Department of Physics

**Indian Institute of Technology Patna**

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**Requisition form for TEM/HRTEM**

1. USER and PAYMENT DETAILS

|  |  |  |  |
| --- | --- | --- | --- |
| Name, Affiliation | Department/Organization (In case of outside IIT P, give full postal address) | Contact details  (phone number and e-mail id) | Payment confirmation |
|  |  |  | Amount Paid:  DD number/Transaction Reference:  Date:  Bank: |

1. SAMPLE DETAILS

|  |  |  |
| --- | --- | --- |
| **No of Samples with sample ID (s):** | |  |
| Nature of sample | Whether the sample is Powder/ Film/ Disc?  Whether the sample is Polymer/Ceramic/Metal/Composite/Biological?  Whether the sample is Amorphous/ Polycrystalline/ Single Crystal?  Is the sample Carcinogenic/Toxic/Radioactive/Corrosive/Explosive/Flammable?  Is the sample magnetic? If yes, mention magnetism type and value.  Is the sample hygroscopic? Yes/No  Whether the sample is volatile? (Yes/No)  Is the sample sensitive to electron beam? (Yes/No)  Medium of Dispersion:  Expected morphology, & expected particle size:  Any other sample info relevant to TEM… | |

1. EXPERIMENTAL DETAILS REQUIRED

|  |
| --- |
| 1. Micrographs required   TEM Micrographs and magnifications:  SAED pattern micrograph  STEM Micrographs and magnifications  HRTEM Micrographs and magnifications   1. Magnification Required: 2. Composition analysis of the sample:    1. Qualitative microanalysis (EDS) Expected elements:    2. X-ray mapping: Line scan/spot scan (mention spot size): 3. Any other specific requirement: |

Signature of the user

Name & Signature of the Supervisor

Signature of HoD, user department

(With date and official seal)

FOR OFFICE USE ONLY

1. SLOT ALLOTMENT DETAILS

Job Order Number:

Assigned date and time of execution: No. of slots allotted:

Signature of staff operator/in-charge Signature of Faculty in-charge

**Terms and Conditions for using the Facilities**

1. The charges mentioned are for one slot (maximum two samples) unless otherwise mentioned in the table mentioning analytical charges
2. If slot is missed by the user, fresh requisition form should be submitted.
3. User is responsible for sample preparation.
4. Diameter for non-powder samples should not exceed 3 mm in dimension.
5. Sample should be properly dried and should not be magnetic.
6. User may contact the concerned operator for the experiment specific preparation/treatment of sample.
7. **User has to send** the respective **TEM grid for** measurement. Alternatively, additional charges of **INR 1000** will have to be paid by the user for issuing a normal carbon coated copper grid subject to availability.
8. The charges mentioned are only for measurement and providing the raw data (in the format possible with the instrument) thereafter. No analysis/software compatibility of data can be claimed later. For consultancy on data analysis, the user may contact the experts separately through head of the department.
9. Measurements are subject to the corresponding instrument being in working condition. The status of each instrumental facility will be updated regularly.
10. In case of the measurement remains incomplete due to malfunctioning or any unforeseen situation, the user will be notified. Depending upon user’s discretion, either the payment received will be returned or the measurement will be carried out after the instrument becomes functional (maximum waiting period also may be informed by user).

**Analytical charges related to experiments performed with transmission electron microscope**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of the facility | Measurement type | Analytical charges (in INR, per sample) | |
| Users from external academic institutes | Users from Industries /R & D laboratories |
| HRTEM | TEM imaging | 3000 | 6000 |
| HRTEM | 4000 | 8000 |
| EDS | 2000 | 4000 |
| EDS (mapping) | 3000 | 5000 |
| TEM+EDS | 4000 | 8000 |
| TEM+HRTEM | 5000 | 9000 |
| TEM+HRTEM+EDS | 6000 | 10,000 |
| TEM+HRTEM+EDS+mapping | 8000 | 12,000 |

\*For any specific customized measurement/testing, the analytical charges can be estimated in consultation with Physics department.