

INVITATION FOR TENDER FOR SUPPLY OF EQUIPMENT

Sealed tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers/suppliers or their direct Indian agents for the supply of the following equipment.

UV-Vis-NIR Spectrophotometer

Please send offers, ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE. The validity of the bid should be at least four months (120 days) or more from the date of the opening of this tender. Please ensure that your quotation reaches not later than **14.02.2019 at 15:00 Hrs** at the following address:

Dr. PRADIP KUMAR CHAKRABORTY,
Assistant Professor, Department of Chemistry,
Indian Institute of Technology Kharagpur – 721 302, West Bengal, India

Earnest money of **Rs. 40,000/-** is to be deposited in the form of Account payee Demand Draft in favour of IIT Kharagpur, payable at Kharagpur, India. Any bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.

Tender Reference	IIT/SRIC/CY/ENE/PC/18-19/EQ-1 , Dated: 24.01.2019
Price of Tender Document	NIL
Last Date and Time for submitting the tender document	14.02.2019 at 15:00 Hrs (Indian time)
Time and Date of Opening of Technical Bids	14.02.2019 at 16:00 Hrs (Indian time)
Place of Opening Tender	Department of Chemistry, Indian Institute of Technology Kharagpur – 721 302, West Bengal, India
Address of Communication	As stated above
Contact Telephone Numbers	+91- 3222 – 283320
E-mail	pradipc@chem.iitkgp.ac.in

Detailed Technical Specification for UV-Vis-NIR Spectrophotometer:

Double beam, ratio recording, double out-of-plane Littrow or equivalent monochromators, quartz over coated optical system with all reflective optics. Monochromator focal length 350 mm or more, dual double-sided gratings, 1200 lines/mm or more in UV-Vis and 300 lines/mm or more in NIR, blazed.

Source: Tungsten Halogen visible source with quartz window, Deuterium arc UV source.

Detector: High performance **PMT for UV-Vis region and NIR region detector: electrothermally cooled Lead Sulfide (PbS) photocell** with signal optimization on real time basis.

- Optical casting should be isolated from external vibrations.
- Purging of entire optical path, includes monochromator, sample compartment and detector compartment.
- Separate purging line for the sample compartment
- There should be facility to remove sample compartment base for special designed accessories and/or for very large samples.
- Calibration routines built-in for periodically re-calibrating detectors response and linearity and wavelength accuracy. It should include Zero %T correction and Linearity correction for both the PMT and PbS detectors.
- Accessory controller for control of external or internal accessories or devices
- **Wavelength range: 175 – 3300 nm**

- Spectral Bandwidth (nm)
UV-Vis: Variable from 0.01 nm to 5.00 nm, 0.01 nm steps
NIR: variable from 0.04 to 20 nm motor driven
- Stray Light
At 220 nm < 0.00007 % T
AT 1420 nm < 0.0002 T
- **Photometric range: 8 ABS or better**

- **Resolution: < 0.05 nm in UV-Vis and <0.2 nm in NIR range**
- Wavelength Accuracy
UV-Vis: ± 0.08 nm (190-900 nm)
NIR: ± 0.4 nm (760-3000 nm)

- **The instrument must be capable of analyzing and capturing data from a thin film in air.**

- **Must be capable of measuring single crystal and powder sample/thin film. The following prepared sample must be measured with sufficiently high signal/noise ratio: single piece of single crystal of dimension 100-200 micron will be mounted on a copper plate (with a hole at the center smaller than the crystal dimension) with Ag-glass. For the powder, the sample must be made using KBr pallet or on sapphire cover slide by dropcasting. After that the whole assembly will be attached to the solid sample holder with a hole at the center. Then the UV-VIS-NIR absorption spectrum will be measured at room temperature. Before hand, the reference must be taken with only hole using the sample as well as in the reference beams between 175-3300nm. Only after observing a satisfactory high resolution absorption spectrum (in person) and baseline, the corresponding technical specifications will be accepted. For this entire exercise, the whole travel cost (outside IIT Khargapur campus) for the visit to the relevant place of interest within India (by means of shortest duration of travel time) must be fully taken care by the company/vendor themselves.**

