

Tender No: IISc/SSCU/2026/ Mössbauer spectrometer

Date: 08/09/2026

Global Tender for the supply of a **High-End Research-Grade Mössbauer spectrometer compatible with a closed-cycle helium cryostat and a $^{57}\text{Co}/\text{Rh}$ Mössbauer source and accessories** to Indian Institute of Science, Bengaluru

This is a **Request for Quote (RFQ)** for the procurement of a **High-End Research-Grade Mössbauer spectrometer compatible with a closed-cycle helium cryostat and a $^{57}\text{Co}/\text{Rh}$ Mössbauer source and accessories** at the Solid State and Structural Chemistry Unit (SSCU) at Indian Institute of Science (IISc), Bengaluru.

Details can be found in the below sections.

Section 1	Bid Schedule		Pg. 3
Section 2	Eligibility Criteria	As specified by IISc	Pg. 4
Section 3	Technical Specifications		Pg. 5
Section 4	Terms and Conditions	As specified by IISc	Pg. 17
Section 5	Technical Bid	Annexure 1: Bidder details	Pg. 19
		Annexure 2: Declaration regarding experience of bidder	Pg. 20
		Annexure 3: Declaration regarding clean track record of the bidder	Pg. 21
		Annexure 4: Declaration of acceptance of terms and conditions	Pg. 22
		Annexure – 5: Details of items quoted	25
Section 6	Commercial Bid	Quotation with Price, Technical specifications of the equipment	Pg. 26
Section 7	Check List		Pg. 28

Prof. Abhishake Mondal

Associate Professor

Email: mondal@iisc.ac.in



Indian Institute of Science, Bengaluru invites the best quotations from bona fide, resourceful, and eligible manufacturer/exclusive distributor/vendors for the procurement of a *High-End Research Grade Mössbauer spectrometer compatible with a closed-cycle helium cryostat and a $^{57}\text{Co}/\text{Rh}$ Mössbauer source and accessories* with the following technical specifications on C.I.P. Bengaluru basis. The quotation should clearly mention the validity of the quote (minimum 90 days validity), terms of delivery, delivery schedule, estimated delivery date, and payment terms. The tender should be submitted in two separately sealed and distinctly marked envelopes: one containing the technical bid and the other containing the commercial bid, both of which should reach us duly signed on or before 17:00 hours (IST), September 29th, 2026.

The bids should be addressed to:

The Chair

Solid State and Structural Chemistry Unit

Chemical Sciences Division

Indian Institute of Science (IISc)

Bengaluru, India - 560012

Kind attention: **Prof. Abhishake Mondal**

Email: mondal@iisc.ac.in

The sealed bids should be sent to the following address:

Prof. Abhishake Mondal

Solid State and Structural Chemistry Unit

Room F-213, F-Block, Second Floor

Chemical Sciences Division

Indian Institute of Science (IISc)

Bengaluru, India - 560012

Ph: +91-9932207177

Email: mondal@iisc.ac.in

Please enclose a compliance statement along with the technical bid.

Section 1 – Bid Schedule

1.	Tender No	<i>IISc/SSCU/2026/ Mössbauer spectrometer</i>
2.	Tender date	08 th September 2026
3.	Instrument	<i>High-End Research Grade Mössbauer spectrometer compatible with a closed-cycle helium cryostat and a ⁵⁷Co/Rh Mössbauer source and accessories.</i>
4.	Tender type	Global Tender
5.	Documents to be submitted	i) Technical bid (part A) ii) Commercial bid (part B)
6.	Place of tender submission	Prof. Abhishake Mondal Solid State and Structural Chemistry Unit Room F-213, F-Block, Second Floor Chemical Sciences Division Indian Institute of Science (IISc) Bengaluru, India – 560012
7.	Last date and time of tender submission	September 29 th , 2026, 17:00 hours (IST)
8.	For Further clarification	Prof. Abhishake Mondal Solid State and Structural Chemistry Unit Chemical Sciences Building Indian Institute of Science (IISc) Bengaluru- 560012, India Ph: +91-9932207177 Email: mondal@iisc.ac.in

