

Research Project Details

Department of Physics, Chemistry and Mathematics

PDEU

Ongoing Funded Research Projects

Name of PI	Name of Co PI(s)	Title of Project	Funding Agency	Duration	Amount	Starting Date
Dr. Ankur Solanki	Dr. Mohendra Roy & Dr. Prahlad Baruah	Development of flexible memristor devices for high density data storage and neuromorphic computation	DST-CRG	3 years	72.25 Lakhs	April 2021
Dr. Pavan Gurrala	Dr. Brijesh Tripathi, Dr. Sheetal Rawat & Dr. Manoj Kumar	3D printing of organic-inorganic composite scintillation detectors	BRNS	3 years	28.50 Lakhs	Nov. 2021
Dr. Ankur Solanki		Development of Perovskite based Memristor Devices	PDPU	2.5 Years	10 Lakhs	Nov. 2019
Dr. Anup Sanchela		To develop homemade thermopower and resistivity measurement set up	PDEU	2 Years	10 Lakhs	Oct. 2020
Dr. Anu Manhas	Prof. Prakash C. Jha (CUG)	A hybrid structure-based modelling technique in exploring the effectiveness of natural compounds against the potential anticancer druggable target cyclin-dependent kinase protein	SERB-TARE	3 Years	15 lakhs	December 2021
Dr. Nitin Chaudhari	Prof. Kwangyeol Lee, Korea University, South Korea	Development of MXene-Transition Metal Compound Hetero-Nanostructures as Electrocatalysts for Overall Water Splitting,	DST-NRF	3 Years	37 lakhs	February 2021
Dr. Busupalli Balanagulu		Salt induced dissipation of energy in synthetic cells as a power source	PDEU	2.9 Years	10 lakhs	September 2019
Dr. Nitin Chaudhari		Development of MXene-hierarchical transition metal sulfide	CPRI	2 Years	48.47 lakhs	March 2022

		hybrid nanostructures as electrocatalysts for overall water splitting				
Dr. Tapan Pal	Dr. Sriram Kanvah (IITGn)	Detection of Biomarkers through Nanoscale Metal - Organic Frameworks (MOFs)	SERB-TARE	3 Years	15 lakhs	December 2021
Dr. Rama Gaur	Dr. Emila Panda	Studies on optical, electrical and microstructural properties of MoS ₂ , SnS ₂ and MoS ₂ -SnS ₂ hybrid	SERB-TARE	3 Years	15 lakhs	December 2020
Dr. Manoj Pandey	Dr. Pankaj Yadav	Mechanosynthesis of Stable and Efficient 2D Perovskite Solar Cells	DST	3 Years	50 lakhs	August 2019
Dr. Manoj Pandey	Dr. Pankaj Yadav	Mechanochemical Approach for Perovskite Solar Cells: A way towards efficient, stable and low cost Solar cells	DST	3 Years	50 lakhs	July 2019
Dr. Anirban Das		Sulfuric acid mediated weathering in the Ganga and the Brahmaputra (GYB) River Basins: Constraints from Sulfur and oxygen isotopes in dissolved sulfate	MoES	3 Years	41.1 lakhs	July 2019
Dr. Manoj Pandey	Dr. Shobha Shukla, IITB	Water Innovation Centre Training and Research, PDPU with IITM, IITH, NCL, BARC	DST	5 years	20 lakhs	September 2018
Dr. Bhasha H. Vachharajani	Dr. Neeraj Agrawal	High Resolution relocatable regional circulation forecasting system	SAC, ISRO, Ahmedabad	October 2021-March 2023	13,18,848	27th October, 2021

Completed Sponsored Research Projects

Name of PI	Name of Co PI(s)	Title of Project	Funding Agency	Duration	Amount	Date of completion
Dr. Rohit Srivastava		Study of heterogeneous patterns with the Study of heterogeneous precipitation patterns with the help of aerosol - cloud properties: Focus on western India and Arabian Sea	SERB, DST	3 Years	20.7 L	Aug, 2021
Dr. Balamurali Krishna Mayya K.	Prof. Joydeep Ghosh, IPR, Gandhinagar	Design and Development of High Resolution Spectroscopic Diagnostics for ADITYA-U/SST-1 Tokamaks	BRNS	3 years	32 Lacs, approx	March. 2019.
Dr. Anirban Das		Tracking chromium (VI) migration in groundwater using stable isotopes of Chromium	DST	3 years	38.6	March 2017
Dr. Ranjan K Pati		Nanostructured Electrolyte Materials for Low Temperature Solid Oxide Fuel Cell (LT-SOFC)	DST	3 years	30 lakhs	March 2019
Dr. Kalisadhan Mukherjee		Towards the development of facilities for studying the (a) volatile organic sensing characteristics of chemiresistive samples (b) defluoridation performances of chemically modified ceramic adsorbents	PDEU	2 years	10 lakhs	May 2019
Dr. Manoj Pandey		Synthesis of sumanene and corannulene derivatives and its applications in various fields of chemistry	DST	3.5 years	18.8 lakhs	February 2012
Dr. Anirban Das		Chemical isotopic investigations of fluoride rich groundwaters in Gujarat and in Rajasthan	DST	3.5 years	22 lakhs	January 2013
Prof. Rajib Bandyopadhyay	Prof. Indrajit Mukhopadhyay	Development of nanosized catalysts for the application in FCC and hydroprocessing	Reliance Industries Ltd.	3 years	25.8 lakhs	April 2014
Dr. Manoj Pandey	Dr. Nidhi Gaur	A novel nanoparticle based bioassay for sensitive detection of cancer specific proteases	DST-SERB	4.5 years	64 lakhs	March 2016

Dr. Ranjan K Pati		Graphene protected Si-nanosphere (interconnected) for developing high energy density Li-ion battery	MES - DST-SERB	2 years	44 lakhs	May 2018
Dr. Bhasha H. Vachharajani	Dr. D.R. Rajak	Spatio-Temporal Analysis of Sea Ice and Icebergs over the Polar Regions	SAC, ISRO, Ahmedabad	January 2017-September 2020	13,15,216	30th September, 2020