DEPARTMENT OF CHEMISTRY INDIAN INSTITUTE OF TECHNOLOGY - DELHI HAUZ KHAS, NEW DELHI - 110016

Dated: 29th Aug 2011

NOTICE INVITING QUOTATIONS

Sub: Purchase of Scanning Tunneling Microscope

Sealed quotations in *separate envelops of technical and commercial bid* kept in a one sealed outer envelope are invited for purchase of an STM as per specifications given below. Your sealed quotation should reach latest by 5 PM on 16th Sept 2011 to **Dr** Sameer Sapra, Department of Chemistry, Indian Institute of Technology – Delhi (IIT Delhi), Hauz Khas, New Delhi - 110016. Your quotation should be superscribed "Purchase of STM due on 16th Sept 2011".

Specifications for the STM

S.No.	Description	Qty
1.	Scanning tunneling microscope	01
	Specifications:	
	The STM should work under ambient conditions.	
	Variable scan area with different scan ranges:	
	- Maximum Scan Area: 2.5μm x 2.5μm (X/Y Res. < 0.8nm)	
	- Minimum Scan Area: ~35Å - 55Å (to produce Atomic Resolution on HOPG)	
	- Tunneling Current range +5nA to -5nA in steps of 0.1nA	
	- Sample Bias Range: +10V to -10V in steps of ~5mV	
	- Sample Mounting support of 10mm dia	
	Imaging modes:	
	- Constant height	
	- Constant current	
	- Dynamical Conductance Imaging	
	Spectroscopy Modes:	
	- IV Spectroscopy in point mode, line mode and grid modes.	
	- IZ Spectroscopy	
	Slope compensation features both in hardware and software	
	Essential Software features:	
	- Dual image windows for scan and retrace display	
	- Export obtained images to standard image formats like ASCII, jpg, png	
	etc.	
	- X/Y/Z Calibration utilities for the piezo-elements.	
	- 3D rendering of STM images	

- Spatial and Fourier image filtering tools like slope correction, Fourier Low Pass Filtering, background, subtraction etc.
- Image analysis like line profile extraction, measurement of distances,
- Toolkit (with tools for tip and sample changing, at least 10 spare sample mounting discs, conducting silver paste, tip wire cutters etc.)
- The systems should have a clear instruction manual and 3-5 experiments for pedagogical purposes with samples.
- Training to be provided to 1-2 personnel.
- Giving a live demo before the customer will better convince us of the product.
- Suitable Vibration Isolation Platform

Mandatory Accessories:

- Pt/Ir and Tungsten Tips (10 each) with 1m extra tungsten wire.
- Reference Sample Kit (with at least 10 pre-mounted samples having, HOPG, Bismuth Telluride, 1T-Tantalum Disulphide and Gold sputtered on STM grade Mica substrates)
- Tip Etching Tool (for preparation of tungsten tips by chemical etching process)

Terms & Conditions:

1. Please submit the TECHNICAL and FINANCIAL bids in separate sealed envelopes. Mark the two envelopes clearly as "Technical Bid" and "Financial Bid". Both the sealed envelopes should be sent in a single sealed envelope, clearly marked as "Quotations for Purchase of STM due on 16th Sept 2011". The quote should reach the following address on or before 16th Sept 2011, upto 5 PM.

Dr. Sameer Sapra Department of Chemistry Indian Institute of Technology Delhi (IIT Delhi) Hauz Khas, New Delhi-110016

- 2. Please quote prices at FOB/CIF New Delhi, inclusive of installation charges.
- 3. The quotations should be in Indian Rupees as well as international currency wherever possible and should be valid for at least three months.
- 4. Please attach all the technical literature and a list of similar installations done in India.
- 5. Standard warranty details should be provided.
- 6. Payment should be through irrevocable letter of credit.
- 7. If the quote is being submitted by the representative of the Principals/manufacturer themselves, a valid Agency ship/Dealership Certificate

- authorizing the agent to quote to IIT Delhi on behalf of the Principals should be enclosed.
- 8. Complete set of manuals for the operation of equipment should be given.
- 9. Clearly specify the installation requirements—such as space, power, frequency, environment (Temperature and humidity) etc.
- 10. If the items quoted are proprietary in nature, please enclose proprietary certificate from the principals stating "certified that______ is a proprietary item M/s. _____ and no other manufacturer makes these items.
- 11. If the bidder is an Indian agent, the agency certificate should be enclosed.
- 12. Please produce compliance certificate for the specification.
- 13. Training should be provided free of cost.
- 14. Delivery period should be specifically mentioned and should be as small as possible.
- 15. The products will be used for educational purposes. Hence any applicable institutional discounts should be offered and stated.
- 16. SALES TAX: This Institute is not exempted from the payment of Sales Tax/Service Tax/VAT. The rate (i.e. percentage of Sales Tax should be clearly indicated included or excluded) wherever chargeable.
- 17. Institute reserves the right to accept or reject any or all the quotations without assigning reasons thereof.