Global tender for the supply of **Enhanced Darkfield Optical and Visible Near Infrared Hyperspectral Microscope System**

Contents

This is a global tender for the supply of **Enhanced Darkfield Optical and Visible Near Infrared Hyperspectral Microscope System**

Section 1 - Bid Schedule

1	**Tender No.**	**MT/ENQ-GTE/PAIR/IISc-AMR/25-26/12**
2	Tender Date	13/01/2026
3	Item Description	**Enhanced Darkfield Optical and Visible Near Infrared Hyperspectral Microscope System**
4	Tender Type	Two-bid system i Technical Bid (Part A) ii Commercial Bid (Part B)
5	Place of tender submission	The Chair, Department of Materials Engineering Indian Institute of Science, Bangalore 560012 E-mail: office.pair@iisc.ac.in
6	Last Date & Time for submission of tender	03rd February 2026, 5 PM IST
7	For further clarification	Prof. Ashok M Raichur Department of Materials Engineering Indian Institute of Science, Bangalore – 560012, India E-mail: amr@iisc.ac.in / office.pair@iisc.ac.in

Section 2 – Eligibility Criteria

Prequalification criteria:

1. The Bidder's firm should have existed for at least 5 years. Bidders should enclose the Company Registration Certificate.

2. Only the Original Equipment Manufacturer or their authorized representatives across the globe shall participate in the bid.

3. The quotations should be **CIP – Bangalore Airport**.

4. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per Annexure 4.

5. The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect has to be given as per Annexure 3.

6. The order will be placed only with the bidder who participated in the bid.

Section 3 – Terms and Conditions

A) Submission of Tender:

1) All documentation in the tender should be in English.
2) Tenders should be submitted in two envelopes (a two-bid system).

a. Technical Bid (Part-A) – Technical bid consisting of all technical details and checklist for conformance to technical specifications.

The technical proposal should contain a technical compliance table with five columns:

I. The first column must list the technical requirements in the order given in the technical requirements below.
II. The second column should provide instrument specifications against the requirement. Please provide quantitative responses wherever possible.
III. 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.
IV. The fourth column should state the reasons/explanations/context for deviations, if any.
V. The fifth column can contain additional remarks from the OEM. You can use this opportunity to highlight technical features, qualify responses of previous columns, provide additional details, compare your solution with your competitors, or provide details as requested in the technical requirements table below.

b. Commercial Bid (Part-B) – Indicating item-wise price for the items mentioned in the technical bid, **as per the format of quotation provided in the tender** and other commercial terms and conditions.

3) The technical bid and price bid should be placed in **separate sealed covers**, superscribing the tender description, tender no., and the due date on both envelopes. Both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscripted with the Tender No, Tender Description & Due Date.

4) The SEALED COVER should reach to **The Chair, Department of Materials Engineering, Indian Institute of Science, Bangalore 560012**, on or before the due date mentioned in the tender notice. If the due date is a holiday, the tender will be accepted on the next working day. If the quotation cover is not sealed, it will be rejected.

5) All queries are to be addressed to the person identified in "Section 1 – Bid Schedule" of the tender notice.

6) GST/other taxes, levies, etc., should be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document, if applicable.

7) If the price is not quoted in the Commercial Bid as per the format provided in the tender document, the bid is liable to be rejected.

8) The purchase committee reserves the right to accept or reject any bid and annul the bidding process and reject all bids at any time prior to the award of the contract without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.

9) Incomplete bids will be summarily rejected.

B) Cancellation of Tender:

Notwithstanding anything specified in this tender document, the IISc purchase committee, in its sole discretion, unconditionally and without having to assign any reason, reserves the right:

a. To accept OR reject the lowest tender, any other tender, or all the tenders.
b. To accept any tender in whole or in part.
c. To reject the tender, the offer does not confirm the tender terms.

C) Validity of the Offer:

The offer shall be valid 90 Days from the commercial bid's opening date.

D) Evaluation of Offer:

1) The technical bid (Part A) will be opened first and evaluated.