Section 2 – Eligibility Criteria

Prequalification criteria:

1. All documentation in the tender should be in English.
2. The tender should be submitted in two envelopes (two bid systems)
 - a) **Technical Bid (Part-A)** – Technical bid consists of all technical details and a checklist for conformance to technical specifications. The proposal should contain a compliance table with 4 columns in addition to the ones in the technical requirements table that has been included with this RFQ above. The compliance table should include all the items in the same order and format. The first column should describe your compliance in a “Yes” or “No” response. If “No”, the second column should state the extent of the deviation. The third column should state the reasons for the deviation, if any. The fourth column can be used to compare your tool with that of your competitors or provide details as requested in the technical requirements table below. (Suppliers who include any indication of prices in the technical bid will be automatically disqualified).
 - 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, superscripting the tender no. and the due date on both envelopes. Both these sealed covers are to be placed in a larger 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 the office of **Prof. Abhishake Mondal**, Room F-213, F-Block, Second Floor, Solid State and Structural Chemistry Unit, Chemical Sciences Building, Indian Institute of Science, Bengaluru – 560012, India, on or before the due date mentioned in the tender notice. In case the due date happens to be a holiday, the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.
5. Notwithstanding anything specified in this tender document, IISc Bengaluru, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:
 - a) To accept OR reject the 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.
6. The Bidder should sign and submit the declaration of Acceptance of Terms and Conditions as per Annexure 4.
7. 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 must be given as per Annexure 3.
8. Only the Original Equipment Manufacturer or their authorized representatives across the globe shall participate in the bid.
9. The order will be placed only on the bidder who participated in the bid.

Section 3 – Technical Specifications

Broad System Requirements and Usage:

We intend to purchase a High-End Research-Grade Mössbauer spectrometer compatible with a closed-cycle helium cryostat and a $^{57}\text{Co}/\text{Rh}$ Mössbauer source and accessories with the following minimum specifications or better for our lab at the Solid State and Structural Chemistry Unit, Indian Institute of Science, Bengaluru, India. The following technical criteria are to be met by any *High-End Research Grade Mössbauer spectrometer compatible with a closed-cycle helium cryostat and a $^{57}\text{Co}/\text{Rh}$ Mössbauer source and accessories* that are being quoted under this notice:

- 1) Access to the quoted 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 our students can set up experiments and handle the instrument.
- 2) In addition, the system being quoted 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.

Principal: Supply and installation of a computer-controlled, user-friendly compact *High-End Research Grade Mössbauer spectrometer compatible with a closed-cycle helium cryostat and a $^{57}\text{Co}/\text{Rh}$ Mössbauer source and accessories* with the modular hardware design for the measurement of Mössbauer spectra for different kinds of samples such as polycrystalline, single crystalline, powders, pellets, thin films, nano-crystalline and liquid samples. The modular hardware design and software upgrade for the system is essential so that we can add these new measurement capabilities in the future. However, this modular design should be multi-user-friendly so that the user can change the measurement probes rapidly and with minimal training.

The bid should also include necessary accessories for day-to-day uninterrupted routine operations. A compliance statement with all the specifications below must be attached to the bid. A few printed literature and published papers in well-recognized international peer-reviewed journals in support of all compliance to the prescribed specifications should be provided.

Detailed Specifications

a) Spectrometer:

Mössbauer Spectrometer

1. Scope of Supply

Specification	Minimum Requirement	Remarks
Complete system	Supply, installation and commissioning of a complete Fe transmission Mössbauer spectroscopy system suitable for room-temperature and variable-temperature measurements using a closed-cycle helium cryostat.	Bidder shall provide complete details of offered configuration.
Primary technique	Transmission Mössbauer Spectroscopy, TMS.	
Advanced acquisition capability	System should support advanced timing-resolved measurements such as time-differential Mössbauer spectroscopy, time histogram acquisition, coincidence/anticoincidence measurements, or equivalent advanced timing functionality.	Functional details shall be provided.
System completeness	All hardware, electronics, mechanical supports, cables, adapters, software, accessories, shielding, sample holders and interfaces required for routine operation shall be included.	No essential operational component shall require separate procurement unless explicitly listed as optional.
Expandability	System architecture should permit future expansion to additional detector, transducer, timing or synchronization channels.	
Mains compatibility	System shall operate from Indian laboratory mains supply, nominally 220 to 240 V AC, 50 Hz.	

