

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032

NIT No. IACS-P/CAMNP/2025-26/30

Date: 26/9/25

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturer/exclusive distributor/vendors for “**Upgrading with EDS, STEM and Imaging in HRTEM**”

Part-I (Technical Bid) of the tender should contain technical specifications item wise in detail as well as commercial terms and conditions. Part-II (Price Bid) should clearly indicate group-wise price, if needed, as mentioned in the technical bid. The Technical Bid and Price Bid are to be submitted in separately sealed envelopes, distinctly marked accordingly and both to be put inside another envelop, that should be sealed and superscribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads.

Completed tender bids should reach the office of **School of Chemical Sciences, Indian Association for the Cultivation of Science (IACS), 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata-700032** on or before the scheduled date and time specified below:

Tender Notice No.	NIT No: IACS-P/CAMNP/2025-26/30 Date:26/9/2025
Date, time and venue of Pre-bid meeting to discuss technical specification	10/10/25, 3:00 PM, Room No M214 IACS
Last date and time of submitting tender	24.10.25, 2:00 PM, Room No M214 IACS
Date, time and venue of opening technical bid of the tender	24.10.25 at 3:00 PM
Date, time and venue of opening the price bid of the tender	Will be intimated to the technically qualified bidder at their email addresses
Contact	Email: camnp@iacs.res.in Tel.+91 33 247 34971 [Ext. 1173]

The technical bids will be opened first to judge/evaluate the technical specifications of the said instrument and thereafter the price bids of only technically qualified bidders will be opened. There are three parts in the technical specifications and it is requested to quote three different technical bids.

Technical Bid Evaluation: The Technical Bids will be evaluated in the presence of the authorized representatives of intending bidders who will be able to clarify technical aspects of their bids, if any, required by the Technical Evaluation Team.

Opening of price-bid: The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected. Price bids are also requested to provide in three parts as mentioned in the technical specification section.

Please note that IACS will not provide any accommodation or reimburse any expenses to any of the bidders for attending opening of technical bid.

1. TECHNICAL BID

The technical bid should contain technical specifications as well as commercial terms & conditions and should be kept in a separate sealed envelope duly super scribed as 'TECHNICAL BID' on the outer cover of the envelop as already detailed above. It should be clearly mentioned on the envelope as "Technical Specification for Upgrading with EDS, STEM and Imaging in HRTEM".

Technical Specification

PART - 01

A. EDS and Mapping

- i) Upgrading the HRTEM with EDS and HAADF imaging calibration in HRTEM 200/300 KV TEM.
- ii) 100 mm² active area with EDX Solid angle should be 0.9 sr or more.
- iii) B to U elements detection and error in configuring the elements should be minimum.
- iv) This should be integrated with TEM software and computer.
- v) Elemental mapping, line scan in High Angle Annular Dark Field imaging.

B. 4D STEM:

- i) This should provide the strain mapping in atomic resolution HAADF-Images.
- ii) Appropriate software for strain mapping should be provided along with the STEM.
- iii) It should be compatible with Grand ARM 2 microscope fitting one one-view camera.
- iv) Speed of recording must be 300fps at 512X512 pixels, 25fps and full sensor readout (that is 4K X4K).
- v) Appropriate workstation for STEM mode recording should be provided.

C. Digital Scanning System:

1. The Digital Scan system which should enhance digital image acquisition performance in STEM and it should be compatible to 200/300 KV TEM.
2. Configurable for external scan input connectors must be provided for STEM system.
3. User-specified pixel density Max. 32k x 32k pixels (W x H)
4. The offered Digital Scan system must be controlled by existing Gatan Camera software (GMS) system of existing TEM, and the STEM images must be seen through GMS software and the image must be stored in Gatan Camera PC .

- D. **Imaging Accuracy:** Vibration and electromagnetic field interaction if any, adequate hardware and software should be provided.

PART-2

E. FEG GUN:

For high quality imaging of TEM and STEM, FEG Emitter with energy spread of 0.4ev with five years lifetime should be provided. Existing gun may be replaced as required.

PART-3

F. Pumping Station and Plasma Cleaner:

- i) Pumping station to hold at least two TEM holders (Jeol make) with turbopump with pressure (below 10⁻⁶ mbar).
- ii) Plasma cleaning for removal of surface contamination in TEM grid. This may be quoted along with or separately with (i). This will be used for cleaning TEM grid using JEOL make holder for STEM measurement. This should have minimum two gas system. One sample testing of the quoted system is mandatory. The company should have provided similar system in India.

Maintenance and Warranty: Five Years warranty from the date of installation and successful commissioning.

Service Facility: Supplier should mention the details of their service setup and man powers in India, preferably Kolkata, who will be responsible for after sales support. Response time should be within 24 hours.

Technical compliance chart should be provided following format,

Sr. No	Tender specification	Your offered instrument specification	Extent of compliance

Tender will not be accepted if the technical compliance chart is not provided following the above format.

