

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.

Raman Spectrometer

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. Satyahari Dey,
Professor, Department of Biotechnology,
Indian Institute of Technology Kharagpur,
721 302, West Bengal, India**

Earnest money of Rs. 160000/- 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.

The offer must include: Door-step delivery, unloading, installation and commissioning, and full training to IIT Kharagpur Scholars/Staff.

Tender Reference	IIT/SRIC/STEP/2018/EQ3 Dated: 21.01.2019
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	SRIC Meeting Room. Indian Institute of Technology Kharagpur, 721 302, West Bengal, India
Address of Communication	Dr. Satyahari Dey, Professor, Department of Biotechnology, Indian Institute of Technology Kharagpur, 721 302, West Bengal, India
Contact Telephone Numbers	+91 -3222 - 283760
E-mail	sdey@hijli.iitkgp.ac.in

Technical Specification for Raman Spectrometer

It is proposed to purchase a Raman spectrometer that will be capable of studying carbon based nano materials and expandable in future to study other materials also. The quoted spectrometer must satisfy the specifications shown below:

1. Raman Spectrometer:

- Spectrograph equipped with research grade microscope capable of producing Raman spectra in the range of 50 cm^{-1} to 4000 cm^{-1} .
- Spectral resolution (FWHM): 0.5 cm^{-1} or better at 532nm (vendor should provide documentary evidence)
- Focal length of 300 mm or more
- Scan to scan repeatability should be better than 0.05 cm^{-1}
- Spatial resolution: 500 nm or better lateral and $1\text{ }\mu\text{m}$ or better axial.
- Grating: Motorized turret with three gratings of 2400gr/mm, 1800 gr/mm and 1600 gr/mm or other suitable combinations.
- The spectrograph should allow spectral coverage from 50 cm^{-1} to 4000 cm^{-1} in one single continuous acquisition without any step
- Edge Filters- 50 cm^{-1}
- The spectrometer should offer different power levels and should be software controlled.
- The system should be upgradable for other wavelengths in future.

2. Lasers:

Lasers should be air cooled for maximal confocal performance.

- Air cooled, Diode Laser 532nm, 30mW or better
- Provision must be there to add other lasers in future

3. Microscope:

- Microscope should be research grade with color camera for viewing.
- Microscope to include:
 - Reflected light illumination
 - Color video camera
 - Objectives – 5X OR 10X, 20X, 50X and 100x

4. Detector:

A multichannel charge coupled device (CCD) detector:

- High efficiency thermoelectrically cooled CCD: A fully automated multichannel detectors suitable for Raman measurements -
- Pixel X/Y – 1024 x 127 or better preferred.
- Quantum efficiency should be mentioned

5. XY mapping stage:

- Computer controlled XY stage - Travel Range 50mm X 50mm or greater, step size/ Resolution 100nm or better in XY and 10 nm or better in Z

6. Computer and software:

- The state-of-the-art computer control system compatible-with and optimized for the application software to perform the various measurement options automatically. 24" LCD display or better, with library.
- 3 offline licenses to be included.
- Software upgradation (when available) should be included.

8. UPS:

- 5kVA or better (Emerson or APC brand)

9. Optional Items

- Atomic Force Microscope to integrate with the Raman spectrometer to do pixel by pixel co-related AFM Raman mapping and TERS (Tip enhanced Raman spectroscopy).
- Heating and cooling stage – Linkam model -196 °C to 600 °C
- Piezo stage 200 μm x 200 μm or better

Other terms and conditions:

1. Three years (comprehensive) warranty from the date of installation. Additional extended warranty terms (after three years) must be mentioned.
2. Installation and training must be included.
3. The vendor should have a track record of having previously supplied at least 10 similar model equipment in India to premier institutions (please furnish details).
4. The vendor should have qualified technical service personal for servicing the equipment. The details of trained service engineers in India must be provided with their location.
5. A list of users of the quoted model installed in India should be provided with contact addresses. Additional list of foreign users may also be supplied.
6. Supplier should provide technical compliance including explanations without fail against each point given in the technical specifications for consideration of the offer. Documentary proof of specifications and accuracies must be provided.
7. The compliance sheet appended must be filled up and provided with the quotation

Raman spectrometer Synoptic Compliance Sheet (*)

Please provide a detailed compliance sheet in the following format. Do not simply enter YES against each item. Enter relevant data for your quoted model.

Raman Spectrometer	
Major technical specifications	(*)Please add quantitative data for your product (bid without such details are likely to be rejected)
Range for Raman spectra (cm ⁻¹)	
Spectral range (nm)	
Spectral resolution (FWHM) at 532 nm	
Spatial resolution (lateral and axial)	
Grating or combination used	
Suitable edge filter (50 cm ⁻¹)	
Filter wheel with neutral density filters and software controlled	
Upgradeable in future	
Laser source	
Air cooled diode laser (specify wavelength and power)	
Provision of additional lasers in future (provide details)	
Microscope	
Research grade with color video camera	
Objectives supplied	
CCD Detector	
Fully automated	
Thermoelectrically cooled	

High efficiency (state the value)	
Pixels in X and Y	
XYZ mapping stage	
Computer controlled	
Travel range	
Step size/resolution for each axis	
Computer and software	
LCD monitor size	
Computer model and specs	
No. of offline licenses included	
Is software upgradation included?	
UPS 5kVA	
Manufacturer name and model	
Battery backup time	
Optional items	
AFM available for integration	
TERS option	
Other items	
Warranty – specify years	
At least 10 numbers of similar model supplied in India	
Company trained service personnel – number and location	
Installation requirements	
Power	
Voltage	

Any other requirements	
Delivery & installation date	

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 ENVELOPES 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 ENVELOPE.

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 **150 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. 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.

21. **WARRANTY / GUARANTEE:** THIS COMPREHENSIVE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR 36 MONTHS AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION.

22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO

Dr. Satyahari Dey
Professor, Department of Biotechnology,
Indian Institute of Technology Kharagpur,
721 302, West Bengal, India

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. Satyahari Dey,
Professor, Department of Biotechnology,
Indian Institute of Technology Kharagpur,
721 302, West Bengal, India
E-mail: sdey@hijli.iitkgp.ac.in

LAST DATE FOR SUBMISSION OF SEALED BIDS: 14.02.2019 (Tuesday) by 15:00 Hrs. (IST)

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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