

Department of Nanotechnology

(DST-FIST Sponsored Department)

NOORUL ISLAM CENTRE FOR HIGHER EDUCATION

(Deemed to be University under section 3 of the UGC Act 1956)

(Accredited by NAAC (Second Cycle))

Kumaracoil, Thuckalay, Kanyakumari District

Tamil Nadu - 629 180

Research and Consultancy Brochure



About the Department



Department of Nanotechnology was established in the year 2009. The Department offers B.Tech(Nanotechnology), M.Tech (Nanotechnology), M.Phil(Biotechnology) and Ph.D. program in Nanotechnology & Biotechnology under the Faculty of Technology with advanced teaching learning process, mainly emphasizing on the concepts that can be applied to all fields of Engineering and Medicine. The Department is supported by DST-FIST for XRD machine. The unique feature of the Department is that it is functioning with young and dynamic faculty members. The faculty involve in various advanced research activities such as Nano Materials / Sensors, Hybrid Functional Materials, Drug Delivery Systems, Nano Carbon Materials, Graphene & Derivatives, Magnetic NanoMaterials, Nano Biotechnology and Catalysis. The Department is well equipped with facilities necessary for nanotechnology research & undertakes consultancy.

Vision

To develop professionals with strong technical and research backgrounds by contributing to the society through applications of nanotechnology for the betterment of the nation.

Mission

The Nanotechnology department is committed to continually improve the educational environment by providing quality education in both theoretical and applied foundations of nanotechnology to create highly skilled engineers, capable of doing research to produce quality publications and encouraging technology- transfer.

Faculty Details

Faculty Name	Designation	Area of Specialization
Dr. P. K. Praseetha	Professor and Head	Nanobiotechnology
Dr. S. Balamurugan	Professor	Nanomaterials
Dr. T. K. Sreeja	Associate Professor	Nanoelectronics
Dr. R. S. Rimal Isaac	Associate Professor	Nanomaterials and Thin Films
Ms. Tamilarasi K	Assistant Professor	Nanomaterials
Mr. G. Faiyazudeen	Teaching Assistant	Nanomaterials

Research Projects

Principal Investigator	Sponsoring Agency	Year	Amount
Dr. P. K. Praseetha	DST - SHRI	2024-2026	1.16 Crore
	DST - FIST	2018-2023	77.00 Lakhs
	TNSCST	2019-2021	3.31 Lakhs
Dr. S. Balamurugan	TNSCST	2013-2014	2.03 Lakhs
	DAE-BRNS	2012-2015	22.02 Lakhs
	DST - Fast Track	2012-2015	26.54 Lakhs
Dr. Joseph Joly	Indo-Taiwan Program on S&T	2012-2015	Travel Grant
	DST - Fast Track	2012-2015	19.58 Lakhs
Dr. P. Venugopalan	VSSC/ISRO	2012-2014	14.81 Lakhs



Infrastructure (Laboratories)



Nano Synthesis Laboratory



Nano Applications Laboratory



Nano Characterization Laboratory



Nano Biotechnology Laboratory



Advanced Nanomaterials Research Laboratory

Consultancy (Facilities)



X-ray Diffractometer

MODEL: Bruker D2 Phaser

Capabilities: Phase analysis of powders, thin films and solid samples.



TG/DTA

MODEL: SIINT 6300

Capabilities: Thermal Analysis of solids and powders.

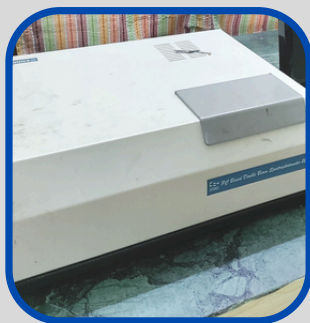


AFM

MODEL: Park Systems XE 70

Capabilities: Nano Imaging with models like AFM, MFM, and STM.





UV-vis Spectrophotometer

MODEL: Systronics M2202

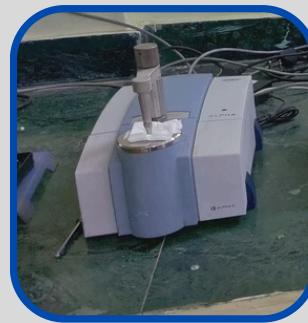
Capabilities: Absorbance and Transmittance measurement of Liquid samples.



Particle Size Analyzer

MODEL: CPS DC12000

Capabilities: Particle Size analysis.



FTIR

MODEL: Bruker Alpha - T & E

Capabilities: For analysis of Functional groups in solid and liquid samples.



Electrochemical Workstation

MODEL: CHI 604 D

Capabilities: Cyclic Voltammetry, AC Impedance, Tafel, Open Circuit Potential.



Ball Mill

MODEL: Retsch PM100

Capabilities: Top Down Synthesis of Nanomaterials.



RAMAN

MODEL: Optiwave EZRaman-N

Capabilities: For analysis of Functional groups in solid and liquid samples.



Surface Area Analyzer

MODEL: Smart Instruments SS 9

Capabilities: Surface Area analysis and Pore Volume analysis of powder samples.

Other Facilities

- Tubular furnace
- Ultra Pure - Water Purifier
- Muffle furnace
- Probe Sonicator
- B-H curve tracer
- Mechanical stirrer
- Autoclave
- Laminar air flow chamber
- Distilled water unit
- Hydraulic Press
- Incubator
- Microwave oven
- Hot air oven
- Spin coater
- Centrifuge
- Vacuum oven
- Magnetic stirrer with hot plate
- Hot plate with ceramic top
- NIR Spectrophotometer
- Glove Box

Contact us

Dr. P. K. Praseetha

Professor and Head

Department of Nanotechnology

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Consultancy

Dr. R. S. Rimal Isaac

(In-charge Nano Characterization Laboratory)

Associate Professor

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