



Tender Document

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

Sub: Supply of Major and Minor Scientific Equipments under **DST-SERB Fastrack**- 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 Fastrack 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 **31.12.2013**.

Thin film deposition system	
The system should contain single Target with single DC/RF Magnetron source (should work in pulsed DC mode) and upgradable for three targets and three DC/RF magnetron sources in the future)	
Chamber	Box type / Cylindrical / Semi cylindrical Double walled Material: SS 304 or higher quality. Dimension:~400 mm (W) x 500mm (H) x 400 mm (D). View ports: 3 Nos (minimum of 10 cm dia.)/RF compatible with shutter Compatible for DC, pulsed DC and RF sputtering Water cooled chamber Capacity to accommodate three Magnetron targets (future upgradation) Should accommodate downward sputtering Should enable reactive sputtering (N ₂ and O ₂)
Vacuum	better than 10 ⁻⁶ mbar (turbo or diffusion pump (700 lrs/sec & Liquid nitrogen trap) with rotary pump backing) Suitable vacuum gauges to measure the vacuum
Magnetron assembly	
Pulsed DC source	Regulated DC and pulsed DC modes of operation should be possible Voltage ~ 800 V (max) Current ~ 3A (max) Frequency (0 – 30 KHz) or better Remote indication of Voltage, current, frequency and duty cycle Should be protected against overload, short circuit and arc.
Magnetron Sources	Magnetron sputtering cathode assemblies should be with rare earth magnets and compatible to RF/DC & Pulsed DC 1 Nos. of 2 inch size are required (provision should be provided for accommodating 3 sources in future)

	<p>Suitable Geometry for sequential sputtering of three targets without breaking the vacuum.</p> <p>Source shutter should be provided for pre ionizing / shielding magnetron.</p> <p>Cross Contamination Shields to avoid deposition in between cathodes</p> <p>Water Flow Switch Interlock for each target</p>
Sputtering Target	<p>Should accommodate 3 targets with one should be active for the present case.</p> <p>Should work in an alternate mode</p>
Service gases	Ar/N ₂ /O ₂
Substrate	<p>Size: able to hold 2-3 inch diameter substrates. Able to hold smaller sized substrates too.</p> <p>Rotatable (0 to 20 rpm)</p> <p>Substrate biasing should be possible.</p> <p>Changeable distance between substrate and sources.</p> <p>Heating: Minimum of 500°C with PID controller.</p> <p>Substrate cleaning facility</p>
Gas Feeding	<p>Nos. of Needle valves - 2</p> <p>2 Nos. of Mass flow controllers(MFC) for Oxygen and Argon (0-60 sccm) (Control Electronics with set point control and digital display of Flow rate in sccm)</p> <p>Option should be there to connect One more MFC for future upgradation</p>
Thickness monitor	Electronically controlled Quartz crystal based thickness monitor
Safety	<p>The entire unit should be provided with all the necessary safety devices like circuit breakers, emergency power-off switch, pressure switches, micro switches, Over load protection for the rotary pump motor, water flow switches.</p>
	<p>All components except the magnetron power supply should be mounted in a single frame.</p> <p>Should work in 220 V, 50 Hz, Single phase.</p>
Electron beam gun	Provision to attach e-beam gun for evaporation should be provided for future upgradation.
Spares	<p>1 set of Viton 'O' rings</p> <p>Spare oil for oil pumps</p>

TERMS AND CONDITIONS

I. General Information:

- a) Last date and time of receipt of the Quotations: **December 31, 2013 at 3.00 PM**
- b) Date and Time of Opening of the Quotations: **December 31, 2013 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-Fastrack 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 Equipments

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.
