

| <div><div><br/>IIT PALAKKAD</div><div><p>Approved analytical charges for Internal Users<br/>Central Instrumentation Facility (CIF) and<br/>Central Micro-Nano Fabrication Facility (CMFF)</p><p>INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD<br/>भारतीय प्रौद्योगिकी संस्थान पालक्काड</p><p>Under Ministry of Education, Govt. of India<br/>शिक्षा मंत्रालय के अधीन, भारत सरकार</p></div></div> |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              |                                                             |                                                 |                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------|---------------------------------|
| Sl. No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Instrument Name                                                                                                                                                                    | Analysis                                                                                                                                                                                                                                                                                                                                                                                     | Unit                                                        | Sponsored Research/Students Category (Internal) | Industry Consultancy (Internal) |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 64-channel EEG amplifier                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                              | Per Hour                                                    | 510                                             | 2040                            |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Experiment with VNA/ Signal Analyzer/ Microwave Signal Generator                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                              | 1 Hour                                                      | 55                                              | 220                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | 1 day (9.00hrs to 13.00hrs) and (14.00hrs to 17.00hrs)      | 220                                             | 880                             |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Fourier Transform Infra Red Spectroscopy                                                                                                                                           | With KBR Pellet                                                                                                                                                                                                                                                                                                                                                                              | If KBr pellet has to be made by CIF staff                   | 145                                             | 580                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | If KBr Pellet is brought by the user                        | 95                                              | 380                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | For ATR Analysis                                                                                                                                                                                                                                                                                                                                                                             |                                                             | 95                                              | 380                             |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Liquid Chromatogram Mass Spectrophotometer (Method is based on water, acetonitrile mixture. The cost indicated is for a 15 min run. Actual cost may vary depending on the method.) | LC MS analysis                                                                                                                                                                                                                                                                                                                                                                               | If the method is for 15 minute run                          | 145                                             | 580                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | LC MS MS Analysis. If Sample is not submitted in prescribed vials an additional cost of 85 /- will be added                                                                                                                                                                                                                                                                                  | If the method is for 15 minute run                          | 165                                             | 660                             |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Nuclear Magnetic Resonace Spectrophotometer                                                                                                                                        | If Sample preparation is to be done by CIF. Cost per sample in respective solvents. (If the sample is not submitted in NMR tube,the same can be purchased from CIF with the cost of INR 1000/ tube.)                                                                                                                                                                                         | CDCl3                                                       | 115                                             | 460                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | CD3OD                                                       | 215                                             | 860                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | Deuterated DMSO                                             | 315                                             | 1260                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | D2O                                                         | 415                                             | 1660                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | Sample is prepared by the user in NMR tube                                                                                                                                                                                                                                                                                                                                                   | per sample                                                  | 65                                              | 260                             |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TG DTA MS                                                                                                                                                                          | Program for a routine run from RT to 1100 deg C at 10 deg./min. *Cost may change according to the Temperature programme and gases.                                                                                                                                                                                                                                                           | For Alumina Pan                                             | 423                                             | 1692                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | For Pt/Rh Pan                                               | 1367                                            | 5468                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TG DTA                                                                                                                                                                             | Program for a routine run from RT to 1100 deg C at 10 deg./min. *Cost may change according to the Temperature programme and gases.                                                                                                                                                                                                                                                           | For Alumina Pan                                             | 330                                             | 1320                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | For Pt/Rh Pan                                               | 1274                                            | 5096                            |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DC Probe Station and Semiconductor Parameter Analyser                                                                                                                              | DC Probe Station (RT to 150 deg C) with Semiconductor Parameter Analyser                                                                                                                                                                                                                                                                                                                     | per hour                                                    | 60                                              | 240                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | Semiconductor Parameter Analyser                                                                                                                                                                                                                                                                                                                                                             | per hour                                                    | 35                                              | 140                             |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Mask Aligner                                                                                                                                                                       | Mask will be brought by the User. Prices comparable or lesser than what IISc charges. Prices are high due to consumables (resists, gases). Available resists for common use will be put up. Any resists not mentioned in the list will have to be brought by the User. It will be encouraged to club slots because it would not be advisable to switch on/off the lamp multiple times a day. | per hour                                                    | 800                                             | 3200                            |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | FE S E M                                                                                                                                                                           | SEM Image                                                                                                                                                                                                                                                                                                                                                                                    | per hour                                                    | 160                                             | 640                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | SEM + EDS                                                                                                                                                                                                                                                                                                                                                                                    | per hour                                                    | 185                                             | 740                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | SEM + EDS