

# **Indian Institute of Technology Indore, Sophisticated Instrumentation Centre (SIC), A National Facility**

**Fee Structure (per sample in INR for All SAARC Countries, exclusive of taxes)**

## **1. Single Crystal X-ray Diffraction Facility**

<u>Academic Institutions</u>	<u>Industry</u>	<u>Condition</u>
7,000/-	60,000/-	Data collection and structure solution up to publication level
2,000/-	15,000/-	Low temperature (Liquid Nitrogen) charges
	25,000/-	Laboratory charges (crystallization attempts if required)

**For NON-SAARC Countries (per sample in Euro, exclusive of taxes)**

<u>Academic Institutions</u>	<u>Industry</u>	<u>Condition</u>
750/-	3,000/-	Data collection and structure solution up to publication level with Low temperature (Liquid Nitrogen)

## **2. Powder X-ray Diffraction Facility (PXRD)**

<u>Academic Institutions</u>	<u>Industry</u>	<u>Condition</u>
2,000/-	5,000/-	per hour of data collection

## **3. NMR Spectroscopy**

<u>Instrument</u>	<u>Academic Institutions</u>	<u>Industry</u>	<u>Condition</u>
Proton NMR	200/-	500/-	
<sup>13</sup> C & other X-Nuclei & 2D NMR (For first hour of data collection)	300/-	700/-	Only raw FID files will be shared over email.
Proton NMR	500/-	800/-	
<sup>13</sup> C & other X-Nuclei & 2D NMR	1,000/-	1,200/-	Proper report in PDF format will be given

(For first hour of data collection)			
Temperature variability range 25°C to 120°C	200/-	500/-	For subsequent hours
Temperature variability range 25°C to 120°C	500/-	2,000/-	For high temperature data collection (extra charges)
Temperature variability range 25°C to 120°C	500/-	2,000/-	For high temperature data collection (extra charges)
Temperature variability range 25°C to -70°C	1,000/-	2,500/-	For Low temperature (Liquid Nitrogen) charges
Structure Elucidation	2,500/-	5,000/-	Detailed report of Peak Assignment based on structure will be given.

#### Solvent charges extra at actual cost

D <sub>2</sub> O / CDCl <sub>3</sub> / DMSO-d <sub>6</sub> / MeOD / CD <sub>3</sub> COCD <sub>3</sub>	200/-
All other solvents	300/-

#### **4. Liquid Chromatography-Mass Spectrometry (LC-MS)**

<u>Instrument</u>	<u>Academic Institutions</u>	<u>Industry</u>
HPLC	1,000/-	1,500/-
LC-MS	1,000/-	2,000/-
HRMS	1,000/-	1,500/-
Mass	1,000/-	1,500/-

#### **5. Gas Chromatography-Mass Spectrometry (GC-MS)**

<u>Instrument</u>	<u>Academic Institutions</u>	<u>Industry</u>
GC-MS	2,000/-	5,000/-
GC-TCD	1,000/-	2,000/-
GC-FID	1,000/-	2,000/-

#### **6. Thermal Analysis: TGA**

	<u>Academic Institutions</u>	<u>Industry</u>
TGA	1,000/-	2,000/-
DSC	3,000/-	5,000/-

#### **7. Differential Scanning Calorimetry : DSC**

<u>Academic Institutions</u>	<u>Industry</u>
3,000/-	5,000/-

## 8. Elemental Analysis (CHNS-O)

	<u>Academic Institutions</u>	<u>Industry</u>
C,H,N,S Analysis	1,000/-	2,000/-
Oxygen Analysis	500/-	1,500/-

## 9. BET Surface Area Analyzer

<u>Condition</u>	<u>Academic Institutions</u>	<u>Industry</u>
Physisorption/Chemisorption		
Measurement based on N 2 Gas	5,000/-	10,000/-
Measurement based on CO 2 , and H 2 gases	8,000/-	16,000/-
Measurement based on mixture of gases :5%H 2 & 95%N 2 , 5% Oxygen & 95% He and 20% Ammonia & 80% He	10,000/-	20,000/-
Micropore Analysis		
Measurement based on N 2 Gas	10,000/-	20,000/-
Measurement based on CO 2 , and H 2 gases	16,000/-	32,000/-
Measurement based on mixture of gases :5%H 2 & 95%N 2 , 5% O 2 & 95% He and 20% NH 3 & 80% He	20,000/-	40,000/-

