

Key Research Facilities at IIT BHU

Characterization/ Studies	Name of Instruments
Structural Characterization	Bench Top X-Ray Diffractometer (BT-XRD)
	High Resolution X-Ray Diffractometer (HR-XRD)
	X-Ray Photoelectron Spectrometer (XPS)
Thermal Characterization	Thermogravimetric Analyzer (TGA)
	TGA-DTA
	Differential Scanning Calorimetry (DSC)
Morphological Characterization	Scanning Electron Microscope (SEM)
	Scanning Probe Microscope (SPM)
	High-Resolution Transmission Electron Microscope (HR-TEM)
	Confocal Laser Scanning Microscope (CLSM)
Mechanical Testing	Nano-Indentation
	Thermal Mechanical Physical Simulator Tester (TMPST)
	Rheometer/Dynamic Mechanical Analyzer (DMA)
	Multifunction Tribometer
3D Printers	3D Metal, Composite, Polymer Printers
Elemental Characterization	Energy Dispersive X-Ray Spectroscopy (EDS)
	Ion Chromatography (IC)
	Inductively Coupled Plasma Mass Spectrometer (ICP-MS)
	X-Ray Fluorescence Spectrometer (XRF)
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Surface Area/Particle characterization	Brunaur Emmet Teller (BET)
	Chemisorption
	Dynamic Light Scattering Analyser (DLS)
Electrical Characterization/ Fabrication	Vector Network Analyzer (VNA)
	Printed Circuit Board (PCB) Prototyping
Magnetic & Physical Properties Measurements	Magnetic Property Measurement System (MPMS)
	Physical Property Measurement System (PPMS)
Identification of Molecule and Chemical Analysis	Fourier Transform Infrared Spectrophotometer (FTIR)
	Nuclear Magnetic Resonance Spectrometer (NMR)
	Liquid Chromatography-High Resolution Mass Spectrometer (LC-HRMS)