mapping                                                                                                                                                                                                                                                                                                                                                                            | per hour                                                    | 210                                             | 840                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | SEM Image + EBSD + Mapping                                                                                                                                                                                                                                                                                                                                                                   | per Specimen                                                | 310                                             | 1240                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | Au/Pd coating                                                                                                                                                                                                                                                                                                                                                                                | per Specimen                                                | 210                                             | 840                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | SEM + Lithography                                                                                                                                                                                                                                                                                                                                                                            | per use                                                     | 860                                             | 3440                            |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Universal hardness tester                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                              | per specimen with max. of 10 indents                        | 60                                              | 240                             |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Non contact Optical Profilometer                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                              | per hour                                                    | 110                                             | 440                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Electropolishing                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                              | per specimen                                                | 50                                              | 200                             |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | XRD                                                                                                                                                                                | Powder/thin film                                                                                                                                                                                                                                                                                                                                                                             | Per Sample                                                  | 110                                             | 440                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | XRR                                                                                                                                                                                                                                                                                                                                                                                          | Per Sample                                                  | 160                                             | 640                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | SAXS                                                                                                                                                                                                                                                                                                                                                                                         | Per Sample                                                  | 160                                             | 640                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | High Temperature/Stress /Pole figure                                                                                                                                                                                                                                                                                                                                                         | Per Sample                                                  | 160                                             | 640                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              |                                                             |                                                 |                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | Normal Scan – 514 nm, 633 nm                                                                                                                                                                                                                                                                                                                                                                 | Per Sample                                                  | 50                                              | 200                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | UV laser – 325 nm                                                                                                                                                                                                                                                                                                                                                                            | Per Sample                                                  | 50                                              | 200                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    | Temperature Dependence from 80K to 600K / Insitu 4 probe measurement                                                                                                                                                                                                                                                                                                                         | 1. Upto 15 Spectra (Liquid Nitrogen to be arranged by user) | 200                                             | 800                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | 2. Upto 25 Spectra (Liquid Nitrogen to be arranged by user) | 250                                             | 1000                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | 3. Upto 35 Spectra (Liquid Nitrogen to be arranged by user) | 300                                             | 1200                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | 4. Upto 45 Spectra (Liquid Nitrogen to be arranged by user) | 350                                             | 1400                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              | 5. Upto 55 Spectra (Liquid Nitrogen to be arranged by user) | 400                                             | 1600                            |

|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            |                                                                                                              |      |      |
|----|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------|------|
| 13 | Raman Spectroscopy                                    |                                                                                                                                                                                                                                                                                                                                                            | 6. Upto 65 Spectra (Liquid Nitrogen to be arranged by user)                                                  | 450  | 1800 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 7. Upto 75 Spectra (Liquid Nitrogen to be arranged by user)                                                  | 500  | 2000 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 8. Per sample (Liquid Nitrogen arranged by CIF for first 10L and Rs.120/ L charged for additional LN2 used). | 1500 | 6000 |
|    |                                                       | Polarization                                                                                                                                                                                                                                                                                                                                               | 1. Upto 15 Spectra                                                                                           | 200  | 800  |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 2. Upto 25 Spectra                                                                                           | 250  | 1000 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 3. Upto 35 Spectra                                                                                           | 300  | 1200 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 4. Upto 45 Spectra                                                                                           | 350  | 1400 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 5. Upto 55 Spectra                                                                                           | 400  | 1600 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 6. Upto 65 Spectra                                                                                           | 450  | 1800 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 7. Upto 75 Spectra                                                                                           | 500  | 2000 |
| 14 | High Performance Liquid Chromatoraphy                 | Method is based on water, acetonitrile mixture. The cost indicated is for a 15 min run. Actual cost may vary depending on the method. If Sample is not Submitted in Prescribed Vials an Additional cost of 85 /- will be added, If sample collecting Vials also has to provide by CIF additional cost of 50/- per samples needs to collect, will be added. | Per Sample                                                                                                   | 160  | 640  |
| 15 | RF Sputtering system                                  | (Tentative cost, will be revised after equipment if fully commissioned.) Standard targets will be supplied. Gold and Platinum deposition will incur an additional cost, depending on actual duration of deposition.                                                                                                                                        | per 3 h                                                                                                      | 350  | 1400 |
| 16 | Wet bench for cleaning and Lithography                | Cost Includes Wet Bench and cost of DI water Plant                                                                                                                                                                                                                                                                                                         | 30 min                                                                                                       | 55   | 220  |