## 10. Spectroscopy

<u>Instrument</u>	<u>Academic Institutions</u>	<u>Industry</u>
FT-IR	500/-	1,000/-
UV-Visible	500/-	1,000/-
UV-Vis-NIR	500/-	1,000/-
Fluorescence	500/-	1,000/-
Circular Dichroism (CD)	1,000/-	2,000/-

## 11. Other Equipments

<u>Instrument</u>	<u>Academic Institutions</u>	<u>Industry</u>

Polarimeter	500/-	1,000/-
Labconco Lyophilizer	750/-	1,500/-
Rheometer	500/-	1,000/-
Langmuir–Blodgett film deposition system	500/-	1,000/-

## 12. Atomic Force Microscopy/ Scanning Probe Microscopy: AFM (SPM)

<u>Measuring modes</u>	<u>Academic Institutions</u>	<u>Industry</u>	
Semi-Contact & Contact Mode	1,000/-	2,000/-	Processed image up to the publication level
Conductive Magnetic Force Microscopy (MFM)			
Kelvin Probe (Surface Potential Microscopy)	5,000/-	15,000/-	Processed image up to the publication level
Electric Force Microscopy (EFM)			
Scanning Tunneling Microscopy (STM)			

## 13. Field – Emission Scanning Electron Microscope (FE-SEM)

	<u>Academic Institutions</u>	<u>Industry</u>	
FE-SEM	1,000/-	2,000/-	
EDS/EDX	2,000/-	3,500/-	Per sample for first hour of recording
WDS/WDX	2,500/-	10,000/-	

## 14. Single Molecule Imaging, Using Total internal reflection fluorescence microscopy (TIRFM)

<u>Academic Institutions</u>	<u>Industry</u>
500/-	2,500/-

## 15. Confocal Laser Scanning Microscope (CLSM)

<u>Operations</u>	<u>Academic Institutions</u>	<u>Industry</u>	<u>Condition</u>
Confocal Imaging	1,000/-	1,500/-	Per Hour
FLIM/FCS	1,000/-	3,000/-	Per Hour
Live Cell Imaging	4,000/-	10,000/-	Per Hour

Multiphoton Imaging	1,500/-	3,000/-	Per Hour
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#### **16. Dual Ion Beam Sputtering Deposition (DIBSD) Facility**

	<u>Academic Institutions</u>	<u>Industry</u>
For precious/noble metals	8,000/-	60,000/-
For Semiconductors	7,000/-	50,000/-
For dielectrics	5,000/-	40,000/-

#### **17. Four Probe Hall Measurement System**

	<u>Academic Institutions</u>	<u>Industry</u>
For precious/noble metals	1,000/-	4,000/-

#### **18. Solar Simulator & Quantum Efficiency Measurement System**

	<u>Academic Institutions</u>	<u>Industry</u>
For Voc,Isc and PCE measurements	5,000/-	20,000/-
For Voc,Isc and PCE, internal and external quantum efficiencies measurements	10,000/-	50,000/-

#### **19. Annealing Furnace**

	<u>Academic Institutions</u>	<u>Industry</u>
For annealing under vaccum	1,000/-	40,000/-
For annealing under argon/nitrogen/oxygen	2,000/-	6,000/-

#### **20. Variable-Angle, Variable-Wavelength Spectroscopic Transmission, Reflection & Ellipsometry**

	<u>Academic Institutions</u>	<u>Industry</u>
For transmission, reflection and thickness measurements	2,000/-	6,000/-
For transmission, reflection, thickness and ellipsometry measurements	4,000/-	10,000/-

#### **21. Photo-Luminescence (PL)**

	<u>Academic Institutions</u>	<u>Industry</u>
For Room Temp PL	500/-	2,000/-

For Low Temp PL	1,000/-	3,000/-
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## 22. Extended X-ray absorption fine structure (EXAFS)

<u>Academic Institutions</u>	<u>Industry</u>	<u>Condition</u>
2000/-	4000/-	Per sample for first hour of recording
500/-	1000/-	Data Recording for subsequent hour
2500/-	5000/-	Data Analysis & Interpretation

## 23. Microwave Reactor

<u>Academic Institutions</u>	<u>Industry</u>
200/- (per hour)	1000/-(per hour)

## 24. Cyclic Voltammetry (CV)

<u>Academic Institutions</u>	<u>Industry</u>
500/- (per hour)	1000/-(per hour)

## 25. Liquid Nitrogen (Ln2)

<u>Academic Institutions</u>	<u>Industry</u>
31/- (per Litre) At a time maximum of 400 liters will be delivered. Transportation to be arranged by the buyer themselves.	37/- (per Litre)

**Source:** <http://people.iiti.ac.in/~sic/index.php?q=fees>