



Tender Document

PONDICHERRY UNIVERSITY
(A Central University)
(R.V.NAGAR, KALAPET, PUDUCHERRY – 605 014)

Sub: Supply of Major and Minor Scientific Equipment under **DST-SERB Fast track- Reg.**

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Sealed quotations under **two bid** system are invited for the purchase of the following item(s) under the **DST-SERB Fast track Research Project**. The quotations duly signed and sealed should be submitted to **Dr. P. Thangadurai, Assistant Professor, Centre for Nanoscience and Technology, Pondicherry University, Puducherry-605 014.**

The quotation should be sent by post (normal/speed/Registered/courier) only. The price quoted should include all the costs such as delivery, installation, testing etc. and also inclusive of all taxes. Warranty terms should be explicitly specified in your quotation. The technical specifications are given below. Last date for receiving quotation is **14.02.2014.**

Electron beam thin film deposition systemwith RF sputteringfacility	
Chamber	Single/double walled Box type/ Cylindrical / Semi cylindrical Material: SS 304 or higher quality. Dimension:~300 mm (W) x 300mm (H) x 300 mm (D) or bigger View ports: Minimum of 10 cm dia./RF compatible with manual shutter to prevent material deposition. Compatible for RF/DC and reactive sputtering(N ₂ and O ₂) Capacity to accommodate two Magnetron sources for future upgradation
Vacuum	Should reach required vacuum for RF sputtering along with measuring gauges. Possibility of attaching turbo molecular pump in the future should be provided. Provision should be provided to maintain the partial pressure of Argon during sputtering operation and to isolate the pumping system when chamber is opened.
Electron beam gun	Provision should be given to attach e-beam gun for evaporation for future upgradation.
Magnetron Sputter Sources	<ul style="list-style-type: none">• One 2” Magnetron Sputter Source compatible with DC/RF power, with cross contamination shields made from nonmagnetic stainless steel in sputter down/up configuration.• Suitable Geometry for sequential/co-sputtering without breaking vacuum.• Source shutter and Cross Contamination Shields should be provided.• Water Flow Switch Interlock for each target• Sputter sources should have in-situ tilt of 0 to 30 Degrees• Sputter source should operate efficiently at high Argon pressure of 3x10⁻²Torr or less on high end & at low argon pressure of

	5x10 ⁻⁴ Torr on low end.
RF power supply source	300 Watts @ 13.56MHz or better with automatic matching network for impedance matching. (Imported; Makes: Advanced Energy/Hüttinger/Seren/ RFVII)
Substrate	Size: able to hold 2-3 inch diameter substrates. Able to hold smaller sized substrates too. Motorized rotation (0 to 20 rpm) Substrate biasing should be possible. Changeable distance between substrate and sources. Heating: Minimum of 500°C with PID controller. Easy substrate cleaning facility and exchanging the substrates
Gas Feeding	Service Gases: Ar/N ₂ /O ₂ 1 No. of imported (MKS/Bronkhorst)Mass flow controllers(MFC) for Argon (0-60 sccm) (Control Electronics with set point control and digital display of Flow rate in sccm). Option should be there to connect two more MFC for future upgradation (One for Argon and one for oxygen)
Warranty	Three years of comprehensive Warranty
General	<ul style="list-style-type: none"> • Should work with proper control system • Pre-installation requirements such as space and utility requirements are to be stated clearly. • Proper safety system should be provided. • Should work in 220 V, 50 Hz, Single phase. • The supplier should provide training on the site of installation • For Local Vendors, document satisfying proof of imports such as Bill of Entry and copy for all components / subcomponents required to be imported as per above specifications would need to be submitted along with the invoice and other documents
Optional Items	<ol style="list-style-type: none"> 1. One DC Power supply of 1 kW (1000 V, 1 Amp variable) for sputtering of conductive thin films 2. Second magnetron sources with the same configurations given above 3. Two MFCs for Ar and O₂ gases (Imported and Make: MKS/Bronkhorst). 4. Quartz crystal monitor with water cooled sensor and set of 10 crystals (imported; make: inficon / intellemetrics /sycon) with a high rate resolution of 0.1 Å per second & 1 Å thickness resolution. 5. Turbo molecular pump (240 ltrs/sec or better)

TERMS AND CONDITIONS

I. General Information:

- a) Last date and time of receipt of the Quotations: **February 14, 2014 at 3.00 PM**
- b) Date and Time of Opening of the Quotations: **February 14, 2014 at 3.30 PM**
- c) Quotation/ Tender document Fee: Rs.500/-.
- d) EMD rate:Rs. 15000/-
- e) Quoting merely the lowest price does not confer any right to any bidder for award of supply order. The University's Purchase Committee, reserves the right to select the equipment any bid under the grounds of specification compliance, technologically advanced quality, proven performance track record, brand reputation, service backup support & training, offer of additional / special features, Compatibility with the existing System, etc.
- f) The Quotation/TenderDocument Fee and EMD should be submitted alongwith your quotations.
- g) The Tender must be submitted along with the stipulated EMD fee in the sealed cover, super-scribing **"Tender for DST-Fast track of Dr.P. Thangadurai– Centre for Nanoscience and Technology, Pondicherry University"**. The name and address of the bidder should also be mentioned at the "From address" space.
- h) The Tender should be addressed and posted to the following address by speed, registered post or by courier.
Dr P. Thangadurai,
Principal Investigator and Assistant Professor,
Centre for Nanoscience and Technology, Pondicherry University,Puducherry – 605 014, India
- i) **Tenders will not be accepted through fax / e-mail.**

II. Common Conditions (Imported or Indigenous items)

1. Price Schedule

The rates should be quoted for a single unit and also for the total quantity required by the University. The price should include the Delivery, installation, training charges, etc. at the respective Department, Pondicherry University. The prices quoted shall remain firm until the Equipment is supplied to the respective Department, Pondicherry University.