|    |                                                       | DI Water alone                                                                                                                                                                                                                                                                                                                                             | Type 1 Water (Ultra Pure)/Liter                                                                              | 15   | 60   |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | Type 2 Water/Liter                                                                                           | 10   | 40   |
| 17 | Mixed signal Digital Oscilloscope                     |                                                                                                                                                                                                                                                                                                                                                            | per hr.                                                                                                      | 25   | 100  |
| 18 | RF Probe station                                      | one probe                                                                                                                                                                                                                                                                                                                                                  | per session                                                                                                  | 55   | 220  |
|    |                                                       | two probes                                                                                                                                                                                                                                                                                                                                                 | per session                                                                                                  | 75   | 300  |
|    |                                                       | three probes                                                                                                                                                                                                                                                                                                                                               | per session                                                                                                  | 95   | 380  |
|    |                                                       | four probes                                                                                                                                                                                                                                                                                                                                                | per session                                                                                                  | 115  | 460  |
| 19 | Chemisorption                                         | Gases used are Ar and 10 % Hydrogen in Ar ( * Cost may vary according to the gases used and method)                                                                                                                                                                                                                                                        | per sample                                                                                                   | 670  | 2680 |
| 20 | GC                                                    | For organic compounds with boiling point below 150 oC. Compounds should not decompose upto 150 oC.                                                                                                                                                                                                                                                         | per sample<br>for Single Column Operation                                                                    | 260  | 1040 |
| 21 | Confocal Laser Scanning Microscope                    |                                                                                                                                                                                                                                                                                                                                                            | Per Slot ( 2 Hours)                                                                                          | 300  | 1200 |
| 22 | Automatic PCB Manufacturing Machine with PTH Facility | Fabrication on the printed circuit board (PCB) with etching and milling. ( The user should bring the PCB substrate for fabrication)                                                                                                                                                                                                                        | 1 Hour                                                                                                       | 150  | 600  |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 2 Hour                                                                                                       | 250  | 1000 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 3 Hour                                                                                                       | 400  | 1600 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | More than 3 Hour                                                                                             | 600  | 2400 |
| 23 | Arc Melt Furnace                                      |                                                                                                                                                                                                                                                                                                                                                            | For Four hours of operatrion                                                                                 | 150  | 600  |
| 24 | Ball Mill                                             | Grinding jar of 50 ml and Milling balls shall be brought by the user.                                                                                                                                                                                                                                                                                      | For max of Two hours of operatrion                                                                           | 60   | 240  |
| 25 | Muffle Furnace                                        | Suitable Boats or Crucible shall be brought by the user.                                                                                                                                                                                                                                                                                                   | For Four hours of operatrion                                                                                 | 30   | 120  |
| 26 | Rapid Thermal Processing System                       | The boats and tube shall be brought by the user.                                                                                                                                                                                                                                                                                                           | For Four hours of operatrion                                                                                 | 90   | 360  |
| 27 | Quartz tube Sealing Station                           |                                                                                                                                                                                                                                                                                                                                                            | 1 No                                                                                                         | 50   | 200  |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | 2 Nos                                                                                                        | 80   | 320  |
|    |                                                       | Quartz tube                                                                                                                                                                                                                                                                                                                                                | 1 No. (Arranged by CIF) 18 mm OD, 15 mm ID                                                                   | 500  | 2000 |
|    |                                                       | Diffusion Pump Vaccum (10-5 mbar)                                                                                                                                                                                                                                                                                                                          | Per Slot (Liquid Nitrogen arranged by CIF)                                                                   | 1600 | 6400 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            |                                                                                                              |      |      |
| 28 | High Temperature Chamber Furnace 1700°C               |                                                                                                                                                                                                                                                                                                                                                            | Per Sample                                                                                                   | 60   | 240  |
| 29 | High Resolution Optical Microscope                    |                                                                                                                                                                                                                                                                                                                                                            | Per Slot of 1 Hour                                                                                           | 50   | 200  |
| 30 | Time-Resolved Spectrofluorometer                      |                                                                                                                                                                                                                                                                                                                                                            | Per Decay                                                                                                    | 120  | 480  |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | Quenching Study (For 10 Samples)                                                                             | 1200 | 4800 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | FRET (Per Decay)                                                                                             | 120  | 480  |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | Anisotropy (Per Decay)                                                                                       | 120  | 480  |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | TRES (Per Decay)                                                                                             | 120  | 480  |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            |                                                                                                              |      |      |
