

**SOLID STATE AND STRUCTURAL CHEMISTRY UNIT**  
**Indian Institute of Science, Bangalore**

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Request for Quote for the Procurement of  
**Advanced Spectrophotometer: Laser and Tunable Light Source**  
Indian Institute of Science, Bangalore  
(Last Date: 3rd January 2025)

This is an RFQ (Request for Quote) for the purchase of an *Advanced Spectrophotometer: Laser and Tunable Light Source* in SSCU, IISc Bangalore. India-based as well as global OEMs and their distributors are invited for submitting bids.

**I. Eligibility Criterion:**

1. Only the Original Equipment Manufacturer or their authorized representatives shall participate in the bid.
2. The order will be placed only on the bidder who participated in the bid.

**II. Procedure:**

1. Vendors will be required to submit a technical proposal and a commercial proposal in **two separate sealed envelopes**. Only vendors who meet the technical requirement will be considered for the commercial negotiation.
2. **The deadline for submission of proposals is 3rd January 2025, 5:00 pm Indian Standard Time.** The proposals should arrive as a sealed hardcopy.

The bids should be addressed to:

The Chairman,  
Solid State and Structural Chemistry Unit,  
Indian Institute of Science,  
Bangalore 560012, India.

The sealed bids should be sent to the office of:

Prof. Vivek Tiwari,  
Solid State and Structural Chemistry Unit,  
Indian Institute of Science,  
Bangalore 560012, India.  
Office: 08022932336  
E-mail: [vivektiwari@iisc.ac.in](mailto:vivektiwari@iisc.ac.in)

3. The technical proposal should contain a technical compliance table with 5 columns.
  - a. The first column must list the technical requirements, in the order that they are given in the technical requirement below.

- b. The second column should provide specifications of the instrument against the requirement (please provide quantitative responses whenever possible).
  - c. The third column should describe your compliance with a “Yes” or “No” only. Ensure that the entries in column 2 and column 3 are consistent.
  - d. The fourth column should **clearly state the reasons/explanations/context** for deviations, if any. Without clear explanation, just stating “Yes” and “No” will not be considered.
  - e. The fifth column can contain additional remarks from the OEM. You can use this opportunity to highlight technical features, qualify response of previous columns, or provide additional details.
4. The commercial proposal should have the price of the item. All the accessories, including wiring, adapters, laptops and softwares, chiller and coolant, beam tubes, beam routing optics, tubing for Nitrogen purging, pressure gauge, etc. needed for the tool to function as per the technical specification, must be listed in the quotation.
  5. As an option, please provide itemized cost for any suggested accessories/add-ons that may enhance the usability, capability, accuracy, or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits.
  6. The commercial bid must indicate the following separately:
    - a. equipment price
    - b. CIP-IISc Bangalore basis (Air Freight only)
    - c. Total
  7. Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors.
  8. If multiple items can fulfil the requirements, vendors can submit multiple bids.
  9. Any questions can be directed to Prof. Vivek Tiwari, Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore 560012, India. [vivektiwari@iisc.ac.in](mailto:vivektiwari@iisc.ac.in)

### **III. Terms and Conditions:**

#### **A. Submission of Tender**

1. All documentations in the tender should be in English.
2. Your quotation should clearly indicate the terms of delivery, delivery schedule, entry tax, and payment terms. The quotations should be on CIP-IISc Bangalore basis.
3. The **validity period** of the offer should be at least 90 days.
4. The vendor is responsible for the installation of the item at the IISc campus.
5. The RFQ must include references of at least 5 previous installations and/or orders of similar systems from the same OEM, preferably in India. Please provide the names and contact addresses of the referees so that they can be contacted independently if required. All other things the same, more number of references may be given preference.
6. Please indicate the warranty provided with the tool. No travel claims must be made by vendor for servicing during the warranty/guarantee period.

