Supply and Installation of Photoluminescence Spectroscopy - Steady state, temperature dependent and time resolved (TCSPC) photoluminescence spectrometer (UV-Vis-NIR region)

NOTICE INVITING DOMESTIC TENDER

Department of Materials Engineering
Indian Institute of Science
Bangalore-560012
India

Date: 11/08/2025

Table of Content

1. Bid Schedule

1.	Tender Number	MT/SRR/2025/OS-2
2.	Tender Date	11/08/2025
3.	Item Description	Supply and Installation of Photoluminescence Spectroscopy - Steady state, temperature dependent and time resolved (TCSPC) photoluminescence spectrometer (UV-Vis-NIR region)
4.	Tender type	Two bid system i Technical Bid (Part A) ii Commercial Bid (Part B)
5.	Place of tender submission	Office of the Chair Department of Materials Engineering Indian Institute of Science. Bangalore-560012. India.
6.	Last Date & Time for submission of tender	01/09/2025
7.	For further clarification	Dr. Sachin R. Rondiya Assistant Professor Department of Materials Engineering Indian Institute of Science. Bangalore-560012. India

2. Eligibility Criteria

Prequalification criteria:

1. The bidder must have supplied similar systems to at least 10 educational institutes/universities and/or research organizations in India along with contact details.

2. The Bidder should belong to either class 1 or class 2 supplier distinguished by their "local content" as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter.

a. Class 1 supplier: Goods and services should have local content of equal to or more than 50%.

b. Class 2 supplier: Goods and services should have local content of equal to or more than 20 % and less than 50%.) (please refer to the attached public procurement order I annex)

c. Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.

3. Purchase preference as defined by the recent edits to GFR (within the "margin of purchase preference") will be given to Class-1 supplier.

4. MSME can seek exemption to some qualification criteria. IISc follows GFR2017 for such details

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

6. 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.

7. Original Invoice, Original Warranty Certificate, Original Test Reports should be produced for all imported items from OEM (Original Equipment Manufacturer) at the time of supply of the equipment.

8. System Catalogue should be produced with the Technical Bid.

9. Manufacturers should have ISO or equivalent international standard certificate. Please attach the required certificate with the bid.

10. Details of an experienced service engineer including contact details should be provided in tender document.

12. Bidder shall have to submit audited accounts (Balance sheet profit and loss account) of last three financial years. Audited statements must be signed and stamped by a qualified chartered accounted.

13. Bidder must submit Income Tax return for last three financial assessment years.

14. Bidder must submit up to date sales tax or GST clearance certificate.

15. CE Certification must be provided for the proposed system. The CE certificate should be provided with the Unit.

3. Terms and Conditions

A) Submission of Tender:

1.All documentations in the tender should be in English.

2.Tender should be submitted in two envelopes (two bid system).

a.Technical Bid (Part-A) – Technical bid consisting of all technical details and check list for conformance to technical specifications. The technical proposal should contain a technical compliance table with 5 columns.

I. The first column must list the technical requirements, in the order that they are given in the technical requirement below.

II. The second column should provide specifications of the instrument against the requirement. Please provide quantitative responses wherever possible with technical details in annexure.

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 response of previous columns, or provide additional details.

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 tender, and other commercial terms and conditions.

3. The technical bid and price bid should each be placed in separate sealed covers, superscripting on both the envelopes the tender no. and the due date. 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 superscripting tender number / due date & should reach Chairperson Office, Department of Materials Engineering, Indian Institute of Science, Bangalore – 560012, India on or before due date mentioned in the tender notice. In case due date happens to be holiday the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.

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

5. The price must be quoted in INR (Indian Rupee). Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor. The quotations should be on FOR-IISc Bangalore basis in INR only.

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

7. The Institute reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of contract, without there by incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.

8. Incomplete bids will be summarily rejected.

B) Cancellation of Tender:

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) Validity of the Offer:

The offer shall be valid atleast 90 Days from the date of opening of the commercial bid.

D) Evaluation of Offer:

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

2. Bidders meeting the required eligibility criteria as stated 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. Pre- qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or during commercial evaluation. The decision in regard to acceptance and / or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and decision in this regard shall be binding on the bidders.

