

AMITY INSTITUTE OF NANOTECHNOLOGY

List of Funded Project

S.No	Number of the Principal Investigator & Co-PI	Project title	Funding agencies	Total Grants received Rupees in Lakhs	Duration	Status
1.	Dr. R.P. Singh	Development of PVA based humidity sensor and its applications in MEMS	DST	13.90	2006-08	Completed
2.	Dr A. Bhattacharya/ Dr. R.P. Singh.	Slow release insect repellent formulations	DRDO	9.90	2009-12	Completed
3.	Dr. Tinku Basu/ Dr. R.P. Singh	Development high barrier packaging materials for process food packating based on silver nano composites	DFRL	9.90	2009-12	Completed
4.	Dr . O.P. Sinha/ Dr. Sandip Chakrabarti/Dr R.P.Singh	Development of semincondutor nanoparticle (s-conducting polymer composites for OLED's application)	DST	22.66	2010-13	Completed
5.	Dr. R. P. Singh	FIST	DST	35	2011-15	Completed
6.	Dr. Nidhi Chauhan	Construction of an amperometric glycated haemoglobain biosensor based on Au-Pt bimetallic nanoparticles and poly (indole 5-carboxylic acid) modified Au electrode	SERB/DST	14.00	2013-16	Completed
7.	Dr Jagriti Narnag	Therapeutic drug monitoring of antiepileptic drug using biosensor approach	SERB/DST	25.00	2013-16	Completed
8.	Dr. Ranu Nayak/Dr O.P. Sinha/Dr.R.P. Singh	Realisation of Novel Low cost, High optical absorption nanostructured design for photovoltaic solar cell device	DST-SERI	24.00	2014-17	Completed
9.	Dr. Ramesh Pukade	Molecular mechanism of mycorrhizal symbiosis during the drought in Finger Millet, Eleusine coracana (L) Gaertn	SERB/DST	17.00	2014-17	Completed
10.	Dr. O.P. Sinha	Study of the orgin of d0 magnetism in oxide materials intended for spintronic application	UGC-DAE-CSR	11.19	2014-19	Completed
11.	Dr Ashish Mathur	A microfluidic based point of care cardiac marker detection system for early detection of acute myocardial infraction	DST	27.12	2016-19	Completed
12.	Dr Utkarsh Jain	Graphene Oxide Wrapped Carbon nanotube-manganese dioxide nanoflakes composite for sensitive biosensing of acetylcholine- A	DST-SERB	23.00	2016-19	Completed

		neurotransmitter				
13.	Dr Jagriti Narang	Improvement in Zinc Micronutrient delivery for cereal crops employing engineered nanoparticles	DST	19.00 (Amity Institute of Post Harvest) Till August 19	2016-19	Completed
14.	Dr. Sumant Upadhyay	Ghraphene based metal oxide nanostructure /nanocomposites for water splitting using photoelectrochemical conversion of solar energy;	SERB`	11.32	2016-19 *joined in 2017	Completed
15.	Dr. D. K. Avasthi	To study the transformation of Au-Pd alloy NPs to core shell NPs under electron irradiation	UGC-DAE-CSR	0.45	2016-19	Completed
16.	Dr.Ashish Mathur/Dr. Utkarsh Jain/Dr. Nidhi Chauhan/Dr Shikha Wadhwa	Facilitating the Intelligent Management of Chronic Wounds in Diabetic Patients: Developing Accessible Wound Monitoring Technologies	DST-UKIERI	25.78	2017-19	Completed
17.	Dr. Lalit M Bhradwaj/Dr/ Tinku Basu/Dr. Arpita Bhattacharya/Dr Ashish Mathur	Nano-based detection of organophosphate pesticides using metal-organic framework conjugates	ICAR	107.58	2017-20	Completed
18.	Dr. Richa Krishna	A study on Al:ZnO nanostructures for transparent conducting oxides applications	UGC-DAE CSR	9.47	2017-20	Completed
19.	Dr Monika Joshi Dr Subhasha Nigam	Reclamation of produced water generated from oil refineries using Nano composites	DST	22.88	2017-19	Completed
20.	Dr. Utkarsh Jain/ Dr. Nidhi Chauhan	Home based portable device integrated with smart phone app. for simulation monitoring of glucose HbA1c Glycated Hemoglobin & GA Glycated Albumin	BIRAC	40.0	2017-20	Completed
21.	Prof. O. P. Sinha	Development of suitable transducer for sensing application based on RGO	UGC-DAE CSR	10.86	2017-21	Completed
22.	Dr. Sandip Chakrabarti	Hetero-Structured nanocomposite Photo catalyst with enhanced capability for the selective conversion of CO2 to Methanol under Visible Light	UGC-DAE	10.31	2017-20	Completed
23.	Dr.Bera/ Dr. Ajay Gupta /Dr. D.K.Avasthi/ Dr.O.P. Sinha/ Dr. Sunita Rattan.	Tailoring of magnetic and other functional properties of thin film nanostructures using low energy ion beams	DST-SERB	58.10 (Funding at ACMS)	2017-21	Completed
24.	Dr. Sadip Chakrabarti	Metal Oxide Decorator doped carbon nanosheet for detection of arsenic in ground water	UGC-DAE-CSR	12.73	2017-21	Completed