7. The indenter reserves the right to withhold placement of final order and the right to reject all or any of the quotations and to split up the requirements or relax any or all of the above conditions without assigning any reason.
8. Wherever requested in this specifications sheet, data must be supplied along with technical compliance documents. Technical bids without supporting data will be deemed as technically non-compliant.
9. All guaranteed specifications will have to be demonstrated, upon request, in an active installation. Failure to demonstrate any promised specifications will be deemed as technical non-compliance.
10. Printed literature and published papers in support of all compliance to the prescribed specifications may be provided.
11. Technical evaluation by the institute must include demonstration to verify functionalities and capabilities of the item quoted. Any discrepancy between the promised specifications and demonstrated specifications will be deemed as technical non-compliance. If a need arises, the vendor must be ready to physically visit IISc for a techno commercial discussion.
12. The technical specifications given below are highly desired. However, we reserve the right to lower technical specifications to obtain a more competitive price.

#### **B. Cancellation of Tender**

1. Incomplete bids will be summarily rejected.
2. Notwithstanding anything specified in this tender document, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights: a. To accept OR reject lowest tender or any other tender or all the tenders. b. To accept any tender in full or in part. c. To reject the tender offer not confirming to the tender terms.

#### **C. Delivery, Installation and Training**

1. The bidder shall provide the lead time to delivery at IISc, Bangalore from the date of receipt of purchase order.
2. The items should be **delivered within 5 months** from the date of receipt of purchase order.
3. The vendor is responsible for the installation of the item at the IISc campus. The supply of the items will be considered as effected only on satisfactory inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore.
4. After successful inspection, the date of taking over of entire order by the IISc, Bangalore shall be taken as the start of the warranty period.
5. No partial shipment is allowed.
6. The bidder should also arrange technical documentation for all the items supplied.
7. The vendor should be able to repair and maintain the equipment once it is installed in India. Clarify if periodic (preventive) maintenance for the quoted system can be done by a trained engineer within India or requires a specialist from the OEM. The vendor should preferably have qualified technical service personnel for the

equipment based in India and must assure a response time of <24 hours after receiving a service request.

8. If maintenance must be done by OEM or their engineers posted in India, as an additional option, provide cost of an annual maintenance contract (AMC) for 3 years, post warranty. The AMC must cover 1 scheduled and 1 emergency visit per year. It must also indicate who will service the AMC, an Indian agent, or the OEM. The AMC cost must also include an itemized list of spares that are essential for the scheduled visits.

9. Necessary training to operate the procured item and required literature support should be provided without additional cost.

10. Vendors should undertake to support the item with spares and software bugfixes, if any, for the next 5 years.

#### **D. Payment Terms**

The payment will be through a Letter of Credit and the milestone of the payment will be determined after mutual discussions with the successful bidder

#### **E. Statutory Variation**

Any statutory increase in the taxes and duties after bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed on to IISc, Bangalore.

#### **F. Dispute and Jurisdiction**

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

#### **G. Annexures**

Kindly adhere to the formats that are provided at the end of the document)

Annexure 1	Details of the Bidder
Annexure 2	Declaration regarding experience
Annexure 3	Declaration regarding track record
Annexure 4	Declaration for acceptance of terms and conditions
Annexure 5	Details of items quoted

#### **IV. Technical Requirements:**

The item should be a research grade *Advanced Spectrophotometer: Laser and Tunable Light Source* with following specifications:

##### **1. Laser:**

- A. Yb:KGW active medium with fundamental wavelength between 1030-1040 nm.
- B. Pulse duration: < 300 fs

- C. Maximum output power:  $\geq 6W$
- D. Max pulse energy: greater than or equal to  $100 \mu J$  at 60 kHz
- E. Repetition rate and pulse selection: continuously tunable repetition rate from at least 100 kHz or less to maximum 1 MHz or more. Forbidden repetition rates in this range, if any, should be clearly specified.
- F. Integrated AOM pulse picker with 1000:1 contrast ratio, with any integer division of fundamental repetition rate
- G. Pulse-to-pulse energy stability over a 24 hour period :  $< 1\%$
- H. Long term output power stability:  $< 1\%$  rms over 100 hours at 1040 nm and 520 nm
- I. Beam pointing stability:  $< 20 \mu rad/^\circ C$  over 400 hours
- J. Polarization of fundamental:  $\geq 1000:1$  purity of vertical polarized
- K. Beam Diameter at exit: between 1.5 to 2.5 mm
- L. Spatial Mode  $TEM_{00}$  with  $M^2 < 1.2$
- M. Cooling method: Air or water cooled. Chiller, coolant, tubing, connectors and power supply should be provided in case of water cooled.

