

# KANNUR UNIVERSITY

## (PMU D SECTION)

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ANRF/ANRF II - 3/1391/2026

29.01.2026

### NOTICE INVITING E-TENDER

The Registrar, Kannur University invites E-tender(s) in Two Bid System (Two cover) for the supply, Installation, Testing and Commissioning **FTIR Spectrometer (Insitu) for photocatalysis** at Department of Chemistry Swami Anandatheertha Campus, Payyanur, Kannur University under ANRF Pair Project from original equipment manufacturers (OEMs) or authorized distributors/dealers as per the technical specifications and schedule given below. The rate quoted should be inclusive of all taxes, installation charges and other charges. The Registrar, Kannur University reserves the right to accept or reject the tenders without assigning any reason thereof. The list of equipment/accessories proposed to be purchased, including its quantity and specifications are furnished in the schedule of items given below. Since this is an e-tender, only those bidders who have enrolled in the <http://etenders.kerala.gov.in> portal with their own Digital Signature Certificate (DSC) can participate in the tender. E-Tender document and other details can be obtained from the above e-portal.

### TENDER SCHEDULE

Tender ID	2026_KnrU_830950
Name of work	Supply, installation, testing and commissioning of <b>FTIR Spectrometer (Insitu) for photocatalysis(Quantity 1)</b>
Last date for receipt of Tender	<b>20.02.2026, 11.00 AM</b>
Date and time of opening tender	<b>21.02.2026, 3.00 PM</b>
EMD	Rs: <b>50,058/-</b>
Tender fee	Rs: <b>7,500/-{excl. GST}</b>
<b>All the MSMEs with Udyog Aadhar Registration working within the state of Kerala will be exempted from the payment of Tender Fee and EMD. Under MSME category, only Manufactures for Goods and Service Providers for Services are eligible for EMD/Tender fee exemption</b>	
Place of supply and installation	Department of Chemistry Swami Anandatheertha Campus, Payyanur, Kannur University

or further details logon to <http://etenders.kerala.gov.in>.



### Specifications for FTIR Spectrometer (Insitu) for photocatalysis

<b>INSTRUMENT COMPOSITION</b>	<p>The Fourier Transform –Infra Red (FT-IR) Spectrophotometer should have;</p> <ol style="list-style-type: none"> <li>1. Attenuated Total Reflectance (ATR) Mode with beam splitter, beam path and detector switchover under automatic motorized control without any manual realignment;</li> <li>2. Access to the supplied instrument should be multi- user friendly, with an easy-to-use software interface and modular hardware design that allows rapid user training. It should also be easy to change from one operational mode to another with relative ease so that handling the instrument becomes easier</li> <li>3. In addition, the system being supplied should have a modular design, providing the flexibility to support upgradation for the possibility of integrating future updates either at the time of procurement or at a later date.</li> </ol> <p>Should comply with CE and ISO certification</p>
<b>System-FTIR Spectrometer</b>	<p>Supply and installation of a computer-controlled, user-friendly compact Fourier Transform–Infra Red(FT-IR) Spectrophotometer with Attenuated Total Reflectance (ATR)Mode for the measurement of IR Spectra of different kinds of samples including solid, powder, liquid etc</p>
<b>System-Design</b>	<ul style="list-style-type: none"> <li>• The manufacturer must have ISO 9001 certification for the design, manufacture, and service of the FT-IR instrument.</li> <li>• The spectrometer must utilize a rotary interferometer, providing inherent immunity to mirror tilt and shear and requiring no scanning mirror dynamic alignment. The interferometer must be aligned, high stability, wear-free design with 10 years warranty on scanning mechanism.</li> <li>• The system must be a sealed and desiccated optical unit covering the <math>8000\text{--}350\text{cm}^{-1}</math> wavelength range.</li> <li>• The system must incorporate a vibration-isolated baseplate.</li> <li>• The mid-IR source must be pre-aligned and must have a Hot-spot stabilized source</li> <li>• Source should be high quality, high performance, and longer life with 10 years warranty and should cover Mid-IR range.</li> <li>• The system must be fully software-controlled.</li> <li>• It should provide the highest measurement, accuracy and optimal throughput at intermediate resolutions,</li> <li>• The system must include an automated optical filter wheel</li> </ul>