2. Mössbauer Spectrometer Control and Acquisition Electronics

Specification	Minimum Requirement	Remarks
Central acquisition unit	Integrated electronic control and acquisition unit capable of controlling Mössbauer velocity generation and detector signal acquisition.	Mandatory.
Detector inputs	Minimum two independent detector input channels.	Preferred for independent and coincidence measurements.

Velocity drive channels	Minimum two transducer drive/velocity-control channels or equivalent architecture supporting at least one complete Mössbauer drive with provision for expansion.	Bidder shall specify architecture.
Independent detector acquisition	Detector channels shall be independently configurable and measurable.	Mandatory where two detector channels are supplied.
Coincidence mode	Capability for coincidence and/or anticoincidence analysis between detector channels.	Preferred.
Synchronization	Provision for synchronization between acquisition units or between multiple transducers using external clock, trigger, or equivalent synchronization method.	Preferred.
Trigger output	TTL-compatible or equivalent trigger output synchronized with the beginning of the transducer period.	Preferred.
Host communication	USB or better digital interface between spectrometer electronics and host computer.	Mandatory.
Data acquisition software	Real-time PC-based control of velocity, detector acquisition, acquisition parameters, count accumulation, SNR, and spectral visualization.	Mandatory.
Acquisition mode	Constant-acceleration Mössbauer acquisition shall be supported.	Mandatory.
Symmetric acquisition	Constant-acceleration symmetric acquisition mode shall be available.	Mandatory.
Asymmetric acquisition	Constant-acceleration asymmetric or equivalent acquisition mode should be available.	Preferred.
Spectrum length	Selectable spectral length covering at least 512 to 2048 acquisition points/channels.	Mandatory.
Standard unfolded spectrum	Minimum 1024 channels per unfolded spectrum shall be supported.	Mandatory.
Time-resolved acquisition	Time-interval or time-histogram acquisition capability should be available.	Preferred.
Time histogram	Time-histogram range of approximately 1 ms or greater, or equivalent timing capability.	Preferred.
Timing resolution	2ns detector timing increment, where time- resolved acquisition is offered.	Bidder shall state actual timing resolution.

Detector signal input range	Suitable for amplified detector pulses, nominally up to approximately 5 V or equivalent.	Bidder shall specify.
Detector HV control	Software-controlled detector high-voltage adjustment where applicable.	Mandatory for PMT-based detector.
Detector power	Detector power/control outputs integrated within the system or provided through compatible external electronics.	Mandatory.
Protection	Power electronics shall include overload, short-circuit and appropriate electrical protection.	

3. Velocity Transducer and Doppler Drive System

Specification	Minimum Requirement	Remarks
Transducer type	High-stability linear velocity transducer suitable for Fe transmission Mössbauer spectroscopy.	Vendor-specific mechanical design shall not be mandatory.
Motion principle	Linear Doppler motion with closed-loop or equivalent velocity-control feedback.	Mandatory.
Velocity range	At least $\pm 20 \text{ mm s}^{-1}$.	
Velocity selection	User-selectable lower velocity ranges shall be available for high-resolution measurements.	Mandatory.
Velocity linearity	Non-linearity shall be $\leq 0.2\%$ over at least the $\pm 10 \text{ mm s}^{-1}$ range, or demonstrably equivalent/better.	
Velocity feedback	Integrated pick-up coil, optical encoder, electromagnetic feedback, or equivalent precision velocity-monitoring system.	Bidder shall describe method.
Velocity regulation	Closed-loop PID, digital feedback, analogue PID, or equivalent precision control.	Mandatory.
Velocity waveform	Constant-acceleration waveform with electronically controlled generation.	Mandatory.
Auto-tuning	Automatic or software-assisted optimization/tuning of transducer response.	Preferred.
Operating frequency	Transducer operating frequency covering approximately 3 to 90 Hz or a range adequate for standard Mössbauer operation.	Bidder shall specify supported range.
Source mounting	Mechanical source mounting compatible with standard $^{57}\text{Co/Rh}$ Mössbauer sources, preferably M4 or equivalent secure mounting.	Mandatory.

