

### Atomic Force Microscope (AFM)



- Make: NT-MDT; Model: NTEGRA Prima; Installed: 2015
- Tapping mode, Contact Mode, Two pass 'lift modes' (EFM/MFM/KPFM), Conductive probe AFM (CP-AFM)
- Funded by DST FIST & BITS Pilani

### BET Surface Area Analyzer



- Make: Quantachrome; Model: Nova 2200e; Installed: 2021
- Two port degassing station and two port sample holders
- Surface area, pore size & pore volume analysis

### CHNS Elemental Analyzer



- Make: Elementar Vario; Model: MICRO CUBE; Installed: 2014
- C,H,N,S analysis for solid samples.
- Procured with 6 digit balance

### Density Meter



- Make: Rudolph Analytical; Model: DDM2911; Installed: 2021
- Density measurement ranges : 0 to 3 g/cm<sup>3</sup>
- Measurement modes - continuous, single, multiple

### Electrochemical workstation



- Make: IVIUM; Model: IVIUMSTAT; Installed: 2015
- Various electrochemical techniques such as voltammetry, step techniques, AC techniques, corrosion analysis

### Flash Chromatograph



- Make: Teledyne Isco; Model: Combiflash Next GEN; Installed: 2018
- PDA variable wavelength UV detection, Real time spectral display, two solvent binary gradients.

### Fluorimeter



- Make: Jasco; Model: FP 8500; Installed: 2017
- Integrated sphere
- Long wavelength PM tube, solid sample holding block, liquid sample cell, quantum yield calculation program.

### FTIR Spectrophotometer



- Make: Shimadzu; Model: IR Affinity 1; Installed: 2013
- Transmission mode
- ATR mode
- KBr press for pellet making

### GC-MS



- Make: Agilent; Model: GC-8890 with MS- 5977B; Installed: 2022
- Thermal conductivity detector with EPC, Flame ionization detector, Electron capture detector with EPC.

### HPLC



- Make: Shimadzu; Model: P-series; Installed: 2023
- Binary HPLC system with PDA detector

### Ion Chromatograph (IC)



- Make: Metrohm; Model: Eco IC; Installed: 2019
- Conductivity detector and UV-Vis detector.
- Detection of cations, anions and transition metals

### UV-Vis Spectrophotometer



- Make: Jasco; Model: V770; Installed: 2015
- Liquid and powder sample holder
- Integrating sphere setup

Apart from these, we have total organic carbon (TOC, Shimadzu, TOC LCPH) analyzer; Multi -Mode Microplate Reader (spectro Max iD3); Benchtop NMR (Oxford, Pulsar); Microwave Reactor (Discover CEM); Polarimeter (Jasco P-2000), Viscometer (Brookfield, DV1MLVCJ0); Refractometer (Rudolph, J 257); TGA & DSC (Shimadzu, TGA 60 & DSC 60); HPLC (Agilent, 1260) and powder XRD (Miniflex III) on shared basis.

**Computational Facilities in the Department:** Dell Server, Gaussian 09 64 Bit for single computer Multiprocessor and Gaussview 5 Academic License MS Window with Media, WIEN 2K, CHEMBIO OFFICE ULTRA, Sigmaplot 13, Molpro

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