**Note:**

1. Please carefully refer to Section III.C.8
2. Please carefully refer to Section II.4
3. Please provide a second harmonic (2H) and a third harmonic (3H) as additional options in the quotation. Clearly list the specifications of the 2H or 3H option. Minimum conversion efficiency should be 50% for 2H and 25% for 3H. The committee reserves the right to select one of the two options based on competitive pricing and availability of funds.
4. As an additional accessory please provide options for beam splitters for routing 5% of the fundamental power (1040 nm) to another setup.

**2. Tunable Light Source:**

- A. Optical parametric amplification (OPA) based tunable light source with tuning range 520 - 900 nm
- B. At least 30 fs pulses or shorter in the 550-650 nm range
- C. Power stability of OPA output over 8 hours:  $< 2\%$  RMS
- D. Energy conversion efficiency at 580 nm:  $> 1.3\%$
- E. An additional second-harmonic (SH) generator option should be provided for enhancing the tuning range in 260-450 nm region, with maximum conversion efficiency of at least 10% at the peak conversion wavelength
- F. Option to bypass any built-in pulse compressor for enhancing output bandwidth should be provided
- G. Option to use the residual fundamental (1030-1040 nm) and second harmonic (515-520 nm) from the OPA should be provided

**Note:**

1. Due to compatibility and pulse stability reasons, it is strongly preferred that the tunable light source and the laser are manufactured by the same OEM.
2. Please carefully refer to Section III.C.8
3. Please carefully refer to Section II.4
4. Any nitrogen purging requirements other than the gas bank, such as tubing, connectors, etc. should be provided.
5. The committee reserves the right to select the SH generator option based on competitive pricing and availability of funds.

3. **Warranty:** Minimum three years from the date of installation.

**A DETAILED COMPLIANCE STATEMENT WITH RESPECT TO ABOVE MENTIONED SPECIFICATION SHOULD BE ENCLOSED ALONG WITH THE OFFER.**

### **Annexure-1:**

#### **Details of the Bidder**

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

## Details of the Bidder

SI No.	Items	Details
1.	Name of the Bidder	
2.	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3.	Registration No/ Trade License, (attach attested copy)	
4.	Registered Office Address	
5.	Address for communication	
6.	Contact person- Name and Designation	
7.	Telephone No	
8.	Email ID	
9.	Website	
10.	PAN No. (attach copy)	
11.	GST No. (attach copy)	

Signature of the Bidder

Name  
Designation, Seal

Date:

## **Annexure-2:**

### **Declaration regarding experience**

To,  
The Chairperson,  
Solid State and Structural Chemistry Unit,

Indian Institute of Science,  
Bangalore – 560012, India

Procurement of an Advanced Spectrophotometer:

Laser and Tunable Light Source

Sir/Madam,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has ----- years of experience in supplying -----

(Signature of the Bidder)

Printed Name

Designation, Seal

Date:

### **Annexure-3:**

#### **Declaration regarding track record**

To,  
The Chairperson,  
Solid State and Structural Chemistry Unit,



Indian Institute of Science,  
Bangalore – 560012, India

Procurement of an Advanced Spectrophotometer: Laser  
and Tunable Light Source

Sir/Madam,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company/ firm is not currently debarred / blacklisted by any Government / Semi Government organizations / institutions in India or abroad. I further certify that I'm competent officer in my company / firm to make this declaration.

Or

I declare the following

Sl.No	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted / debarred by Government / Semi Government/Organizations /Institutions	Reason	Since when and for how long

(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully  
(Signature of the Bidder)  
Name  
Designation, Seal

Date:

**Annexure – 4:**

**Declaration for acceptance of terms and conditions**

To,  
The Chairperson,  
Solid State and Structural Chemistry Unit,  
Indian Institute of Science,  
Bangalore – 560012, India

Procurement of an Advanced Spectrophotometer:

Laser and Tunable Light Source

Sir/Madam,

I've carefully gone through the Terms & Conditions as mentioned in the above referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name  
Designation, Seal

Date:

## **Annexure – 5:**

### **Details of items quoted:**

- a. Company Name
- b. Product Name
- c. Part / Catalogue number
- d. Product description / main features

- e. Detailed technical specifications
- f. Remarks

**Instructions to bidders:**

1. Bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with technical bid.
3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.