

**INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE**  
2A & 2B, RAJA S.C.MULLICK ROAD, JADAVPUR  
KOLKATA -700032

## **TENDER NOTICE**

**NIT no. IACS/TRC/Prof.A.Patra/2016-17/39 Date 14.09.2016**

Sealed tenders in two bid system (Technical Bid & Financial Bid) are invited from bonafide, resourceful and eligible manufacturers/exclusive distributors for "**Transient absorption pump-probe spectrometer**"

**Part - I** (Technical Bid) of the tender should contain technical details and commercial terms and conditions and **Part-II** (Price Bid) should indicate groupwise price as mentioned in the Technical Bid where applicable. The Technical Bid and Price bid are to be submitted in two separately sealed envelopes distinctly marked accordingly and both to be put inside another envelope, which should be sealed and super scribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads.

Complete tender should reach to the Material Science Department Office, Indian Association for the Cultivation of Science, 2A & B Raja S. C. Mullick Road, Jadavpur, Kolkata-700032 on or before scheduled date & time specified below. The technical bids will be opened first to evaluate the technical specifications of the equipment thereafter, the **Price bids** of only technically qualified bidders will be opened.

**1) 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.

|   |  |
|---|--|
| Tender Notice Number                                | IACS/Prof. A. Patra/Mat.Sc/2016-17/39 Dt. 14/09/2016   |
| Last date and time of submitting tender             | 26/10/16 up to 2.00 pm at Materials Science Department   |
| Pre bid meeting to discuss technical Specifications | 3/10/16 at 3.00 PM at IACS   |
| Date and time of opening tender (Technical bids)    | 26/10/16 at 4.00 PM at IACS  |
| Place of Opening Tender (price bids)                | 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 expenses to any of the bidders for attending opening of technical/price bids. |
| Contact details:                                    | <a href="mailto:msap@iacs.res.in">msap@iacs.res.in</a>   |

**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 expenses to any of the bidders for attending opening of technical/price bids.

## **2) Technical Bid:**

The Technical Bid should contain technical specifications and kept in a separate envelope duly superscribed as "**Technical Bid**" on the outer side of the envelope as detailed above.

## **3) Technical Specifications for "Transient absorption pump-probe spectrometer":**

The Transient absorption pump-probe spectrometer should have a state-of-the-art design and with latest technology for use to analyze various kinds of samples from different fields of science and technology towards higher end research.

The companies offering the system should have experience in installing and maintaining such set up in India.

## **System Specifications:**

1. Spectral detection range: 400 - 800 nm or larger (IR range can be quoted as optional).
2. Min step of the gate pulse: 6-8 fs
3. Max delay between exc & probe pulse: 3-8 ns
4. Sensitivity: 0.1 mOD
5. Temporal resolution: 120-250 fs
6. Delay stage adjustment: Video Camera
7. Capable of Anisotropy measurement: Should be included
8. Mounted Sample holder: For liquid, solid and film with magnetic stirrer, (Temperature controlled can be quoted as optional)
9. Sample Cells: 6 No (liquid), 4 No (Solid), 4 No. (film)  
Multichannel with image sensor
10. Spectrometer: Computer controlled with 4 gratings and Two Outputs
11. Detectors: Each detector head includes two detectors (For Probe and Reference)
12. Additional accessories required: Additional accessories if required for complete functioning of the instrument may also be quoted. Necessary optics for coupling the system to OP should be provided.
13. The "Transient absorption pump-probe spectrometer" should have the computer controlled software program with complete data acquisition/collection and analysis software along with dedicated computer.
14. Data analysis software should include the following features (minimum)
  - (i) Display the 3D data surface with normal editing and navigation option.
  - (ii) Simultaneously display multiple spectra and kinetics (overly).
  - (iii) Normalization at any wavelength.
  - (iv) Temporal chirp corrections
  - (v) Time zero adjustments.
  - (vi) Kinetics to one or a combination of the following option to incorporate custom fitting models like, Gaussian(s), First Derivative(s) of Gaussian, Exponential(s) & Perform Global Analysis.