Radiation shielding	Appropriate lead or equivalent gamma-ray shielding shall be supplied around the source/drive assembly.	Mandatory.
Shield thickness	Nominal shielding equivalent to approximately 4 cm Pb around the source region, or radiation-safety equivalent design.	Bidder shall provide shielding design and dose-rate information.

4. Detector and Gamma-Ray Spectroscopy Electronics

Specification	Minimum Requirement	Remarks
Detector type	Scintillation detector optimized for Fe Mössbauer spectroscopy at 14.4 keV.	Mandatory.
Scintillator	YAP:Ce, YAlO ₃ , or equivalent/better low-energy gamma-ray scintillator suitable for 14.4 keV photons.	Mandatory.
Detector optimization	Detector shall have high efficiency for the 14.4 keV Fe Mössbauer photon.	Mandatory.
Scintillator thickness	Approximately 0.4 mm for YAP-type detector, or optimized equivalent thickness for the proposed detector material.	Bidder shall state detector material and thickness.
Photodetector	Photomultiplier tube or equivalent low-noise photon detector suitable for low-energy gamma-ray spectroscopy.	Mandatory.
High voltage	Software-controlled high-voltage supply suitable for the supplied detector, typically covering approximately 500 to 1200 V for PMT systems.	Bidder shall specify actual range.
Preamplifier	Low-noise detector preamplifier integrated or supplied separately.	Mandatory.
Shaping amplifier	Suitable spectroscopy shaping/amplification electronics shall be included.	Mandatory.
Pulse-height analysis	Digital or analogue pulse-height discrimination/analysis shall be provided.	Mandatory.
MCA/SCA functionality	Multi-channel or equivalent digital pulse analysis capability shall be included.	Mandatory.
Independent windows	User-selectable pulse-height/energy windows shall be available.	Mandatory.
Detector shielding	Appropriate gamma-ray shielding and mechanical detector mount shall be supplied.	Mandatory.
Additional detector compatibility	System should permit addition of a second detector in future.	Preferred.

5. Source compatibility: The $^{57}\text{Co}/\text{Rh}$ Mössbauer radioactive source is not included in the scope of supply of this tender (optional items). However, the technical specifications of the intended $^{57}\text{Co}/\text{Rh}$ source are provided below solely to ensure complete mechanical and operational compatibility with the offered Mössbauer spectrometer. The bidder shall ensure that the spectrometer, including the source mounting arrangement, velocity transducer and associated acquisition system, supports the safe and complete integration of the specified source without compromising spectral quality, velocity control, data acquisition, or overall instrument performance.

Specification	Minimum Requirement	Remarks
Radionuclide	^{57}Co Mössbauer source suitable for Fe spectroscopy.	
Matrix	Rhodium matrix, $^{57}\text{Co}/\text{Rh}$, or equivalent established matrix suitable for high-resolution Fe spectroscopy.	
Initial activity	Nominal activity approximately 1850 MBq, 50 mCi, at the reference date stated by manufacturer.	
Source linewidth	Typical source linewidth approximately 0.11 to 0.13 mm s ⁻¹ or better, as certified by manufacturer.	
Source mounting	Compatible with supplied transducer, preferably M4 threaded mount or equivalent secure mounting.	Mandatory.
Source certificate	Source certificate stating radionuclide, matrix, activity, calibration/reference date, serial number and relevant performance data shall be provided.	Mandatory.
Transport	Supplier shall arrange compliant transport of the radioactive source up to the legally permissible delivery point in India, subject to applicable regulatory requirements.	Mandatory.
Regulatory documentation	All documentation required for legal import, transport, receipt and use of the radioactive source shall be supplied.	

Note: The specifications provided above shall not be interpreted as a requirement for the bidder to supply the radioactive source. They are provided exclusively for establishing and ensuring compatibility of the spectrometer offered with the source to be procured separately.

