

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH**

**THIRUVANANTHAPURAM [IISER-TVM]**

PH: 0471-2597454  
FAX:0471-2597427  
EMAIL: [purchasestores@iisertvm.ac.in](mailto:purchasestores@iisertvm.ac.in)

CET CAMPUS, KULATHUR, ENGINEERING COLLEGE.P.O  
THIRUVANANTHAPURAM 695016,  
KERALA, INDIA.

Date: 29<sup>th</sup> October 2014

**INVITATION TO TENDER(IND)**

**No: IISER/PUR/4891/14**

**Due Date: 17<sup>th</sup> November 2014 (3PM)**

**Date of Opening: 18<sup>th</sup> November 2014 [11AM]**

Dear Sirs,

**Sub: Supply of Ambient Scanning Tunnelling Microscope and Electrical Resistivity Measurement Setup**

We invite Sealed Tenders for the following items:

| Sl No | Description  | Qty   |
|-------|--|-------|
| 1.    | Ambient Scanning Tunnelling Microscope (Specification as per Annexure I)   | 1 No  |
| 2.    | Electrical Resistivity Measurement Setup (Specification as per Annexure I) | 2 Nos |

Please quote your lowest rate and shortest delivery period. Your offer in sealed cover **SUPERSCRIBING TENDER NUMBER AND DUE DATE** shall reach us on or before the due date and time. Please follow strictly the "Instructions to Tenderers attached".

Thanking You,

  
Yours Faithfully

**K. BHASKARA RAO**  
Deputy Registrar  
[Purchase & Stores]  
IISER TVM

**P.S: CATALOGUE/LEAFLET FEATURING ALL TECHNICAL SPECS/INFORMATION OF THE PRODUCT QUOTED SHALL ACCOMPANY THE OFFER.**

## **(1) AMBIENT SCANNING TUNNELLING MICROSCOPE**

To record atomic resolution surface topography and spectroscopy on semiconducting (highly oriented pyrolytic graphite) and metal (polycrystalline Au/Pt films) surfaces.

### **Specifications:**

- XY Scan Range: 0.5 $\mu$ m x 0.5 $\mu$ m or better. Z range: 100nm or better
- XYZ resolution: demonstrable atomic resolution on HOPG
- Current range: 100pA -50nA (Typical)
- Bias range: 0 to  $\pm$  2V (typical)

### **Operation Modes:**

- (i) Imaging (constant height and constant current)
- (ii) Spectroscopy (IV and ID characteristics)

Current amplifier + Control unit + desktop computer preinstalled with necessary data recording hardware + software (including GUI). Data recording at 512 x 512, 1024 x 1024 and 2048 x 2048 resolution for topography and minimum 512 data points per cycle for spectroscopy.

### **Accessories:**

- (1) Pt/Ir wire for tips
- (2) Samples: HOPG, metal films and other conducting/semiconducting samples
- (3) Sample holders
- (4) Necessary tools (wire cutters, tweezers etc)

Camera + recording facility [see special requirement below]

### **Special Requirement:**

Open design allowing free optical access to the tip-sample junction, such that the junction may be viewed through a camera/telescope for projection. Compatible camera unit to record/project image of the junction area (tip/sample approach etc) for real time demonstration purposes.

Power specifications: 240 V AC, 50/60Hz

Hardcopy of operation manual

Optional Items: active vibration isolation setup.

## **(2) ELECTRICAL RESISTIVITY SETUP**

Setup to measure the temperature dependence of resistivity of conductors and semiconductors.

### **Specifications:**

- Temperature Range: 300K -500K (typical)
- Samples: Interchangeable metal and semiconductor samples (to be supplied)
- Necessary Current/Voltage source and measurement system for measuring resistance.
- Compatible temperature sensor, including control and reading unit.
- Heating Unit spanning the above temperature range.
- A/D interface to simultaneously record resistance and temperature.
- Interface computer including necessary software and GUI.

### **Accessories:**

Cables and connectors (as applicable).