	<p>containing traceable validation materials to allow instrument performance verification on the Mid spectral regions. The Software controlled validation wheel must contain a <b>polystyrene reference material, traceable to a NIST standard for wave number accuracy, and a SchottNG11 filter for ordinate repeatability.</b></p> <p>The system must include HeNe or Diode laser with minimum 10 years warranty from the date of successful installation.</p>
<b>Performance</b>	<ul style="list-style-type: none"> <li>• Wave number Range:8,000–350cm<sup>-1</sup>or better</li> <li>• The vendor must demonstrate Wavelength accuracyatleast <math>\pm 0.1\text{ cm}^{-1}</math> or better</li> <li>• Wave number reproducibility: 0.007cm<sup>-1</sup>or better</li> <li>• The vendor must demonstrate <b>Peak-Peak signal-to-noise of greater than 15,000:1 for a 5 second and 50,000:1 for 1 minute scan at 4cm<sup>-1</sup> for transmission</b> or better.</li> <li>• Resolution:0.4cm<sup>-1</sup> to 64 cm<sup>-1</sup>or better.</li> <li>• Interferometer:Michelson interferometer</li> <li>• Optics:Completely sealed and desiccated KBr</li> </ul> <p>Detector: system Must be with two detectors 1. DTGS/DLaTGS detector and 2. MCT detector</p>
<b>Required Accessories&amp; Consumables</b>	<p>ATR Diamond Extended Range: 8000 to 350 cm<sup>-1</sup>,must have a single-reflection ATR,with innovative optical design and durable monolithic diamond ATR crystal.</p> <ul style="list-style-type: none"> <li>• Rechargeable Desiccant – Pack of 2 or more</li> <li>• Universal Liquid Cell Holder with0.1mm,0.2mm&amp;0.5 mm Spacer with rectangular windows for Liquid Transmission study, should be supplied. This must have NaCl/KBr Liquid Windows Rectangular Size with 1 drilled &amp;1undrilled.</li> <li>• NIST traceable Polystyrenefilm (Calibration standard)with proper certificateshould be supplied.</li> </ul> <p>Vendor should supply powder pelleting accessories such as Die set, KBr Powder, Pellet holder, agate mortar, pestle and hydraulic press</p>
<b>Upgradability features</b>	<p>System should be able to upgrade with various general purpose accessories like UATR, HATR, gas cells etc.</p> <p>Hyphenation with TGA , GCMS should be possible from same manufacturers.</p> <p>System should be able to upgrade to NIR or FIR range on field.</p> <p>Upgradability with MCT bases microscope imaging system.</p>



<b>Diffuse Reflectance Assembly (DRIFTS) with high temperature reaction chamber</b>	<p>This subsystem will be used in conjunction with FTIR for studying heterogeneous catalysis, gas-solid interactions, photochemical reactions, and oxidation mechanisms.</p> <p>The DRA must be compatible with IR, UV and VIS</p> <p>Reaction chamber Made of chemically resistant 316 stainless steel with Three inlet/outlet ports provided for evacuating the cell and introducing gases.</p> <p>Reaction temperature: 900°C.</p> <p>Reaction chamber shall be compatible with the desired reaction temperature and pressure.</p> <p>Suitable windows for capturing UV-NIR-VIS (Zn-Se/ other suitable material) at pressure up to 15 bar, under vacuum (<math>10^{-5}</math> torr or better ) and temperature up to 900°C.</p> <p>Suitable chiller circulation unit and Vacuum pump should be supplied.</p>
<b>COMPUTERSYSTEM</b> MakeProcessor RAM&HDD KeyBoard Monitor Ethernet& Software	Branded and Reputed System preferably HP/Dell or better Intel Core i7 (3 <sup>rd</sup> /upgraded Generation) processor or better. 32GB RAM & 1TB SSD or higher. Optical mouse with pad. 27" or more LED 32 bit autoselectable 10/100MBPS & Internet ready with integrated Graphics. <ul style="list-style-type: none"> <li>Preloaded Windows 10 professional or latest Operating System (OS) with licensed CD.</li> </ul> MS Office 2021 Professional with media, manual and licensed CD.
<b>Instrument Control application Software</b>	The application software should be user friendly and capable for spectral collection and in-built library search etc., a wide variety of compounds with basic library with at least 15000 spectra should be supplied
 <b>In-Interrupted powersupply</b>	A branded UPS System (minimum 2KVA) [30 min back up] with input/output phases as per the requirements of FTIR must be provided.

<b>Operation and Maintenance&amp; Training</b>	<ul style="list-style-type: none"> <li>Supplier will have to carry out successful installation at our laboratory premises (wherever the system has to be installed)</li> </ul> <p>Onsite comprehensive training for Scientific Personnel operating the system and support services must be provided.</p>
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- The vendor should provide list of **at least 10** installation of similar system in Indian Universities/ Colleges / IITS/NITs/IISER and other government research laboratories with their contact details in last 3 years
- The vendor should have proper qualified engineer/s located near to our place for prompt and efficient after sales services for the next at least 10 years.
- Quoted item should be the latest model with the availability of all the parts and required accessories for at least 10 years
- Warranty of the equipment : 3 years**

### **Terms and Conditions**

- The tender should be submitted in two cover system ( Technical bid & Financial bid ).
- Prices shall be quoted in Indian Currency only.
- Tender fee and EMD should be remitted through SBI MOPS as indicated in the e-Tender website. All payments including EMD should be made through online but 18% GST of Tender fee should be remitted to GST Department directly. The bidder shall be solely responsible for the payment of GST. The University holds no responsibility or liability in this matter.**