## Detailed specifications of the amplifiers/controllers of "Transient absorption pump-probe spectrometer"

### Ti: Sapphire Amplifier

#### Specifications:

Pulse Duration: 100 - 120 fs  
Min Pulse energy: 4.5 mJ (at 800 nm)  
Repetition Rate: 1 kHz  
Tuning Range: 780 - 820 nm  
Spatial Mode TEM00

### Solid State Q-switched pump laser for the amplifier

#### Specifications:

Wavelength: 527 nm  
Repetition rate : 1 kHz  
Power: 20 W at 1 kHz

### Ti: Sapphire oscillator (Seed Laser for the amplifier)

#### Specification:

Pulse duration : <100 fs  
Output power: >2.5 W  
Repetition rate: 80 MHz  
Min tuning range: 700 - 1040 nm  
Spatial Mode: TEM00  
Automated and computer controlled

### Optical Parametric oscillator (to couple with the amplifier)

#### Specification:

Tuning Range: 290 - 2600 nm  
Pump duration: 90 -120 fs  
Pump energy: upto 3 mJ  
Repetition rate: 1 kHz

### Vibration free optical table with proper specification

#### Handheld IR viewer:

Specification: Range: 350 - 2000 nm, battery operated, 2.5x lens and an IR filter

#### Power meter:

Specification: 5 mW to 20 W (250 nm to 1.5 micron)

**Auto correlator:** As required for measuring the pulse width of the oscillator and the amplifier described above

**Laser goggles:** should cover most of the commonly used wavelengths.

**Power back (UPS) for 1 hr**

**Warranty:** 24 months from the date of completion installation and commissioning. Please quote warranty for additional 24 months after completion of 24 month standard warranty.

**Installation Base of the quoted model:**

The vendor should give a user list of **Transient absorption pump-probe spectrometer** with the above mentioned mandatory criteria supplied / installed. They should have a number of installations in reputed institutions / organizations.

**After Sales Service and Application Facilities:**

The vendor must have excellent after sales service and applications support with a number of service engineers and service centre at Kolkata, and they should have facility to give training to the students.

The service engineers and applications specialists must be experienced and factory trained - will be able to train the deputed person for operations and basic maintenance of the complete "Transient absorption pump-probe spectrometer" system. The response time of the engineer must be within 24 Hrs.

### **Installation and Training :**

(1) The installation and commissioning of the complete system should be carried out by experienced factory trained engineers at our site.

(2) The respective training to the deputed personnel should be given for required number of days.

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

**4) User List:** The supplier should provide a list of current users (with contact no, Email address etc) for the quoted item.

**5) Service facility:** Trained technicians should install the instrument and ensure it is operating correctly and within specifications. User training at site should also be provided. Supplier should mention their details of service set up that are responsible for after sales support.

**6) Price Bid:**

The financial bid indicating (item-wise) 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 envelope as already detailed above. The price bids of only technically qualified bidders will be opened and they will be intimated the date and time of opening of price bids at their email id-(s). Rest of the bids will stand rejected.

**7) Price:** Price to be quoted both on FOB/CIF basis. Name of the particular port from where our authorized forwarder will lift the consignment must be mentioned clearly with FOB price.

**8) Bid Security:**

1. The financial bid should be super scribed as "**PRICE BID**" on the outer cover of the envelope.

2. **Bid Security (EMD)** : An Account Payee Demand Draft of 9 Lakhs ( Rs. 900000/- ) in the name of "**Indian Association for the Cultivation of Science**" is to be furnished by the bidders, as Bid Security money or Earnest Money Deposit (EMD).

3. The Demand Draft for the Bid-Security money should have at least 90 (ninety days) days validity period after the opening of the Bids.

4. In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders.

**9) Performance Security:**

An Account Payee Demand Draft of an amount of 6 % of the contract 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 will be refunded to successful bidder on receipt of the Performance security money.

**10) General Instructions:**

1. Incomplete & conditional tenders and tenders received after the due date will be summarily rejected without assigning any reasons thereof.

2. 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](http://www.iacs.res.in/tender)) for any amendment.

3. **Payment:** 100% against delivery and successful installation subject to submission of performance guarantee.

4. **Warranty:** Minimum 5 years or 2 years warranty + 3 years annual maintenance contract.

5. **Installation/Demonstration/Application Training at site:** Free of cost by the supplier.

6. **Service facility:** Supplier should mention their details of service setup for Kolkata/India who are responsible for after sales support. Response time should be within 24 hours.

7. **Validity of tender** : Tender submitted shall remain valid at least for three months from the date of opening of the tender. Validity beyond four months from the date of opening of the tender shall be by mutual consent.

8. The tender should accompany a compliance chart.

9. The rate should be inclusive of all taxes, transportation etc. Nothing extra will be paid in addition to the quoted rate.

10. The model number, make, and a printed literature of the product shall be submitted positively.

11. Proposed delivery schedule should be mentioned clearly.

12. Manufacturers/exclusive distributors/vendors should have history of supplying this type of instrument to this or other Scientific Organization.

13. Authorized Dealership Certificate is must in case of principal manufacturing company is not quoting directly.
14. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.
15. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of technical bids will be the following working day at the appointed time.
16. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.
17. For any clarification regarding technical specifications etc. please send your queries to [msap@iacs.res.in](mailto:msap@iacs.res.in) by email only.
18. The Institute reserves the right to reject any or all of the tenders received without assigning any reason thereof.

**Registrar ( Acting )**