

Transmission Electron Microscope (TEM)



Atomic Force Microscope (AFM)

Make: Bruker
Model: INNOVA AFM

Instrument Specifications:
Contact, Non-contact
(tapping mode) and STM

Installed at Electron Microscopy Lab

Teacher In-charge:
Dr. K.S. Joshi,
Dr. V. Chandio and
Dr. C.P. Upadhyay



Simultaneous Thermal Analyzer

Make: Netzsch
Model: STA 6000 F1 Jupiter

Installed at Department of Physics
Teacher In-charge: Dr. Binveer Kumar



BET Surface Area Analyzer

Make: BEL, Japan Inc.
Model: BELSORP-M16
Installed at Department of Chemistry

Instrument Specifications

BELSORP-M16

BET single point measurement with 6 sample holders. BET surface area can be obtained accurately and quickly after drying samples in built-in desiccator complete control of the measurement.

Measurement principle: Dynamic method

Measurement mode: BET single point method

The number of samples: 6

Absorption gas: N₂, H₂

Maximum pretreatment temperature: 600°C

Measurement relative pressure: 0.3, 0.05-0.9 (ppb)

Machine installed at the Department of Chemistry.

Time for measurement: Approximately 12 minutes/sample (excluding sample pretreatment)

Measurable specific surface area range: 0.01 m²/g and more

Reproducibility: Within 1% (depends on sample)

Dimensions: 570x450x435

Teacher in charge:
Dr. Pooja Ghosh and Dr. Anish Chandra



Single Crystal X-ray Diffractometer (SC-XRD)

Make: BRUKER AXS
Model: Xpress Apex II

Instrument Specification

Four Circle Diffractometer
CCD based Detector System
Mo K α (0.7107 Å) radiation
APEX II Software suit
Low temperature (100 K) data collection

Installed at Department of Physics (Room No: 14)
Teacher in-charge:
Dr. R. Raghaviah and Dr. M.D. Pandey



Flow Cytometer Cell Sorter

Make: BD Biosciences USA,
Model: FACSAria III

Instrument specification

The BD FACSAria™ III sorter is built on the solid foundation of patented technologies, superior multicolor performance, and legendary ease-of-use that opened the complex world of cell sorting to a broader audience of researchers and wider range of applications. The fluids and optical systems are precisely integrated to maximize signal detection. A patented flow cell with gel-coupled cuvette and patented collagen and trigon detection system allow the system to achieve unrivaled sensitivity and resolution.



Fourier Transform Infrared Spectrometer (FT-IR)



Electrochemical Work Station (AutoLab)

Gas Chromatograph Mass Spectrometer (GC-TOF)

Make: JEOL JAPAN
Model: GC-AMS1100GCV
(AccuTOF GCV 40)

Instrument Specifications:

Mass accuracy:
1.5 mDa or 4 ppm (m/z 4)
Mass resolution:
0-8000
Sensitivity:
SN at 100 fM (1 pg)
Mass range:
m/z: 4-4000
Installed at Department of Chemistry
Teacher in-charge:
Dr. Rajeshwar Das and
Dr. Aparajita Duggopatri