2) Bidders meeting the required eligibility criteria in Section 2 of this document shall only be considered for Commercial Bid (Part B) opening. Further, agencies not furnishing the documentary evidence as required will not be considered.

3) Prequalification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or commercial evaluation. The decision regarding acceptance and/or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and the decision in this regard shall be binding on the bidders.

4) The contract award will be subject to acceptance of the terms and conditions stated in this tender.

5) Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:
a. Non-submission of complete offers.
b. Receipt of bids after the due date and time or by email/fax (unless specified otherwise).
c. Receipt of bids in open conditions.

6) In case any BIDDER is silent on any clauses mentioned in these tender documents, IISc Bangalore shall construe that the BIDDER has accepted the clauses as of the tender, and no further claim will be entertained.

7) No revision of the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.

8) The lowest bid will be calculated based on the total price of all items tendered for the basic equipment, accessories selected for installation, operation, preprocessing and post-processing, optional items, recommended spares, warranty, and annual maintenance contract. The purchase committee seeks the most cost-effective solution for obtaining a new tool. Vendors are encouraged to propose all avenues, including but not limited to buy back of the existing tool, turnkey upgrade of existing to, l or purchase of a new tool.

E) Pre-requisites:

The bidder will provide the prerequisite installation requirements of the equipment along with the technical bid.

F) Warranty:

The complete system has to be under warranty for a **minimum period of 3 years** (year-wise breakup value should be shown in the commercial bid). The vendor should include the cost of any spares needed during the warranty period, including electronics, subcomponents, and software. If the instrument is defective, it has to be replaced or rectified at the bidder's cost within 30 days from receipt of written communications from IISc, Bangalore.

1. If there is any delay in replacement or rectification, the warranty period should be extended.
2. Terms and conditions for the annual maintenance contract beyond the warranty period should be mentioned.
3. Warranty terms and additional warranty options are a must for all the components. Specify the service plan, like whether the local distributor will address the issue or the parent company. A minimum of three years of complete system warranty should be given. If the system requires service during the warranty period, the vendor must guarantee or replace the instrument for free. Vendor to have logistic support to ensure that at least 95% of the service parts are readily available and upkeep delivery within 1 week.
4. A declaration of Conformity certificate and System Validation certificate must be provided. All modules must be GLP compliant.
5. Support should be available on full working days (excluding Public Holidays), local time.
6. On-site installation, commissioning, and training shall be conducted by a qualified factory-trained engineer.
7. The vendor must demonstrate that it has a proven appropriate set-up and capability to provide after-sales service efficiently and effectively. The supplier should have a similar system in their facility to that proposed in this tender for training purposes.
8. The vendor must have a local dedicated Sales & Service team & Application lab in the Southern region.

G) Annual Maintenance Contract:

An annual maintenance contract for at least two years post-warranty may be provided as an essential, optional item upon completion of the warranty period.

H) SPARES:

Vendors must provide a detailed list of spares and a user manual with a detailed Bill of Materials for all Parts. It should include the Spares Column with the Manufacturer part Number, Qty, and availability of stock after 3 Years.

I) Purchase Order:

The quantity of the items in the tender is only indicative. IISc, Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.
If the product and service quality is unsatisfactory, IISc, Bangalore reserves the right to cancel or amend the contract.

J) Delivery, Installation, and Training:

The bidder shall provide the lead time to delivery, installation, and made functional at **IISc, Bangalore**, from the date of receipt of the purchase order. The system should be delivered, installed, and functional within 120 days of receipt of the purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and the inspection of all the items and features/capabilities tested by the **IISc, Bangalore**. **For acceptance, the vendor must demonstrate the technical specifications mentioned in the tender**. After successful installation and inspection, the date of taking over the entire system by the **IISc, Bangalore**, shall be taken as the start of the warranty period. **No partial shipment is allowed.**

Vendors must demonstrate and validate all claimed system specifications

K) Payment Terms:
Full payment (except AMC) will be released after completion of delivery, satisfactory installation, and qualification, subject to TDS as per rules. Advance payment is acceptable based on mutually agreeable terms. As per GFR, no advance payment can be made to domestic vendors unless an equal amount of bank guarantee is provided.

