

INVITATION TO TENDER

No. CeNS/2016-17/Tender /Advt/Equip/002

8th Nov 2016

The Centre invites Tender bid(s) for the following item detailed below.

SL No	ENQUIRY NO & DATE	Description of Items	Catalogue No/ Product Code	Qty
1)	CeNS/2016-17/SA/F05	ITO & AZO sputtering unit Note: Detailed Specification in Annexure.		1 No

NOTE:

- (a) The Tender sealed bid containing **two separate sealed envelopes**, clearly marked as “Techno-Commercial Bid and “Price Bid along with Compliance Statement should be submitted on or before 23 Nov 2016 by 5.00PM through Speed Post / Courier / Registered Post.
- (b) The Tender bid may be addressed to the Director, Centre for Nano and Soft Matter Sciences PB No: 1329, Prof. U.R Rao Road, Jalahalli, Bangalore-560013. The bid should be accompanied with and Earnest Money Deposit of Rs.50,000/- in the form of a Demand Draft of Nationalized bank drawn in favor of “The Director, Centre for Nano and Soft Matter Sciences”, payable at Bengaluru. The EMD will be refunded to unsuccessful bidders without any interest thereon.
- (c) The cost of Packing, Freight & Insurance (CIF Bangalore) should be indicated separately. A brochure giving technical details of the product should be enclosed.
- (d) Discount if any should be clearly mentioned.
- (e) Delivery schedule, warranty details must be clearly indicated.
- (f) Taxes & duties should be separately shown.
- (g) Tender bid(s) should be valid for a minimum period of **3 months** from the date of issue.
- (h) **Terms of payment:**
- i) For Imported Equipment:** 90% through Letter of Credit with usance period of 30 days on proof of arrival of consignment. The balance 10% payment will be released after expiry of the applicable Warranty period or on submission of Performance Bank Guarantee for an equivalent amount (10% of the Invoice value), having validity up to three months from the date of expiry of the applicable Warranty period.
- ii) For Indigenous Equipment:** the payment in INR shall be made through NEFT/RTGS after successful installation and against submission of performance Bank Guarantee equal to 10% value of the equipment, valid for the period of warranty. Complete details such as the bank account number/IFSC/SWIFT/Bank Address, etc. should be provided along with the price bid.

- (i) **Opening of bids:** The firm shall be at liberty to authorize a representative to be present at the opening of the tender at the time and date which will be informed by E-mail. A proper letter of authority be produced before the meeting.
- (j) Any firm representing the actual supplier should submit authorized dealership certificate in original from the principal company.
- (k) **Banking charges:** All banking charges applicable outside India will be on suppliers account.
- (l) **Guarantee and replacement:** The Supplier shall guarantee that the Items/Equipment supplied shall comply fully with the specifications laid down, for material workmanship and performance. The Guarantee should be as mentioned in the specification.
- (m) The Centre reserves the right to accept or reject any quotation or part thereof without assigning any reasons.
- (n) Sealed envelopes containing the Separate tender bid(s) should be superscribed with " Tender for CeNS/2016-17/SA/F05.
- (o) Tender bid(s) received after the due date shall not be considered.
- (p) The Centre is exempt from paying Central Excise of Customs duty on purchase under the Govt. of India Notification No. 11/280/1993-TU-V dated 29 April 2016.

Yours sincerely

Sd/-
Administrative Officer

ANNEXURE

ENQUIRY NO : CeNS/2016-17/SA/F05

Specifications of indium tin oxide and aluminum zinc oxide (ITO & AZO) sputtering coating unit.

- Electro polished high grade Stainless Steel (non magnetic) water cooled D shaped vacuum chamber of approx. size 400 mm dia. x 500 mm height with suitable support structure.
- Sufficient number of ports with flanges along with view port on door for loading of substrate
- 3" flexible Magnetron Sputtering Source with adjustable tilt angle ($\pm 45^\circ$)– 2 nos.
- Pneumatically operated source shutters.
- 2 kW DC power supply – 1 no.
- DC Selector switch to direct the power from one source to another.
- Rotary substrate holder to accommodate 150 mm dia. substrate or multiple no. of smaller substrates in single process cycle
- Substrate heater to heat up to 300 °C with PID controller
- Rotation and wobbling motion of substrate facility need to be provided.
- Gas manifold with a Mass Flow Controller (2- 100 sccm flow rate) for Ar gas and isolation valves should be provided.
- Turbo Molecular pump and Scroll Vacuum Pumping system capable of achieving 1×10^{-6} mbar.
- Electromagnetically operated Roughing, Backing and Vent Valves.
- Motorized high vacuum valve for the control of the process pressure during deposition
- In-built Liquid Nitrogen Trap incorporated below the High Vacuum Valve
- Pirani gauge for measuring vacuum from 1000 to 1×10^{-3} mbar
- Penning gauge for measuring vacuum from 10^{-2} to 10^{-7} mbar
- Stainless steel vacuum plumbing lines with necessary bellow adaptors/dampers to arrest vibrations.
- Suitable Electrical & Control System Control Console.
- ITO (3" Dia x 3mm Thick x 4N purity) sputtering target – 1 no.
- AZO (3" Dia x 3mm Thick x 3N purity) sputtering target – 1 no.
- Supplier should have the experience of coating ITO & AZO based hybrid electrodes.
- Supplier should have carried out minimum three installations of Multi Target sputtering systems.
- Coated Samples of ITO & AZO to be submitted along with the tender for evaluation
 - Coated ITO & AZO films should have Transmission of 90%(+/-5) in the visible region
 - Sheet resistance should be less than $10 \Omega/\square$
 - Uniformity of deposition over 4" substrate should be of $\pm 3\%$ and the distance between Source & Substrate should be mentioned.
- Photographs of the unit should be attached.
- Demonstration of the ITO & AZO sputtering coating on the given substrate should be arranged in order to consider the technical bid of the supplier.

Warranty: Comprehensive warranty for 1 year from the date of installation. The extended warranty for 2 more years for which the Terms should include labour free of cost.