

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

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

NIT No.: IACS/SMS/AB/2022-23/66

Date: 30.01.2023

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturer/exclusive distributor/vendors for **oneChemBET PULSAR TPR/TPD**.

Part-I (Technical Bid) of the tender should contain technical specifications 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 mentioned 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 **Prof. Asim Bhaumik, School of Materials 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/SMS/AB/2022-23/66 Date: 30.01.2023
Last date and time of submitting tender	20.02.2023 within 2:00 pm
Date, time and venue of Pre-bid meeting to discuss technical specification	03.02.2023 at 11:30 hrs (online meeting via Google meet)*
Date, time and venue of opening technical bid of the tender	21.02.2023 at 15:30 hrs in A. K. Ray Chaudhury Hall or online mode via Google meet
Date, time and venue of opening the price bid of the tender	22.02.2023 at 11:30 hrs in A. K. Ray Chaudhury Hall or online mode via Google meet
Contact	Prof. Asim Bhaumik Email: msab@iacs.res.in Tel.+91 33 2473 4971 [Ext. 1207]

*If you wish to participate in the online Pre-bid meeting, please write a mail to the email account (msab@iacs.res.in) on behalf of your company so that the required link can be sent prior to the online meeting.

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.

Technical Bid Evaluation: The Technical Bids will be evaluated in the presence of the 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.

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 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 high-end physical memory based standalone server".

Technical Specification for ChemBET PULSAR TPR/TPD

SI No	Specifications
1	Main System: An automatic, high resolution complete chemisorption analyzer for TPR, TPO, TPD job along with Pulse Chemisorption in the same system.
2	Gas Delivery: Up to four gases shall be selectable via automatic operation via a built-in gas-switching manifold. A fifth gas input port shall be available for titration gas.
3	Furnace and cooling system (Temperature System): a) The furnace should be of tubular design for maximum safety, and provided with automated forced air cooling without requiring additional gas hook-up. b) The unit should enable fully automated analyses to be carried out at $\geq 1100^{\circ}\text{C}$ c) The furnace should allow for ramp rates of 100° C per minute up to 500° C, 50° C per minute up to 750° C, 30° C per minute up to 1000° C, and 20° C per minute up to 1100° C. d) The active cooling shall be able to bring the furnace from 1000° C to 100° C in less than 30 minutes.
4	Cold trap: a) The unit shall be equipped with a cold trap between sample cell and downstream TCD filament to allow the trapping of unwanted vapors. b) The cold trap shall be equipped with a bypass valve so that the trap may be switched in and out of the flow path. c) The unit shall be equipped with an analysis station bypass valve to allow the sample cell to be removed without interruption to the gas flow.
5	Analysis Station: a) Unit shall have one analysis port and one preparation port. b) The unit shall be supplied with, and independently control, two heating devices, via a high-temperature (upto 1100° C) furnace and a mid-temperature mantle. c) The unit shall be supplied with an automated gas titration valve with three interchangeable loops of different volume. The titration valve should allow in-situ calibration by the user using syringe injections.
6	Sample temp measurement: Sample temperature shall be recorded using a thermocouple inside the sample cell.
7	Thermal conductivity detector: The unit shall employ a thermal conductivity detector as standard means of signal detection. The thermal conductivity detector shall have: a) filaments that are both oxidation and ammonia resistant (i.e. of tungsten/rhenium) b) filaments in series (to minimize influence from flow rate change) and c) filament circuit of constant current type to ensure maximum sensitivity.
8	Heating mental Temperature: Maximum temperature: 350°C Temperature accuracy: $\pm 1\%$ of set point at thermocouple

	Temperature stability: < 5°C
9	Adsorbates: N ₂ , Ar, Kr, CO ₂ , O ₂ , H ₂ , CH ₄ , NH ₃ etc.
10	Surface area range (using nitrogen): 0.01 m ² /g to no known upper limit
11	Electrical requirement: The system should run on 230V AC, 50HZ
12	Warranty: Warranty: 36 months for the entire system, from the date of completion of the installation & commissioning.
13	Others: a) The bidder must have supplied similar systems/ setup in at least 3 Indian Institutes of Technology (IITs) or Centrally Funded Technical Institutes (CFTIs). Complete list along with the contact details of the customers must be provided. b) Training: Complete application and maintenance training should be given by company expert person and full technical and application support during warranty periods. The supplier or manufacturer should also provide applications training during the installation.

Warranty: 3 years.

Service Facility: Supplier should mention the details of their service setup and manpowers in India, preferably in Kolkata.

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, if required) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly mentioned 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 on INR (The Indian Rupee).

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. 100,000.00 (Rupees One Lakh only) drawn in favor 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 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.
- 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.

4. PERFORMANCE SECURITY:

- An Account Payee Demand Draft 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 90 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.

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 to visit the website (www.iacs.res.in/tender) for any amendment.
5. 100% payment after delivery.
6. Installation/Demonstration/Application training at site: Installation & user training at IACS, free of cost by the supplier.
7. Service facility: In India, preferably Kolkata, supplier should mention their details of service setup and manpowers 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 90 days from the date of purchase order.

10. Manufacturers / vendors should have history of supplying this type of instruments to this or other scientific organizations. Availability of a list in this regard would be preferred.
11. Authorized dealership certificate should be provided in case of principal manufacturing company is not quoting directly.
12. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.
13. 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.
14. In case of any dispute, the decision of IACS authority shall be final and bidding on the bidders.
15. For any clarification regarding technical specifications, information etc., please send your queries to Professor Asim Bhaumik (msab@iacs.res.in).
16. The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.
17. The manufacturer/vendor should have a service center in Kolkata.

Registrar