

### Sponsored Research Projects

Sr. No.	Project Title	Funding Agency	Faculty Name (PI & Co-PI)
1.	Supramolecular fluorescent probes for the selective detection of biological signaling molecule (H <sub>2</sub> S) and real time assay	SERB-DST	Dr. Amilan Jose D., Department of Chemistry
2.	Development of polyoxometalate based light induced water oxidation catalysts	SERB-DST	Dr. Amrita Ghosh, Department of Chemistry
3.	New Magnetic Materials Applicable as colored pigments and catalysts	DST-INSPIRE	Dr. Avijit Kumar Paul, Department of Chemistry
4.	Design, Synthesis and Optoelectronic Properties of Thiophene Based Functional Organic Materials	SERB-DST	Dr. Chetti Prabhakar, Department of Chemistry
5.	Quantum Chemical design, synthesis and energetic properties study on tetrazole based high energy materials	SERB-DST	Dr. Ghule Vikas D, Department of Chemistry
6.	Multifunctional Metal Organic Framework Construction by O/-N Donor Ligands	SERB-DST	Dr. Avijit Kumar Paul, Department of Chemistry
7.	Nano-Scale Vesicles Modified Metal Complexes for Therapeutic Carbon Monoxide (CO) Delivery	CSIR-EMR	Dr. Amilan Jose D, Department of Chemistry
8.	Detailed investigations on crystal and magnetic structures of frustrated double perovskites and their Lanthanum composites	UGC-DAE-CSR	Dr. Avijit Kumar Paul, Department of Chemistry

9.	Neutral and Cationic Ruthenium Complexes for Amidation and Related Reactions in Aqueous and Biphasic Medium	SERB-DST	Dr. M. Senthil Kumar, Department of Chemistry
10.	Synthesis of Water Soluble Cobalt Complexes and their Catalytic activities in Aqueous and Biphasic Medium	DST under Women Scientific Scheme	Dr. M. Senthil Kumar (Ms. Anita Bhatia, Ph.D. Scholar) Department of Chemistry
11.	Study of Ion Beam Induced Modifications in Semiconducting Nanostructures	IUAC	Dr. R.P. Chauhan, Department of Physics
12.	Silver nano-particle embedded bio-glasses: Electrical polarization and assessment of their biocompatibility	SERB-DST	Dr. C.R. Mariappan, Department of Physics
13.	Synthesis of Novel Random Laser Materials for Advance Photonic Applications	SERB-DST	Dr. Yashashchand Dwivedi, Department of Physics
14.	Investigations on Hexaferrites to search strong magnetoelectric compounds at room temperature	CSIR	Dr. Anurag Gaur, Department of Physics
15.	Dielectric Relaxation Investigation in Swift Heavy Ion Irradiated Ferroelectric Ceramic/Polymer Nanocomposites	IUAC	Dr. J.K. Quamara, Department of Physics
16.	Impact Assessment of Rice Varieties Developed by ICAR and SAUs in India	NCAER	Dr. Ashwani, Department of Humanities & Social Sciences
17.	Defending Distributed Denial of Service (DDoS) Attacks using Dynamic Resource Ownership and Economic Incentive Based Solution	SERB-DST	Dr. B.B. Gupta, Department of Computer Engg.
18.	Intelligent Real Time Situation Awareness and Decision Support System for Indian Defense	DR&IPR-DRDO	Dr. Sarika Jain (PI) and Dr. Ashutosh Kumar Singh (Co-PI), Department of Computer Applications
19.	Classification and feature selection of AVIRIS-NG airborne hyperspectral data for crop cover mapping/urban mapping	ISRO	Dr. Mantosh, Biswas (PI), Department of Computer Engg., Dr. Surinder Deswal (Co-PI) Department of Civil Engg. & Dr. Mahesh Pal (Co-PI), Department of Civil Engg.
20.	Students Perception About Introduction of Human Values and Professional Ethics As Compulsory Course In Engineering Education An Exploratory Study	ICPR	Dr. Manish Kumar Jha, Department of Business Administration
21.	Design and development of solar assisted soiled desiccant air conditioning system for India	SERB-DST	Dr. Avadhesh Yadav Department of Mechanical Engg.