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

M) Disputes and Jurisdiction:
Any legal disputes arising from any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction in Bangalore, India.

N) General:

1) All amendments, time extensions, clarifications, etc., within the tender's submission period, will be communicated electronically. No extension of the bid due date/time shall be considered due to a delay in receipt of any document(s) by mail.

2) The bidder may furnish any additional information necessary to establish capabilities to complete the envisaged work successfully. It is, however, advised not to furnish superfluous information.

3) With prior intimation, the bidder may visit the installation site before tender submission.

4) Any information furnished by the bidder found to be incorrect, immediately or later, would render the bidder liable to be debarred from tendering/taking up work in IISc, Bangalore.

5) Price of every line item in the commercial bid should be quoted along with the total quoted price for the instrument to be operational (installed and ready to use) in our facility. Quote the price of each optional line item separately.

6) The vendor should have qualified technical service personnel for the equipment based in India (preferably in Bangalore).

7) Items in addition to that listed in the technical table that you would like to bring to our attention, such as data sheets, technical plots, etc. can be listed at the end of the compliance table.

8) Vendors are encouraged to highlight the advantages of their instrument and accessories over comparable instruments from competitors.

9) If needed, a meeting for any technical clarifications can be scheduled with the undersigned by sending an email.

10) The Institute reserves the right to accept or reject any bid or to annul the bidding process and reject all bids at any time prior to the award of the contract without thereby incurring any liability of the affected bidder or bidders.

11) After the award of the purchase order, the vendor must provide an Order Acknowledgement within 7 days from the receipt of the Purchase Order.

12) The vendor must have a local dedicated Sales & Service team & Application lab in the Southern region.

13) Vendors must provide proper justification for any technical deviations mentioned in the technical comparison statement during evaluation.

14) A comprehensive three-year warranty must cover all system components and accessories supplied with the equipment.

15) Vendors must submit a detailed list of infrastructure requirements (such as power supply, exhaust, laboratory space, etc.) necessary for installation and smooth operation of the system.

16) The payment terms should be specified in the commercial proposal, which should be consistent with IISc's purchase policies.

17) Provide details of the number of trained personnel in India, the number in the southern region, or Bangalore who can service the instrument.

18) Include other options currently available which can be added in the future.

19) The vendor should attach product brochures along with the technical bid.

20) A set of basic experiments for performing routine checks of acceptable operation with clear instructions to be provided. A standard sample to estimate column efficiency should be included.

21) Details and contact information of at least the last five installations of similar equipment.

22) End-user certificates from these installations, confirming, satisfactory performance.

Section 4 – Technical Specifications

Enhanced Darkfield Optical and Visible Near Infrared Hyperspectral Microscope System

The Enhanced Darkfield Optical & Visible Near Infrared (VNIR) Hyperspectral Microscope System should include the following minimum components listed below. It should provide for transmission-based enhanced darkfield microscopy. It should provide for line scan hyperspectral imaging of nanoscale sample elements including materials such as metal nanoparticles, carbon nanomaterials and related nanoscale samples in a wide range of environments. It should also meet the following minimum performance specifications as listed in the components outline. These components must be installed as an integrated system solution on-site at. A minimum of two days of training must be provided on the operations of the system.

Mandatory Required Specifications and Components

Research Grade Upright Optical Microscope: Must support enhanced darkfield transmission illumination. Must be equipped with the following components:

- Trinocular Head
- 15X Eyepiece (Qty. 2)
- Cross line Reticule, 24mm
- Sextuple nosepiece with analyzer slot
- 10X Plan achromat objective
- 40x Plan Fluorite long working distance 2.7-4.0mm .6 NA
- 60x UPL Fluorite .65-1.25 NA oil Iris objective
- 100x UPL Fluorite .6-1.30 NA oil Iris objective
- Dual port camera (C) mount for seamless switching from VNIR hyperspectral image capture to optical image capture at 100%-0%.
- Motorized Upright Stage for integrated push broom hyperspectral image capture. Must support 10nm Step Resolution and include XY joystick to also enable manual control of the stage by user.

