

# CENTRAL RESEARCH FACILITY

HEFA FINANCED FACILITY  
DEDICATED TO THE SERVICE OF THE NATION



## Our Vision

To become a Center of Excellence and an international hub for High-end Research, Characterization, Consultancy and Innovation

## About

The Central Research Facility (CRF) at the NITK, is established with a higher education financing agency (HEFA) loan of Rs. 80 crores towards equipment. CRF has 100% power backup and centralized HVAC and fiber optic connectivity. The total floor area being used is approximately 9300 sq. mt.

## CONTACT US

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# Material Characterization

Field Emission Scanning Electron Microscope

3D Non Contact Confocal Profilometer

Atomic Force Microscope

Automatic Gas Sensing System

BET Surface Area Analyzer with Physisorption

Cell Imaging Multimode Reader

Chemisorption Analyzer with Integrated MS

Ion chromatography

Laser Flash Analyzer

Particle Size & Zeta Potential Analyzer

Pressure Plate Membrane Apparatus

X-ray Diffractometer



## Spectroscopic Characterization

Confocal Raman Spectrometer

Fourier Transform NMR Spectrometer

GCxGC Time of Flight Mass Spectrometry

Glow Discharge - Optical Emission Spectrometer

High Resolution LCMS

Inductively Coupled Plasma Mass Spectrometry

Proton Transfer Reaction TOFMS

Spark - Optical Emission Spectrometer

Spectroradiometer

Thermal Gravimetric Analysis with FTIR

UV-Vis-NIR Spectrometer



## Computational Facility

ANSYS Multiphysics Simulation Package

High Performance Workstations

Simulation Tool for Organic Electronic Device Design  
SETFOS



## Mechanical Characterization

250 kN Servo- Hydraulic Fatigue Testing Unit

Advanced Modular Rheometer

Friction and Wear Monitor

Impedance Analyzer

Instrumented Impact Tester

Low Force Fatigue Testing Machine

Multi-purpose Impact testing Machine with SHPB

MultiRole Mechanical Test System

Slow Strain Rate Test (SSRT) System

Tribotester



## Manufacturing Facility

5-Axis CNC Machine

Friction Stir Welding and Processing

Hollow Fiber Membrane Spinning System

Hybrid Micro EDM Unit

Metal 3D Printer

High Velocity Oxyfuel / Airfuel  
Thermal Spray Coating Facility



## Material Processing

Abrasive Cut off Machines

Automatic Electrolytic Polishing Machine

Ball Milling Units

Electrohydraulic Specimen Mounting Press

Glove Box

Multi-Specimen Grinding and Polishing Machine

Probe Sonicator

Type I & II Water Purification System

Ultra-Centrifuge

UV Ozone Cleaning System

Vacuum Assisted High Temperature Furnace

Liquid Nitrogen Plant