25.	Dr Ranu Nayak	Multiple Protein biomarker detection platform for Breast Cancer using quantum Dots on a needle shaped Nanostructured Gold array	ICMR	34.50	2017-21	completed
26.	Dr. O. P. Sinha	Synthesis of 2D films based on TMDC materials, characterization and investigation of their properties for device application.	DRDO	9.46	2018-20	Completed
27.	Dr. Jagjiwan Mittal / Mr. Robin Kumar	Fabrication of highly selective and sensitive sensors based on Carbon Nanomaterials (CNT/Graphene) for detection of different gases (NO ₂ NH ₃ SO ₂ NO NH ₄ NO ₃) in a mixture.	DRDO	11.02	2018-21	Completed
28.	Dr. Nidhi Chauhan/ Dr. Utkarsh Jain	An ultrasensitive detection of anandamide, a neurotransmitter, through Molecularly Imprinted Polymer modified Glassy Carbon Electrode	SERB	32.39	2018-21	Completed
29.	Dr. D. K. Avasthi	Synthesis of plasmonics assisted SERS substrates	UGC-DAE-CSR	7.9	2019-22	Completed
30.	Dr. Tinku Basu/ Dr. Irani Mukherjee, IARI	Electrochemical sensing of Aflatoxin B1 in ground nut extract based on anisotropic gold nano particle decorated self-assembled thiol monolayer using monoclonal antibody suitable for field application.	BIRAC	36.16	2019-20 (18 months)	Completed
31.	Dr. Nidhi Chauhan/ Dr. Utkarsh Jain	Real time lab based absolute physiological electrochemical sensing device based on released RNS/ROS integrated with multi micro electrode arrays MEAs detecting Hecobacter pylori, a stomach gastric cancer causing pathogen	DST	31.39	2019-22	Ongoing
32.	Ms.Shikha Kaushik (Dr. Sujata Pandey - Mentor)	Metal Rich Metal Oxide for RRAM applications	DST-Women Scientist	24.70	2019-22	Ongoing
33.	Prof. O. P. Sinha	FIST Program	DST	220	2020-25	Ongoing
34.	Dr. Ramesh N Pudake	Development of CRISPR-Cas9 based gene editing method for abiotic stress tolerance in Finger millet	SERB TARE	18.30	2021-24	Ongoing
35.	Prof. O. P. Sinha/ Dr. Ravi Mani Tripathi	High sensitivity X-ray CT imaging of tumours using targeted bismuth-based	UGC-DAE-CSR	7.89	2021-24	Ongoing

		quantum dots.				
36.	Dr. Richa Krishna	Investigations on radiation stability of cerium oxide using energetic ion beams	SERB-Power	24.62	2021-24	ongoing
37.	Ms. Kirti Saxena (Dr. Utkarsh Jain-Mentor)	A label-free microfluidics based electrochemical immune-sensor with reduced graphene oxide/thionine/ gold nanoparticles nanocomposites for the dual detection of VEGF/ CagA in clinical sample of H. pylori infected patients	DST-Women Scientist	22.88	2021-24	ongoing
38.	Dr. Sandip Chakrabarti	Photo-therm solar converted thermal energy harvesting mangrove and composite layer mechanistic photo-thermal material in interfacial water evaporator-collector desalination system to potable water	DST-SERD	21.38	2021-24	ongoing
39.	Dr. Ranu Nayak	Photonic Viropscopy Harnessing light on chip for precise SARS-CoV2 diagnosis	INDO-AUSTRALIA COVID grant	41.87	2021-24	Ongoing
40.	Dr. Shaheen Husain (Dr. Ranu Nayak-Mentor)	Design and development of Nano-scaffolds for bone tissue regeneration	DHR-ICMR Women Scientist	47.25	2021-24	ongoing
41.	Dr. Sumant Upadhyay	Development of Two-Dimensional (2D) Nanoarchitectures based composites/Heterojunctions for photocatalytic hydrogen generation	SERB-TARE	18.30	2022-25	ongoing
42.	Dr. Robin Kumar	Design and optimization of room temperature, heater-less, cost effective CO (Carbon Mono Oxide) Gas sensor using doped OMS2 Nanofibers	SERB-TARE	18.30	2022-25	ongoing
43.	Dr. Utkarsh Jain	Development of molecular imprinting technology based selective impedimetric sensor for direct detection of Acetylcholine (Ach)	SERB-TARE	18.30	2022-25	ongoing
44.	Dr. Sumant Upadhyay (Co-PI)	Design and development of wettability gradient metallic substrate for dropwise condensation under microgravity environment	SERB-CRG	28.23	2022-25	Ongoing

45.	Dr. Nidhi Chauhan, Dr. Utkarsh Jain	Electrochemical ultra-sensing platform integrated with biomarker coated on graphene detecting neonatal sepsis	DBT	6.51	2022-24	-
46.	Dr. Ranu Nayak	Smart 3D nebulized nanofibrous scaffold based low-cost, portable and reusable sorbents for rapid removal of oily contaminants and pathogens from wastewater	BIRAC-BIG	45.29	2022-24	Ongoing
47.	Dr. Ravi Mani Tripathi	Development of colorimetric immunoassay for detection of cholangiocarcinoma using peroxidase-mimetic activity of Pd@SiO ₂ core/shell nanoparticles	SERB-TARE	18.30	2022-24	Yet to start

Industrial Consultancy

S.No	File No.	Number of the Principal Investigator & Co-PI	Project title	Consulting /Sponsoring agency with contact details	Total Grants received Rupees in Lakhs	Duration	Status
1.	C1	Prof. Arpita Bhattacharya	Development of Mosquito repellent additive for emulsion paint formulation	M/S. British Paints	1.11 (2021)	6 Months	Completed
2.	C2	Prof. O, P. Sinha	Testing and analyzing the efficacy of their Nano-Clean range of products towards a large variety of bacteria, viruses, and other micro-organisms.	M/s Luxor Nano Technology Pvt Ltd	5 (2021)	-	-

Fellowship

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1	F1	Dr. Nidhi Chauhan	SERB International Research Experience (2022-23)	SERB	18000 (US\$3000 per month)	6 months (2022-23)	ongoing