2. Quoting the Core price & Tax, Duties, Discount etc.

The taxes / duties / discounts, if applicable, are to be explicitly and separately shown in the bid.

3. Eligibility:

The firm must have the requisite domain expertise with regard to supply, installation and post-sale service of the items they are quoting. The firm should have been in existence for at least six years as on the date of this Tender and must have executed at least three orders for this kind of Equipment) during the last three years.

4. Duty Exemption

The University has been granted the benefit of exemption from the payment of the Central Excise Duty and Customs Duty by the Department of Scientific and Industrial Re-search (DSIR), India, vide their Notification No.10/97, dated 01-03-1997 and No.51/96 dated 23.07.96 respectively, in respect of

- a) Scientific and technical instruments, apparatus, equipment, Software including computers.
- b) Accessories and spare parts of goods specified in (a) above and consumables.
- c) Computer software, compact disks, CD ROM, Recording magnetic tapes, microfilms, micro-chips etc.
- d) Prototypes.

Customs duties at Indian port, if any, will be to the account of the University.

5. Technical Specifications

- i. **WARRANTY:** The Equipment covered under the purchase order, when installed, shall be warranted for the quality, workmanship, trouble free operation and performance for a period of at least 36 months (**preferably 3 years**) from the date of putting the system into operation at the Centre for Nanoscience and Technology, Pondicherry University, or at least 42 months from the date of receipt of the last lot of the consignment.
- ii. If any item covered under warranty fails, the same shall be replaced free of cost including all the applicable charges including shipping cost both ways.
- iii. Complete technical specifications of the Equipment including the Operating system to be included in the bid.
- iv. The necessary service support should be provided by Bidder during the agreement period.
- v. The training should be provided by the supplying companies.
- vi. Operating Manual should be provided in English.
- vii. A recent customer list (within last five years) with contact details including email ad-dress is to be submitted with technical bids / bids as the case may be.
- viii. If the Equipment is proprietary a product, a proprietary product certificate should be enclosed.
- ix. The Equipment must operate at 230V / 50 Hz single phase and / or equivalent three phase electrical power.
- x. **The validity of the each quotation should be at least for THREE MONTHS from closing date.**
- xi. The offers will not be considered if received after the bid closing date and time.
- xii. The offers received through telex / telefax / e-mail will not be accepted by the University under any circumstances.
- xiii. The University shall not be responsible for any delay / loss or non-receipt of the tender by post / courier service.
- xiv. No unsolicited correspondence shall be entertained after the submission of the offer.
- xv. If an order is placed with the firm, the purchase shall be governed by an agreement as per the University rules in force at the time.

- xvi. Additional terms and conditions will be incorporated in the purchase order, if needed, to safe guard the interests of the University.
- xvii. Tender is not transferable.
- xviii. In case of any dispute in respect of the Tender, all legal matters shall be instituted within the jurisdiction of the place where the purchaser ordinarily resides.

6. Power to reject the offer:

- i. Pondicherry University reserves the right to accept / reject any offer in full or in part or accept any offer other than the lowest offer without assigning any reason thereof. Any offer containing incorrect and incomplete information shall be liable for rejection.
- ii. No Agency commission will be paid to any authorized agent in India.
- iii. Liquidated damages: Timely supply of the ordered items, installation, commissioning (wherever is applicable) and training etc. is the essence of the contract. In case of failure to supply within the time specified in the Purchase order, a penalty / LD of 0.5% of the total value per week or a part thereof shall be levied subject to a maximum of 7.5% in respect of items which are not supplied. The decision of Pondicherry University shall be final in this regard.
- iv. Bidder(s) must be authorized business partners of Global / National service providers of the respective Equipment.
- v. The Bidders must enclose authorization letter from the respective global / national service providers of the above said Equipment particularly mentioning an undertaking that in case of default by the Bidder, they (Global Service Provider) shall take over all the responsibilities of the Bidder.
- vi. The Bidder should not be involved in any Bankruptcy filing for protection from it.

III. Specific Conditions for Imported Equipment

1. Payment of EMD:

The Quotation must be accompanied by EMD as stated above, by means of a Demand Draft, drawn in favour of **The Finance Officer, Pondicherry University, payable at Puducherry**. The Small Scale units are exempted from payment of EMD provided they enclose the proof of their exemption Certificate issued by the competent authority.

2. Payments terms:

Normally a payment 90% will be released after the installation & training. However, 100% payment will be released **if the supplier provides Bank Guarantee** towards performance Security for the 10% of the total cost of the furnace to cover the warranty period. Bank charges in India shall be borne by the purchaser and outside India shall be borne by the contractor / supplier. The offer must be in English. The rates should be indicated both in figures and words against item specified in the given table. It is preferable that the price be quoted in US Dollars or in major foreign currencies.