Advanced Structured Transmission-Based Enhanced Darkfield Illumination System: This system should contain a 1.2-1.4 NA cardioid oil condenser, capable of accepting source illumination directly via liquid light guide and producing automated prealigned Koehler illumination. The system should allow for user-controlled optimization of critical illumination without any degradation of Koehler illumination. System must fit onto condenser mount of a wide range of research grade optical microscopes.

This advanced structured transmission darkfield illumination system must enable optical detection of metal nanomaterials down to 10nm in solution or adhered on glass slide. These enhanced darkfield optics should also enable signal-to-noise enhancement of up to 10x over standard microscope darkfield condenser optics. Verification of both the optical detection of 10nm metal nanoparticles and a 10x improvement in the optical signal-to-noise over standard darkfield optics should be provided in an independent documented manner, such as a peer-reviewed publication.

Visible Near Infrared Diffraction Grating Hyperspectral Imaging Spectrograph and Integrated CCD

Detector: This system must fit onto microscope dual port camera mount and provide a minimum of 2.0nm spectral resolution from 400nm-1,000nm VNIR wavelengths. Must include integrated digital 14bit dynamic range monochrome CCD with USB connection. The integrated detector must produce a minimum quantum efficiency of 62% and a NIR enhancement mode. Pixel size should be 6.45um square or smaller.

Hyperspectral Source Illumination

Must support aluminum halogen broadband illumination providing smooth illumination for spectral imaging. This illumination should be able to support both optical observation and optical image capture as well as VNIR hyperspectral image capture from 400nm – 1,000nm.

Hyperspectral Image Acquisition Software: The image acquisition software should provide the following minimum features:

- Should be integrated into the image analysis software and allow for a user selected full field of view or more limited field of view from the center of the image to be captured.
- Should have a live preview capability to enable proper setting of the detector exposure prior to image capture.
- Should provide for real time display of the hyperspectral image as it is being created by the system
- Should automatically open and display the full hyperspectral image automatically upon completion of the image acquisition process

Hyperspectral Image Analysis Software: The image analysis software should be capable of providing the following minimum features:

- An ability to query the spectral response of any single pixel or multiple contiguous pixels within the hyperspectral image based on user selection
- An ability to determine the mean spectral response of one or multiple regions of interest within a hyperspectral image as well as conducting a comparison of mean spectra from different spectral image files
- An automated method for correcting for the instrument response of the recorded spectral data for every pixel within a hyperspectral image
- An automated method for converting reflectance values to absorbance for all pixel level spectral data within an image
- An automated method to spectrally subset data in each pixel or to spatially subset pixels within a hyperspectral image
- An automated particle filter tool to enable nanoparticles within a sample to be identified and sorted based on wavelength, optical scatter size or peak intensity
- The ability to create spectral libraries in an automated fashion from individual pixels or pixels within a region of interest for use in spectral mapping
- An automated method for comparing spectral libraries against control samples to ensure accuracy of the spectral library for spectral mapping
- An automated spectral mapping mechanism to map spectral libraries in hyperspectral images

- An automated spectral mapping mechanism to map reference spectra based on scale and root mean square error or similar calculation in hyperspectral images
- A mechanism to automatically identify all pixels in an image based on the peak wavelength of the individual pixel level spectra. This mechanism should map all pixels within a hyperspectral image meeting the peak wavelength criteria determined by the user
- An ability to conduct spectral smoothing including the most common smoothing methods of adjacent band averaging and Savitzky Golay within every pixel of a hyperspectral image

Color Optical Camera for Still Image and Video Image Capture

This camera must mount onto the dual port camera mount along with the hyperspectral imaging system. It should include a windows-based image capture capability and should provide the minimum specifications:

- CCD Array 2048 x 2048
- Pixel Size 6.5µm x 6.5µm
- Sensor Dimensions 18mm diagonal
- Peak Quantum Efficiency 80% at 600nm
- Frame Rate 40fps (full resolution)
- Exposure Time Range 21µs – 5sec
- Dynamic Range 16bit

Dual Mode Transmitted Fluorescence System: Equipped with DAPI FITC, TX Red and triple pass 25mm excitation filters plus 25 mm triple pass DAPI, FITC, TX Red emission filter.