Item	Tender Fee (₹)		EMD (₹)
	Fee	18% GST	
FTIR Spectrometer (Insitu) for photocatalysis	7,500/-	1350/-	50,058/-

- All the MSMEs with Udyog Aadhar Registration or any other body specified by the Ministry of Micro, Small and Medium Enterprises working within the state of Kerala will be exempted from the payment of Tender Fee and EMD. Under MSME category, only Manufacturers for Goods and Service Providers for Services are eligible for EMD/Tender fee exemption.**
- The bidders shall keep their rate firm for a period of **120 days**.
- The successful bidder shall, before signing the agreement and within the period specified in the letter of acceptance of his tender, deposit a sum equivalent to **5 % of the value of the contract** by way of Demand Draft drawn in favour of the Finance Officer, Kannur University payable at SBI Kannur Branch or Kannur Branch of other Nationalized or Scheduled bank, **as security** for the satisfactory fulfilment of the contract.



7. The total rate tendered should be inclusive of all taxes and other charges.
8. All bid/tender documents are to be submitted online only and in the designated cover(s)/envelope(s) on the website. Tenders/bids shall be accepted only through online mode on the website and no manual submission of the same shall be entertained.
9. Profile of Bidder as per Annexure1 shall be provided.
10. The earnest money of the unsuccessful bidders will be returned through ONLINE Transaction and the EMD of successful bidders will be discharged upon the bidder executing the contract and furnishing the security deposit that will have to be deposited for the satisfactory fulfilment of the contract.
11. The bid shall contain detailed technical specifications, Brochures and pamphlets of all items quoted.
12. All the claimed specifications (make, model, year of manufacture, warranty etc) should be mentioned in the Brochure or Catalogue of the equipment
13. The installation, commissioning and the initial operation will be the responsibility of the supplier.
14. In case of under performance during the warranty period, the item should be replaced and the period of warranty will recommence from the date of replacement.
15. The payment will be made after completion of supply, installation and commissioning.
16. The bidder shall undertake to supply materials according to the standard sample and /or specifications.
17. No representation for enhancement of rates once accepted will be considered.
18. The bidder shall quote their rate in the standard BOQ provided indicating the break up details.
19. The supplier shall ensure the quality of the stores supplied.
20. The provisions of Kerala Stores Purchase Manual are applicable to this Tender and further proceedings.
21. The University reserves all rights to accept or reject any or all the tenders without assigning any reason whatsoever at its discretion.
22. The bids shall be opened online at Kannur University on the date mentioned in Invitation Bid. If the date fixed for opening happens to be a holiday/due to net failure, tender will be opened at the next working day at the same time.
23. The bidder should have the responsibility to attend the first level service if any complaint report.
24. The final acceptance of the tenders rests entirely with the University who do not bind themselves to accept the lowest or any tender. But the bidders on their part should be prepared to carry out such portion of the supplies included in their tenders as may be allotted to them.
25. Communication of acceptance of the tender normally constitutes a concluded contract. Nevertheless, the successful bidder shall also execute an agreement for the due fulfilment of the contract within the period to be specified in the letter of acceptance. In cases where a successful bidder, after having made partial supplies fails to fulfil the contracts in full, all or any of the materials not supplied may at the discretion of the Registrar, be purchased by means of another tender/quotation or by negotiation or from the next higher bidder who had offered to supply already and the loss, if any, caused to the University shall thereby together with such sums as may be fixed by the University towards damages be recovered from the defaulting bidder.



## **DOCUMENTS TO BE SCANNED AND UPLOADED**

1. Bidder Profile ( As per format mentioned in Annexure1)
2. Scanned copy of valid registration certificate (GST) & PAN Card
3. Scanned copy of relevant Brochure of the equipment including make & model and copy of its certifications like ISO certification.
4. Copy of payment receipt of tender fee and EMD
5. Address details of active/ functioning Service Centres in Kerala or nearby regions
6. Details of previous installations in India within last 5 years.
7. Valid authorization certificate from OEM (in case of resellers)
8. Warranty details

Sd/-

Prof. (Dr.) Joby K Jose

Registrar



**ANNEXURE 1**  
**BIDDER PROFILE**

<b>Sl.No</b>	<b>Particulars</b>
Details of bidder(Firm/Company)	
1	Name
2	address
3	Telephone & Mob
4	Email & website
Details of Authorized Person	
5	Name
6	Address
7	Telephone & Email
Information about the company	
8	Status of Company (Public Ltd./Pvt.Ltd)
9	Details of Registration of Firm (Provide Ref.)
10	Number of Professionals
11	Location and address of offices (in India & overseas)
12	Service Tax Registration Number
13	Income Tax Registration Number (PAN)
14	GST Registration Number

Signature of the Bidder

