

Tender nos: SB/PHY/NC/220115 (Closing date for receiving tenders 7th Feb.2015)

### **Tender Enquiry for a Sputtering Chamber**

Sealed quotations (two separate sealed envelopes containing only technical bid and financial bid, for details see section below on Method for submitting quotation) are invited for the purchase of a sputtering chamber

#### **Please make the bid for only the following features mentioned below for the sputtering chamber:**

- 1) Appropriate chamber for housing 4 nos of sputtering sources (specifications indicated below) in a confocal configuration with sputter down configuration. The chamber should have appropriate port to connect to user provided Diffusion pump (Company : Hind High Vacuum, DP model number DF-114) with an elbow. Port for gauges quick access door to change sample with 150mm opening. Shuttered view ports 2 nos, port for thickness monitor, port for gas entry with bellow sealed gas valve. Additional port (CF100) 2 nos for future upgrade. Port from below for sample heater.
  - 2) Sputter sources: 2" dia sputter sources with capability of using either 1" or 2" dia targets. High power magnets for high rate depositions, efficient water cooling, flange mounted with inbuilt shutter to make the source modular. Target substrate adjustable by 100mm by adjusting the source. N type female connector for power supply connection. RF and DC compatible, Target clamping provision. All rotary seals should be non oring based (magnetic, bellow sealed or ferro fluidic) for leak free operation.
  - 3) Sample holder cum heater: to heat a substrate of 2" dia . Rotation of about 5 rpm max. Max temperature 800C in vacuum as well as reactive gases like Oxygen. Sample shutter. All mounted on a single flange to make this modular. Drop in slots for samples if 1"X1" and 2" dia. (deposition will be done on one size at a time. Appropriate PID programmable temperature controller for the heater.
  - 4) Elbow to connect chamber to Diffusion pump (diffusion pump user provided)
  - 5) Appropriate frame to mount the chamber with castor wheels and adjustable leveling legs.
  - 6) Gas flow: 2 nos of flow meter with fine control needle valve for gas entry into the chamber of about 30 to 60 SCCM (max flow 70 to 100SCCM) with manifold to connect both gases and allow entry into chamber through 1 no bellow sealed gas valve. (Both flowmeters should have individual ball valves. As an option please also quote for 2 nos digital MFC with appropriate display control unit, manifold and valves as specified above.
  - 7) Water manifold with flow switch and interlocking so that sputtering cannot be done without water flow being present. (Chiller will be provided by user)
  - 8) Quick access door with shuttered view ports for easy removal and loading of sample. Should be about 150mm ID.
- Note: all rotary seals should be non o ring based for leak proof long life operation.
- 9) One set of spare gaskets, O rings for the system.
  - 10) System should be capable of future upgrades if necessary.

**Terms and Conditions:**

1. Maximum educational discount, if any should be offered.
2. Validity of quotation should be at least for 60 days.
3. Prices should include the installation and training cost.
4. Quotation should carry all the appropriate certifications like agency certificate, proprietary certificate if applicable etc.
5. Delivery must be within a year from the data of opening LC.
6. The bidders must enclose a list where their sputtering chambers have been supplied and Installed. Decisions will be based on technical merit, after sales service and market reports of the systems sold.

**Method of submitting the quotation**

**The prospective suppliers are required to send quotation as two separate sealed envelopes.** One envelope labeled as “**Technical Bid**” should contain **only the technical specifications** and the “**Financial Bid**” should contain **only the financial documents** relating to the price bid. **Note the Technical Bid should contain detailed technical specification of the product being offered and should not mention any prices.** The Financial Bid should include the detailed price quotation clearly including the cost of the equipment, taxes, service charges if any, shipping and handling charges. As far as possible the financial bid should include breakup of costs of the different items offered. Optional items should be listed clearly in the financial bid with their final cost. The two separate and sealed envelopes should be clearly marked appropriately as “Technical Bid” and “Financial Bid”. Both the sealed and labeled bids need to be sent to the address below (both sealed and labeled envelopes are to be enclosed in a single envelope while sending).

Please ensure your technical and Financial bids reach latest by **7th February 2015** to:

Satyajit Banerjee  
Professor, Department of Physics,  
Indian Institute of Technology Kanpur  
Kanpur – 208016  
India.