- **The UV-VIS high resolution spectrum at room temperature must be demonstrated with 200-300 micron single crystal at reduced slitwidth and slowest scan rate possible so that the deep in the absorption spectrum must be observed if any. This whole exercise must be demonstrated in front of me before the acceptance of any technical specifications. Only after observing a satisfactory high resolution absorption spectrum (in person), the corresponding technical specifications will be accepted. For this entire exercise, the whole travel cost (outside IIT Khargapur campus) for the visit to the relevant place of interest within India (by means of shortest duration of travel time) must be fully taken care by the company/vendor themselves.**
- **Must be compatible with low temperature (down to 3 K) vacuum based closed-cycle cryostat coldhead. For the following criteria must be satisfied: must require at least 6" clearance for inserting the cryostat coldhead, length of the vacuum shroud from the window is about 24", so upper part of the spectrometer must be open for the insertion of the cryostat cold head. Also without any lid/cover, the spectrometer must be functional normally by covering the sample compartment with a piece of black cloth. A dummy showcase (in absence of cryostat) must be demonstrated in front of me before the acceptance of any technical specifications. Only after observing a satisfactory high resolution absorption spectrum (in person), the corresponding technical specifications will be accepted. For this entire exercise, the whole travel cost (outside IIT Khargapur campus) for the visit to the relevant place of interest within India (by means of shortest duration of travel time) must be fully taken care by the company/vendor themselves.**
- **Software:** Windows 10 based user friendly software. Additional software for color measurements and analysis should be offered. It should have following
- **Ordinate Modes:**
Abs, %T, %R, Absolute %R, Log Abs, 1st-4th Deriv, Absorptivity, and Dual Ordinate mode, Kubelka-Munk functions . Abscissa Modes
Continuous, stepped and multi-point modes: nm, cm^{-1} , Å, min/sec, mm, angle
- **Baseline Correction:** Modes to be included: Multicell, Multi-angle, 0% and 100% corrections, Standard reference correction
- **Data Collection Modes**
Continuous scanning. Stepped scanning, Signal to noise mode scanning and Independent NIR control scanning.
- **Branded PC (Xeon/i7 processor or above, 19 inch color monitor) with pre loaded windows 10 or above operating system should be supplied with the Instrument Free of cost with all the remaining hardware components must be upgraded or latest.**
- **Branded UPS, 2kVA capacity with atleast one hour backup.**
- **Complete Installation must be done by qualified service engineer Free of cost.**
- **Freight charges and Insurance must be included**
- **Supply of Operation and Service manual with the Instrument is essential.**
- **A detailed profile of your technical Service Station in India, especially in Eastern Zone. Please include the number of service persons with their professional background.**
- **Accessories:**
- **System should be supplied with Pair of liquid and solids sample holder/plates with a hole at the center as standard.**
- **Optional: System should be offered with reference beam attenuator (automated) for handling high absorption samples**

System should be compatible to other accessories like DRA, SRA, temp controlled sample holder etc.

GENERAL TERMS & CONDITIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:-

1. TENDERS ARE INVITED COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY'S / FIRM'S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPS CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPS SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOP.

THE FOLLOWING DOCUMENTS ARE REQUIRED FROM THE INDIAN AGENTS OF FOREIGN FIRMS:

1.1 FOREIGN PRINCIPAL'S PROFORMA INVOICE INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT AND NATURE OF AFTER SALES SERVICE TO BE RENDERED BY THE INDIAN AGENT.

1.2 COPY OF THE AGENCY AGREEMENT WITH THE FOREIGN PRINCIPAL INDICATING THE NATURE OF AFTER SALES SERVICES, PRECISE RELATIONSHIP BETWEEN THEM AND THEIR MUTUAL INTEREST IN THE BUSINESS.

2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL. PROVIDE COMPLIANCE STATEMENT WITH RESPECT TO THE TECHNICAL SPECIFICATIONS MENTIONED ABOVE.
3. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.
4. **PRICE BIDS FOR FOREIGN FIRMS:** PRICES ARE TO BE QUOTED ON 'EX-WORKS' DULY PACKED OR ON "FCA/FOB" INTERNATIONAL PORT" BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:-

- I) EX-WORKS PRICE
- II) PACKING & FORWARDING
- III) FREIGHT
- IV) ANY OTHER RELEVANT EXPENSES.
- V) TAXES PAYABLE BY THE INSTITUTE

INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.