The Dual Mode Fluorescence System must enable the ability for transmission light observation of fluorescent and non-fluorescent sample elements simultaneously, in real time, with no overlay required. This system should allow for liquid light guide connection from a fluorescence optimized light source of to the excitation filter wheel and then light guide connection to the enhanced darkfield illumination system. the emission filter should be included above the objectives in an analyzer slot or emission slot of the filter cube.

Live Cell Imaging Chamber Standard Kit – A live cell imaging chamber that can work with the above-mentioned set up. This should allow to simulate live cell studies using this setup.

Computer hardware and monitors: Minimum requirements

- Operating System (OS) = Windows
- Central Processing Unit (CPU) = 3.2+ GHz,
- RAM = 32 GB
- Disk Space = 1TB
- 2x 24” monitors

Warranty: 1 year

Shipping, insurance and delivery: FOR – IISc, Bangalore

System Installation and Training: must be provided for all components of the system on-site.

Section 5- Technical Bid

The technical bid should furnish all requirements of the tender along with all annexures in this section and be submitted to:

The Chair,
Department of Materials Engineering
Indian Institute of Science
Bengaluru, Karnataka 560012

Kind attn.: Prof. Ashok M Raichur

Annexure-1

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

Details of the Bidder

Sl. 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 Chair,
Department of Materials Engineering
Indian Institute of Science, Bangalore – 560012

Ref: Tender No: XXXXXXXXX Dated: XXXXX

Enhanced Darkfield Optical and Visible Near Infrared Hyperspectral Microscope System

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has XXXXXX years of experience in **Enhanced Darkfield Optical and Visible Near Infrared Hyperspectral Microscope System.**

(Signature of the Bidder)

Printed Name

Designation, Seal Date:

Annexure-3

Declaration regarding track record

To,
The Chair,
Department of Materials Engineering
Indian Institute of Science, Bangalore – 560012

Ref: Tender No: XXXXXXX Dated: XXXXX

Enhanced Darkfield Optical and Visible Near Infrared Hyperspectral Microscope System

Dear Sir,

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 Chair,
Department of Materials Engineering
Indian Institute of Science, Bangalore – 560012

Ref: Tender No: XXXXXXX Dated: XXXXX

Enhanced Darkfield Optical and Visible Near Infrared Hyperspectral Microscope System

Dear Sir,

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.

6. Commercial bid

The commercial bid should be furnished with all requirements of the tender with supporting documents as mentioned under:

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total
1.	Essential items noted in the technical specification				
1.a	… (details of essential items)				
1.b	…				
2.	Optional items noted in the technical specification				
2.a	… (details of Optional items)				
2.b	…				
3.	Accessories for operation and installation				
4.	All Consumables, spares and software to be supplied locally				
5.	Warranty (1 year)				
6.	AMC 2 years beyond warranty				

Any additional items

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total

Addressed to

The Chair,
Department of Materials Engineering
Indian Institute of Science, Bangalore – 560012

Kind Attn: Prof. Ashok M Raichur

7. Checklist

(This should be enclosed with technical bid- Part A)
The following items must be checked before the Bid is submitted:

1. Sealed Envelope "A": Technical Bid

1. **Section 5- Technical Bid** (each page signed by the authorized signatory and sealed) with the below annexures:
   a. Annexure 1 : Bidders details
   b. Annexure 2: Declaration regarding experience
   c. Annexure 3: Declaration regarding clean track record
   d. Annexure 4: Declaration for acceptance of terms and conditions
   e. Annexure 5: Details of items quoted
2. Copy of this tender document duly signed by the authorized signatory on every page and sealed.

2. Sealed Envelope "B": Commercial Bid

Section 6: Commercial Bid

Your quotation must be submitted in two envelopes: Technical Bid (Envelope A) and Commercial Bid (Envelope B) super scribing on both the envelopes with Tender No. and due date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender No., Tender description & Due Date.