2. PRICE BID

The financial bid indicating (item-wise/group-wise, if required) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly superscribed as 'PRICE BID' on the outer cover of the envelop as already detailed above. Price bids of only technically qualified bidders will be opened and the corresponding manufacturer/exclusive distributor/vendors will be intimated the date and time of the opening of price bid at their e-mail ids. Rest of the bidders will stand rejected.

PRICE: Price to be quoted in CIF, Kolkata on INR basis.

3. BID SECURITY: Declaration in terms of F.9/4/2020-PPD dated 12.11.2020

a. An Account payee Demand Draft/Pay Order for Rs. 6,40,000.00, Six Lakh Forty Thousand only) drawn in favour of "Indian Association for the Cultivation of Science (State Bank of India, Jadavpur University Branch, A/C No. 11079699211, IFSC: SBIN0000093, MICR Code: 700002048)" is to be furnished by the bidders except those who are MSEs, registered with the Central Purchase Organizations, National Small Industries Corporation or the concerned Ministry or Department. Bid Security money or Earnest Money Deposit (EMD) may also be deposited in Bank Guarantee or any other acceptable form. If vendor wants to quote partwise, then the Bid Security for Part 1 is Rs 3,00,000.00 (Four Lakh only, Part 2 is Rs 2,00,000.00 and Part 3 is Rs 1,40,000 (One Lakh Forty Thousand Only)

b. The Demand Draft for the Bid-Security should have at least 90 (ninety) days validity period from the date of opening of the bids.

c. In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders. The Bid security will not carry any interest.

4. PERFORMANCE SECURITY:

An Account Payee Demand Draft or a Bank Guarantee on a Commercial Bank of 3% of the order value in the name of "Indian Association for the Cultivation of Science" is to be furnished by the successful bidder as Performance security. Performance security money should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. Bid security money or EMD will be refunded to successful bidder on receipt of the Performance security money. No interest is payable on Performance Security.

GENERAL INSTRUCTIONS

1. Validity of tender: Tender submitted should remain valid for at least six months from the date of opening the tender. Validity beyond six months from the date of opening of the tender shall be lapsed by mutual consent.
2. The tender should accompany a compliance chart.
3. Incomplete and conditional tenders as well as tenders received after the due date will be summarily rejected without assigning any reasons thereof.
4. At any time prior to the bid due date, IACS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder during pre-bid meeting, modify the bidding documents. The amendment(s) will be notified on the institute website. Prospective bidders are advised to occasionally visit the website (www.iacs.res.in/tender) for any amendment.
5. Payments: 100% against delivery and successful installation or 90% against Letter of Credit at sight and balance 10% on Installation and Commissioning of the system.
6. Installation, User training and Commissioning: Free of cost at IACS, Kolkata. The vendors are required to give an estimate of the time required for installation, fine-tuning of the cluster and hand- holding/training of the principal users in the technical bid. The vendor shall be responsible for setting up of the cluster using CENTOS Linux distribution or equivalent (to be provided by vendor)
7. Service facility: In India, preferably Kolkata, supplier should mention their details of service setup and man powers who are responsible for after sales support. Response time should be within 24 hrs.
8. The model number, make and a printed literature of the product should be submitted positively.
9. Proposed delivery schedule should be mentioned clearly. Delivery of the materials to the PI should be within 60 days from the date of purchase order.
10. Liquidated Damage: An amount at the rate of 0.5% per week or part there of subject to a maximum of 10% of cost will be deducted from the bill in the event of delayed supply.
11. Original Equipment Manufacturers (OEM) / exclusive distributors / vendors should have regularly manufactured & supplied this type of instruments to this or other scientific organizations for 3years before the bid opening date Availability of a list in this regard would be preferred.
12. Authorized dealership certificate should be provided in case of Original Equipment Manufacturing (OEM) company is not quoting directly.
13. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.
14. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of the technical bids will be the following working day at the appointed time.
15. In case of any dispute, the decision of IACS authority shall be final and binding on the bidders.
16. For any clarification regarding technical specifications, information etc., please send your queries to Professor Narayan Pradhan (camnp@iacs.res.in).
17. The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.
18. Bidder should submit their past experience for supplying and successful installation of similar units to other research Institute/Universities/other organization in India. Please provide documentary proofs of such successful installation and project completion.
18. A compliance table (see below) must be prepared and submitted along with the technical bid

Sr. No	Item	Tender specification	Your offered instrument specification	Extent of compliance
1	Digital Scanning System for ARM STEM Imaging			

19. Bidder should enclose copy of following documents:

- i. Trade license.
- ii. Company Registration certificate.
- iii. Bid specific OEM Authorization certificate is mandatory.
- iv. GST registration certificate.
- v. PAN GST certificate to be submitted.
- vi. Similar Purchase Orders for the last 3 years.
- vii. Income Tax Return (for the last 3 years ending 31.03.25).
- viii. Audited Balance Sheet and profit loss account statement (for the last 3 years ending 31.03.25).
- ix. A list of clients where such system has been installed.
- x. Documentary proof of Servicing facility and service engineer stationed at Kolkata.
- xi. Documentary proof of the vendor/bidder working in this field for at least last 3 years.

Registrar