Hardcopy of manual

**NOTE: THE VENDORS SHOULD PROVIDE PROOF OF SUPPLY OF SAME ITEMS TO NATIONAL INSTITUTES LIKE IITs/IISc ETC.**

**IISERTVM**  
**INSTRUCTIONS TO TENDERERS [INDIGENOUS].**

1. Tenders should be sent in sealed envelopes superscribing the relevant tender no. and the due date of opening. Only one tender should be sent in each envelope.
2. Late tender and Delayed Tenders will not be considered under any circumstances.
3. Sales Tax and /or other duties/levies where legally levies and intended to be claimed should be distinctly shown separately in the tender.
4. (a). Your quotation should be valid for a minimum period of 60 days from the date of opening of the Tender. Quotation with firm prices will be preferred.  
(b). Prices are required to be quoted according to the units indicated in the Invitation to Tender. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
5. (a) Preference will be given to those tenders offering supplies from ready stocks and on the basis of delivery at IISER site.  
(b) Preference will also be given to those who agree our payment terms of within 30 days of receipt and acceptance of the item at our site.
6. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.  
(b) Samples, if called for, should be submitted free of all charges by the tenderer and the IISER shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to take back the samples at his own expense.  
(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.  
(d) **Specifications:** Stores offered should strictly conform to our specifications. Deviations, if any should be clearly indicated by the tenderer in their quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary along with the quotations. Test Certificates wherever necessary should be forwarded along with supplies. Whenever specifically mentioned by us the tenderer could suggest changes to specifications with appropriate reasons for the same.
7. IISER shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the tenderers shall supply the same at the rates quoted.
8. Corrections, if any, in the Quotation must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail. Quotation must have price for each line item and totaling of the price including taxes and duties should be clearly mentioned.
9. The tenderer should mention the name of his bankers, Sales Tax Registration, PAN number etc in the tender.
10. The authority of the person signing the tender, if called for, should be produced.
11. The purchaser reserve the right to accept or reject the lowest or any other offer in whole or in part without assigning any reason.
12. IISER being a Govt of India Educational and Research Institute, is exempted from payment of Excise Duty under Notification No. 10/97 and Customs Duty under Notification No. 51/96- Customs dated 23<sup>rd</sup> July 2009. Also, we can issue Form 16 as per VAT Rules.
13. The stores supplied should be covered with minimum of 1 year warranty from the date of supply, installation and commissioning.
14. There is no EMD or Tender Cost.

  
**DEPUTY REGISTRAR**  
**[PURCHASE & STORES]**

# **IISER-TVM**

## **INSTRUCTION TO TENDERERS [IMPORTS]:**

1. **PRICE:** The price quoted shall be firm. The terms of FOB/EXW/FCA/CIF/CIP etc shall be clearly mentioned.
2. **AGENT & AGENCY COMMISSION:** In case Tenderer is represented by any agent in India, their name and address shall be furnished. The amount of commission included in the price shall be clearly shown in the offer; which will be paid directly to the Indian Agents by purchaser in equivalent Indian Rupees. In case Indian agents existing and their agency commission is not shown in the Tender, reasons for the same shall be clearly mentioned in Tender. Details of Indian agent's statutory registration shall be stated. If Agency Commission is paid by Principals in foreign currency, the reasons for the same and exemption from Enforcement Directorate in India shall also be provided.
3. **LEAFLET/CATALOGUE:** Tenderer should furnish all necessary leaflet/catalogue etc., of the stores offered by him to enable the Purchaser to evaluate his offer correctly.
4. **MODE OF DESPATCH:** Tenderer shall indicate the mode of dispatch (*i.e.*, Sea/Air-freight/Parcel Post, etc.) depending upon the normal mode of dispatch adopted by him for the type of stores offered for consideration of the Purchaser.
5. **COUNTRY OF ORIGIN:** Tenderer shall indicate in his offer the country of origin of goods offered and the name and address of the manufacture.
6. **INSURANCE:** If insurance of the goods is felt necessary, the same shall be advised by the Tenderer in the offer.
7. **DELIVERY/SHIPMENT:** The time for and date of delivery quoted shall be reasonable/realistic and shall strictly be adhered to in case of placing order on the Tenderer.
8. **MODE AND TERMS OF PAYMENT:** Payment in full (excluding the amount of Agency Commission included in the price payable directly by the Purchaser to the Indian Agents in Indian Rupees) will be made immediately on presentation of the prescribed documents against SIGHT DRAFT or LETTER OF CREDIT or WIRE TRANSFER against shipping documents. **OURS BEING A GOVT OF INDIA EDUCATIONAL INSTITUTE WE ARE UNABLE TO MAKE ANY ADVANCE PAYMENT**
9. **WARRANTY:** Period of warranty and conditions shall be clearly mentioned in the Tender.
10. **GENERAL:** The Tenderer shall also be complied with the following:
  - a. Mention your Banker's name and address.
  - b. Show approximate net and gross weight and dimensions of packages/cases.
  - c. Furnish list of recommended spares for satisfactory operation for a minimum period of one year if the quote is for Plant & Machinery, Equipments etc.
  - d. Details of any technical service, if required for erection assembly, commissioning and demonstration.
  - e. Conform that the prices quoted are inclusive of all taxes, levies, duties arising in the tenderer's country.
  - f. The offer is valid for a minimum period of 90 days from the due date of opening of the tender.
  - g. Samples, if called for, will be sent free of all charges.
  - h. Late tenders and Delayed will not be considered.
  - i. Offers made by Indian Agents on behalf of their Principals, should be supported by the Proforma Invoice of their Principals.
  - j. The authority of person signing the tender, if called for, shall be produced.
  - k. The purchaser reserves the right to accept or reject the lowest or any other offer in whole or in part without assessing any reason.



DEPUTY REGISTRAR