PRICE BIDS FOR INDIAN FIRMS: PRICES ARE TO BE QUOTED ON F.O.R., IIT KHARAGPUR, ON DOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

5. **PERIOD OF VALIDITY:** BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.
6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN FE). PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS.

7. **MEASUREMENTS/WEIGHT:** NETT/GROSS OF THE CONSIGNMENT. IN CASE OF AN ORDER, YOU SHALL USE AIR WORTHY PACKAGE (AS APPLICABLE) DULY CERTIFIED WITH DOCUMENTS – PLYTO – SANITARY CERTIFICATE (AS PER QUARANTINE ORDER 2003).

8. **SCOPE OF SUPPLY:** SHOULD INCLUDE FREE INSTALLATION AND COMMISSIONING

9. **PAYMENT TERMS FOR FOREIGN FIRMS**

The offer will be made on a single currency and only one PO will be issued for the entire scope of the supply.

A) 90% PAYMENT THROUGH SIGHT DRAFT / FOREIGN DEMAND DRAFT / LC (EXCEPTIONAL CASES) / SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION AND 10% AFTER SUCCESSFUL INSTALLATION & COMMISSIONING.

B) BANK CHARGES ON LC / SD (WITHIN INDIA APPLICANT ACCOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

PAYMENT TERMS FOR INDIAN FIRMS

A) 100% PAYMENT THROUGH CROSSED ACCOUNT PAYEE CHEQUE / ELECTRONIC TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER & CONDITION AND SUCCESSFUL INSTALLATION & COMMISSIONING.

B) ENSURE MENTIONING

i) BANK DETAILS OF THE BENEFICIARY, GST NO. AND PAN NUMBER

ii) FULL NAME AND ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED

10. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.

11. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.

12. THE INSTITUTE SHALL PROVIDE THE CONCESSIONAL CUSTOMS DUTY AND EXCISE DUTY EXEMPTION CERTIFICATE AS PER GOVT. NOTIFICATION NO. 51/96 CUSTOMS DATED: 23.07.1996 AND CENTRAL EXCISE DUTY EXEMPTION IN TERMS OF GOVT. NOTIFICATION NO. 10/97 – CENTRAL EXCISE DATED: 01.03.1997 AS AMENDED FROM TIME TO TIME.

13. **LIQUIDATED DAMAGES:** THE STORES SHOULD BE DELIVERED / DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IF THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.

14. **PATENT RIGHTS:** THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.

15. ONLY THOSE BIDDERS WHO'S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.

16. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.

17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.

18. LATE TENDERS I.E. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.

19. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-

A) INCOME TAX RETURN (3 YRS) AND LATEST SALES TAX RETURN (GST No.), AND PAN NO.

B) BANKER'S SOLVENCY CERTIFICATE

C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

COMPANY'S KEY PERFORMANCE

DESCRIPTION	JAN. TO MARCH	APRIL TO JUNE	JULY TO SEPT.
GROSS REVENUE			
PROFIT BEFORE TAX			
PROFIT AFTER TAX			
RETURN ON INVESTED			
CAPITAL (ROIC)			

D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.

E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.

20. **WARRANTY / GUARANTEE:** THIS COMPREHENSIVE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR **36 MONTHS** AFTER THE GOODS HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION.

21. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO'S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO **DR. PRADIP KUMAR CHAKRABORTY, Department of Chemistry, INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR - 721 302** AND ACKNOWLEDGEMENT TO BE OBTAINED.

IMPORTANT

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.
2. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim.
3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.
4. For any query pertaining to this bid document correspondence may be addressed to **Dr. PRADIP KUMAR CHAKRABORTY**, at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 14.02.2019

- 1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.
 - 2) Fax, e-mail Tender will not be accepted.
 - 3) The General Terms and Conditions as stated above relate to supply of stores / equipment /assets etc. and for specific service other terms and conditions of the Institute will apply.
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