22.	Fusion of Optical and Multifrequency Multipolarimetric SAR data for Enhanced Crop/Vegetation and Urban Mapping	SAC-ISRO	Dr. Mantosh, Biswas (PI), Department of Computer Engg., Dr. Surinder Deswal (Co-PI) Department of Civil Engg. & Dr. Mahesh Pal (Co-PI), Department of Civil Engg
23.	Development of Ultrasonic Assisted Electrochemical Mechanical Finishing (UAECMF) Process with Modular Tooling System for Precision Finishing of Gears	SERB-DST	Dr. JP Misra Department of Mechanical Engg.
24.	Modelling and Simulation of Explosive Driven Helical Flux Compression Generator	TBRL-DRDO	Dr. Saurabh Chanana Department of Electrical Engg.
25.	Data Fusion Algorithms for Vehicle Detection and Classification System	TBRL-DRDO	Dr. Vikas Mittal (PI) Department of Electronics & Communication Engg. and Dr. Monika Mittal (Co-PI) Department of Electrical Engg.
26.	Computational Design, Synthesis and Optoelectronic Properties of Functionalized 1,3,5-Triazine compounds and their Metal Complexes	DST under Women Scientific Scheme	Dr. Chetti Prabhakar (Ms. Vidya VM Ph.D. Scholar)
27.	Physics Based Accurate Analytical Modeling of AlGaN/GaN High Electron Mobility Transistors	DRDO	Dr. Ashutosh Nandi Department of Electronics & Communication Engg
28.	Development of Novel Electrode Material for Supercapacitor Applications	SERB-DST	Dr. Prakash Chand Department of Physics
29.	Design and Development of a Hybrid Powered Liquid Desiccant System for Air Conditioning and Fresh Water Production	SERB-DST	Dr. Rajneesh Department of Mechanical Engg.
30.	Partition Recovery of Wireless Sensor Networks with the integration of Unmanned Aerial Vehicles (UAVs)	SERB-DST	Dr. Virender Ranga Department of Computer Engg.
31.	Performance Enhancement of Vapor Compression Refrigeration System Using Ejector as an Expansion Device	SERB-DST	Dr. Gulshan Sachdeva Department of Mechanical Engg.
32.	Design and Development of a Novel Approach for Secure Storage on External Media and Lossless Retrieval	JCB-DRDO	Dr. Jitender Kumar Chhabra Department of Computer
33.	Implementation of Security Features in Smart Cards	JCB-DRDO	Dr. Brij Bhooshan Gupta Department of Computer
34.	Modifications in the Properties of II-VI Semiconducting Nanostructures By Ion Beam	IUAC-UGC	Dr. R.P. Chauhan Department of Physics

35.	Photoinduced release of therapeutic Nitric Oxide (NO) from functionalized self-assembled nanovesicles.	DBT	Dr. Amilan Jose. D Department of Chemistry
36.	Feasibility of Development of Spectrally Selective Absorbing Materials for Laser Absorbing Coatings	DRDO	Dr. Yashashchandra Dwivedi Department of Physics
37.	Nanomaterials for stable and high efficiency inorganic-organic perovskite-tandem solar cells	CSIR	Dr. Ashok Kumar (PI) Dr. Anurag Gaur (Co-PI) Department of Physics
38.	Design Synthesis and Optoelectronic Properties of Squaraine and Croconine based Functional Organic Materials	CSIR	Dr. Chetti Prabhakar Department of Chemistry
39.	Localized Surface Plasmon Resonance effect of metal nanoparticles (Au,Ag etc.) on the optical properties of nanophosphors for Plasmon Enhanced Fluorescence sensors	CSIR	Dr. Neena Jaggi Department of Physics
40.	Development of Highly Sensitive Colorimetric and Fluorescent Moisture Sensors, Based on Small Molecules, Chemically Modified Paper and Electrospun Nanofibrous Materials	SERB-DST	Dr. Amilan Jose D. Department of Chemistry
41.	Synthesis and Characterization of Ceramic-Metal Multilayer Functionally Graded Armor Materials with Improved Ballistic Performance	DRDO (ARMREB)	Dr. Lalit Thakur (PI) Dr. Vinod Kumar (Co-PI) Dr. Punit Kumar (Co-PI) Department of Mechanical Engg.