| 31 | Dual Channel Source Meter                             |                                                                                                                                                                                                                                                                                                                                                            | For Full Day                                                                                                 | 50   | 200  |
| 32 | Dynamic Shear Rheometer                               |                                                                                                                                                                                                                                                                                                                                                            | Frequency/Time/Temperature sweep                                                                             | 300  | 1200 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | MSCR                                                                                                         | 300  | 1200 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | LAS                                                                                                          | 300  | 1200 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | Building Material Cell                                                                                       | 400  | 1600 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | DMA Analysis (Tension/Torsion)                                                                               | 450  | 1800 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | Flow of consolidated powders                                                                                 | 600  | 2400 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | Tribology                                                                                                    | 600  | 2400 |
| 33 | Argon Glove Box                                       |                                                                                                                                                                                                                                                                                                                                                            | Normal Operation Per Hour                                                                                    | 100  | 400  |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | Large Antechamber Per Hour                                                                                   | 50   | 200  |
| 34 | Precision Diamond Wire Cutter                         |                                                                                                                                                                                                                                                                                                                                                            | Cut Per Sample (Maximum 5 Cuts)                                                                              | 75   | 300  |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | Temperature range (2 K to 300 K) 2 days                                                                      | 500  | 2000 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | Temperature range (300 mK to 300 K) 2 days                                                                   | 650  | 2600 |
|    |                                                       |                                                                                                                                                                                                                                                                                                                                                            | Temperature range (2 K to 300 K) 7 days                                                                      | 1000 | 4000 |

|                                                                                                                                                                             |                             |                                                                                                                                                                                             |                                                        |      |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------|------|
| 35                                                                                                                                                                          | Variable Temperature Insert |                                                                                                                                                                                             | Temperature range (300 mK to 300 K) 7 days             | 1300 | 5200 |
|                                                                                                                                                                             |                             |                                                                                                                                                                                             | Temperature range (2 K to 300 K) with magnet 2 days    | 700  | 2800 |
|                                                                                                                                                                             |                             |                                                                                                                                                                                             | Temperature range (300 mK to 300 K) with magnet 2 days | 900  | 3600 |
|                                                                                                                                                                             |                             |                                                                                                                                                                                             | Temperature range (2 K to 300 K) with magnet 7 days    | 1400 | 5600 |
|                                                                                                                                                                             |                             |                                                                                                                                                                                             | Temperature range (300 mK to 300 K) with magnet 7 days | 1800 | 7200 |
| 36                                                                                                                                                                          | Gas Bank                    | Per 100 Litres of Gas Consumption                                                                                                                                                           | Nitrogen                                               | 112  | 448  |
|                                                                                                                                                                             |                             |                                                                                                                                                                                             | Oxygen                                                 | 15   | 60   |
|                                                                                                                                                                             |                             |                                                                                                                                                                                             | Argon                                                  | 112  | 448  |
| 37                                                                                                                                                                          | Squid Magnetometer          | DC Magnetization vs. Magnetic Field ( 0 to $\mp$ 7 T) or DC Magnetization vs. Temperature (1.8 K to 350 K) or AC Susceptibility Measurements (frequency = 1 - 499 Hz; amplitude = 2- 10 Oe) | First Day                                              | 400  | 1600 |
|                                                                                                                                                                             |                             |                                                                                                                                                                                             | Second Day Onwards                                     | 300  | 1200 |
| 38                                                                                                                                                                          | 500 MHz NMR                 | Solution State Probe (5.0 mm BBFO)                                                                                                                                                          | Proton                                                 | 10   | 40   |
|                                                                                                                                                                             |                             |                                                                                                                                                                                             | Carbon (Proton Decoupled)                              | 20   | 80   |
|                                                                                                                                                                             |                             |                                                                                                                                                                                             | 2D (COSY, NOESY, HSQC, HMBC etc.)                      | 50   | 200  |
|                                                                                                                                                                             |                             |                                                                                                                                                                                             | VT NMR Experiments (Temperature range -60°C to +90°C)  | *    | *    |
| *The charges will be based on the number of experiments conducted. The internal user must provide all the necessary consumables required for conducting the VT experiments. |                             |                                                                                                                                                                                             |                                                        |      |      |
| Approved charges applicable from September 01, 2026                                                                                                                         |                             |                                                                                                                                                                                             |                                                        |      |      |