4. The award of contract 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 due date and time and 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 consider that the BIDDER had accepted the clauses as of the tender and no further claim will be entertained. Further if the BIDDER is silent or does not give detail justification of their claim regarding those mentioned in technical specifications, IISc Bangalore reserves the full right to reject the tender due to non-compliance without any further discussion.

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

8. Lowest bid will be calculated based on the total price of all items tendered for Basic equipment along with accessories selected for installation, operation, preprocessing and post processing, optional items, recommended spares, warranty.

E) Pre-requisites:

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

F) Warranty:

The complete system is to be under warranty period of minimum 3 years from the date of functional installation . If the instrument is found to be defective, it has to be replaced or rectified at the cost of the bidder within 30 days from the date of receipt of written communications from IISc, Bangalore . If there is any delay in replacement or rectification , the warranty period should be correspondingly extended.

G) Purchase Order:

1. The order will be placed on the bidder whose bid is accepted by IISc based on the terms & conditions mentioned in the tender document.

2. The quantity of the items in tender is only indicative. IISc, Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.

3. If the quality of the product and service provided is not found satisfactory, IISc, Bangalore reserves the right to cancel or amend the contract.

I) 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 purchase order. The system should be delivered, installed and made functional within 180 days from the date of receipt of purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore. After successful installation and inspection, the date of taking over of entire system by the IISc, Bangalore shall be taken as the start of the warranty period. No partial shipment is allowed.

The bidder should also arrange for technical training to the local facility technologists and users.

J) Payment Terms:

100% payments will be released after completion delivery and satisfactory installation subject to TDS as per rules. AMC cost (if ordered), after completion of warranty period) will be released on half-yearly basis at the end of each six months subject to satisfactory services. Price basis must be on FOR-IISc Bangalore basis only. As per GFR, no advance payment can be made to domestic vendors unless an equal amount of bank guarantee is provided.

K) Statutory Variation:

Any statutory increase in the taxes and duties subsequent to 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 onto IISc, Bangalore.

L) Disputes 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.

M) General:

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

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

3. The bidder may visit the installation site before submission of tender, with prior intimation.

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

4. Technical Specification

Technical Specifications for Photoluminescence Spectroscopy - Steady state, temperature dependent and time resolved (TCSPC) photoluminescence spectrometer (UV-Vis-NIR region)	
Configuration Design: Photoluminescence Spectroscopy - Steady state, temperature dependent and time resolved (TCSPC) photoluminescence spectrometer (UV-Vis-NIR region)	
General Description	
Essential	1. PC controlled Research grade modular fluorescence spectrometer system for acquiring steady-state excitation and emission spectra in the UV-VIS-NIR spectral range with single photon counting sensitivity along with TCSPC and MCS measurement facility with CCR cryostat in the range of 4K/10K-300K. The standard instrument configuration must have a high sensitivity of the S/N (>35000:1) Ratio of the water Raman signal measured with excitation at 350 nm , emission at 397 nm with a 1s integration time and 5 nm spectral bandwidth. 2. Instrument must incorporate factory pre-alighned Xenon source. The Instrument should be fitted with proper required detectors to achieve high sensitivity in the NIR range . NIR quartz cell (3ml, Qty -2), film and powder holder should be supplied with instrument. 3. Software operation should be user friendly with controlled operation , data collection and analysis. The system should be plug and play type and easy to install or to be removed. The system has to be optimized for standard /reference sample and to be successfully demonstrated at our site . The instrument must allow standard RS 232 C or USB communication with PC. All cables and connectors to be provided for full operation of the system . Complete product catalog describing all the required basic and optional items should be produced . OEM should have application lab and service facility in India for support . The instrument should be flexible to incorporate modular , removable source , detector, and sample compartments to enhance operation range and future expandability to support a wide range of experimental needs.
Technical Specifications of the system should be included the following:	
Essential	1. **Broadband Sources: a)** CW ozone free Xenon Lamp with integrated power supply and displayed lamp parameters for steady state PL measurements. **b)** Pulsed Xenon source with pulse width 1.5 µs to 2.5 µs and 0.1 - 100 Hz for phosphorescence decay measurements in the range of microseconds to seconds. 2. **CW Laser Source: ~**405 nm, ~650 nm and ~785 nm range Laser with 3% stability with proper laser mount. Power control box along with interlock box as required. 3. **TCSPC Sources: ~**405 nm (±5 nm) ps, ~635 nm (±5 nm) ps and ~785 nm (±5 nm) ps pulse laser with laser mount. Typical pulse width : <100 ps @ 10 MHz and Rep rate : Few kHz - 20MHz. * Laser mount for source and control box for all the lasers (CW, Pulsed) should be included. 4. **Set of neutral density filters (ND) installed in wheel mount:** from 0.1 to 4.0 OD with suitable dimension to the sample chamber incident beam pathway. 5. **Sample chamber:** Large Sample Compartment with single cuvette holder. Filter slots provided (for holding 50mm square filters) as standard. Suitable focusing optics lens/mirror based. T-geometry should be available for additional emission monochromator. Interlocks to operate detector protecting shutter. computer controlled signal level attenuator. 6. **Emission Monochromator:** Czerny Turner configured double monochromator with suitable grating optimized for required range and greater stray light suppression (1:10^10). Minimum step 0.01 nm. Computer controlled slits, swing mirror, filter wheel for high order removal, shutters, exchangeable triple grating turrets enabling software selection of gratings. 7. **Excitation Monochromator:** Czerny Turner configured double monochromator with suitable grating optimized for required range and greater stray light suppression (1:10^10). Minimum step 0.01 nm. Computer controlled slits, swing mirror, filter wheel for high order removal, shutters, exchangeable triple grating turrets enabling software selection of grating.

Essential	8. **Detector:** Standard reference detector (part of standard spectrometer) for recording excitation incident intensity. Suitable PMT detector (230 nm - 950 nm or better) in TE cooled housing with low dark count <100 cps at -20°C and response width <600 ps. PMT gating circuit/hardware for measuring phosphorescence spectra. 9. **Solid sample holder:** Front face detection suitable for measurements of powders and film /slide samples including all the sample holders.Necessary set of 7 long-pass filters with wavelength of 330 nm, 395 nm, 455 nm, 495 nm, 550 nm, 590 nm, and 645 nm with suitable dimension to fit into the filter holders. 10. Acquisition Electronics for TCSPC/MCS/counter module as required for the system. 11. **NIR Steady-state and TCSPC measurement:** TE cooled/LN cooled detector for extended fluorescence and time resolved spectral measurements in the range of 870 nm-1650 nm or better. Required Additional emission grating and additional second order filter . All other required hardware and software components to measure NIR steady state and TCSPC spectra in the given range. 12. **Phosphorescence decay and spectral measurements:** All the related hardware and software accessories for phosphorescence decay measurements in the range of microseconds to seconds must be included. 13. **Quantum Yield:** Integrating sphere (scattering of light in the range of 250 nm - 2500 nm) with proper dimension for absolute PLQY and reflectance measurements for solution, film and powder samples. The sphere must feature a motorized sample loading mechanism which allows easy sample exchange. Two separate 3ml cuvette (10mm path length) with stopper and all other holders, reference plug, powder tray and all other related accessories must be provided as sphere accessories for complete measurements of absolute PLQY for both solid and liquid samples. 14. **Low temperature measurement- CCR Upgrade:** Bottom loaded Closed cycle cryostat along with temperature controller in the temperature range 4K/10K-300K for Steady state, TCSPC, MCS measurements. Air cooled water recirculation system must be provided. Turbo-molecular Pump for Cryostat, ready-to-operate high vacuum pump with integrated vacuum gauge and display. 10^-8 mbar ultimate pressure. Necessary mounting to couple it in the sample chamber and sample holder. 15. **Circularly Polarized Luminescence:** Measure right and left circularly polarised luminescence signals with Glum value. Wavelength range of PEM device: 200 nm – 900 nm. Usable aperture: 56 mm. Frequency: 50 kHz. Retardation: lambda/4, lambda/2 or lambda (configurable in software). EM-exd emission polariser for extended NIR range.
Software Specifications	
Essential	Comprehensive suitable software for Windows, providing spectrometer control, performance monitoring, spectral and lifetime data acquisition and data analysis. Protecting software key, should provide: - control over spectrometer components such as lamps, monochromator and detector settings - spectral and fluorescence/phosphorescence lifetime acquisition - automatic or manual spectral correction - kinetic measurements and batch measurements for automated sequential operations; spectral and lifetime availability depending on light sources and electronics - time resolved excitation and emission spectra (TRES) and slicing of TRES data - data handling routines (normalisation, scaling, arithmetic, integration, differentiation, smooth etc.) - numerical data reconvolution of up to 4 exponential based on Marquardt-Levenberg algorithm - full reconvolution analysis of up to max. channels of data - residuals analysis, Durbin-Watson analysis and auto-correlation analysis - 2D, 3D and contour graphics - routines for quantum yield, reflectance and absorption measurements (integrating sphere and or absorption accessory fitted) - chromaticity and luminance calculation and presentation - file import/export options, including ASCII - fully automated acquisition of time resolved anisotropy with G-Factor correction (polarisers fitted) - fully computer controlled sample temperature (if optional cryostat or TE cooled sample holder is fitted) - optional communication to certain lasers and oscilloscopes and sample holder options

Installation & Commissioning	
Essential	➢ Installation and commissioning of the equipment has to be carried out by supplier at our laboratory in site and the performance has to be demonstrated. ➢ On site training must be provided to our personnel on the installed equipment for operation and data processing at free of cost.
Instrument Control	
Essential	Suitable computer/workstation with all the interfacing hardware and pre-loaded software to operate the system with full capabilities and the license key must be provided.
Warranty	
Essential	One-year comprehensive warranty on the full system should be provided from the date of successful installation. Additional two years (2nd and 3rd year) non-comprehensive warranty (without spares) should be provided.
Maintenance	
Essential	The system Should be plug & play type and easy to install or to be removed.

5. Technical Bid

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

The Chairperson,
Attn: Dr. Sachin R. Rondiya (Assistant Professor)
Department of Materials Engineering,
Indian Institute of Science
Bangalore – 560012, India

Annexure 1

Details of the Bidder

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

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 Bidder

Name

Designation, Seal Date:

Annexure-2

Declaration regarding experience

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

Ref: Tender No: MT/SRR/2025/OS-2

Dated: 11/08/2025

Supply and Installation of Photoluminescence Spectroscopy - Steady state, temperature dependent and time resolved (TCSPC) photoluminescence spectrometer (UV-Vis-NIR region)

Sir,

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 and installing Photoluminescence Spectroscopy - Steady state, temperature dependent and time resolved (TCSPC) photoluminescence spectrometer (UV -Vis -NIR region) with asked technical specifications.

(Signature of the Bidder)

Printed Name

Designation, Seal Date:

Annexure-3

Declaration regarding track record

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

Ref: Tender No: MT/SRR/2025/OS-2

Dated: 11/08/2025

Supply and Installation of Photoluminescence Spectroscopy - Steady state, temperature dependent and time resolved (TCSPC) photoluminescence spectrometer (UV-Vis-NIR region)

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 Chairperson,
Materials Engineering Department,
Indian Institute of Science
Bangalore – 560012, India

Ref: Tender No: Tender No: MT/SRR/2025/OS-2

Dated: 11/08/2025

Supply and Installation of Photoluminescence Spectroscopy - Steady state, temperature dependent and time resolved (TCSPC) photoluminescence spectrometer (UV-Vis-NIR region)

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:

Sl. 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)				

Any additional item

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

Addressed to
The Chairperson,
Attn: Dr. Sachin R. Rondiya (Assistant Professor)
Materials Engineering, Indian Institute of Science
Bangalore – 560012, India

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:
Annexure 1: Bidders details
Annexure 2: Declaration regarding experience
Annexure 3: Declaration regarding clean track record
Annexure 4: Declaration for acceptance of terms and conditions
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.