6. Mechanical Bench, Alignment and Shielding

Specification	Minimum Requirement	Remarks
---------------	---------------------	---------

Experimental bench	Optical rail, rigid bench or equivalent precision mounting system for source, cryostat/sample and detector.	Mandatory.
Mechanical stability	Assembly shall provide mechanically stable alignment during measurements extending over several days or weeks.	Mandatory.
Fine alignment	Adjustable alignment along the gamma-ray beam axis shall be provided.	Mandatory.
Horizontal/vertical operation	Mounting system should permit horizontal and/or vertical configurations as required by cryostat geometry.	Preferred.
Source shielding	Lead or equivalent radiation shielding around source and transducer.	Mandatory.
Detector shielding	Lead or equivalent shielding around detector assembly.	Mandatory.
Cryostat shielding	Additional shielding compatible with the cryostat geometry shall be supplied where required.	Mandatory.
Shield design	Shielding shall permit safe access, alignment and routine sample exchange while maintaining radiation protection.	Mandatory.

7. Computer, Control and Analysis Software

Specification	Minimum Requirement	Remarks
Computer	Current-generation computer/workstation suitable for uninterrupted spectrometer acquisition and analysis.	Mandatory.
Operating system	Current supported Windows operating system or equivalent platform fully compatible with supplied software.	Mandatory.
Control software	Full spectrometer acquisition and control software shall be included with a perpetual or institutionally appropriate license.	Mandatory.
Velocity control	Software control of velocity range, waveform and acquisition parameters.	Mandatory.
Detector control	Software control of detector acquisition windows, high voltage and pulse-processing parameters where applicable.	Mandatory.
Live display	Real-time display of accumulated spectra and counting statistics.	Mandatory.
Data export	Export of spectra in ASCII/text and commonly used scientific data formats.	Mandatory.

Raw data	Access to unfolded/raw spectra prior to folding shall be provided.	Mandatory.
Folding	Software functionality for folding forward and reverse velocity spectra shall be included.	Mandatory.
Calibration	Velocity calibration using α -Fe or other standard reference shall be supported.	Mandatory.
Spectrum fitting software	Mössbauer spectrum fitting/interpretation software such as MossWinn or equivalent shall be supplied.	
License	Minimum one permanent or long-term institutional license for analysis software.	Mandatory.
Updates	Software updates and bug fixes shall be available during the warranty period without additional charge.	Mandatory.
Documentation	Complete software manual and acquisition protocol shall be supplied in English.	Mandatory.

8. Calibration and Standard Samples

Specification	Minimum Requirement	Remarks
Calibration standard	Standard α -Fe foil/reference absorber suitable for room-temperature calibration.	Mandatory.
Calibration accessories	All holders and fixtures required for calibration measurements shall be included.	Mandatory.
Instrument test sample	At least one additional test absorber/sample suitable for functional demonstration.	Preferred.
Velocity calibration	Supplier shall demonstrate velocity calibration using α -Fe at room temperature.	Mandatory.
Calibration documentation	Calibration procedure shall be documented in the operating manual.	Mandatory.

9. Accessories and Consumables

Specification	Minimum Requirement	Remarks
Cables	Complete set of detector, transducer, synchronization, trigger, power, USB/network and auxiliary cables.	Mandatory.
Adapters	Required BNC, SMA, USB, feedthrough and other adapters shall be supplied.	Mandatory.
Terminators	Required 50 Ω terminators or equivalent shall be included.	Mandatory.

Mounting hardware	Screws, clamps, holders, rail mounts and alignment hardware necessary for installation shall be supplied.	Mandatory.
Sample preparation accessories	Suitable aluminium foil, sample encapsulation accessories and standard absorber mounting materials should be provided.	Preferred.
Sample Holders	Minimum two sample holders each for loose powder sample, pellets (15 to 20 mm), thin films, and liquid samples.	Compatible between 2 K – 350 K
Tool kit	Basic tool set required for routine alignment and maintenance.	Preferred.
Spare consumables	Recommended critical consumables for at least two years of normal operation should be quoted separately.	Separate optional price may be provided.

10. Documentation

Specification	Minimum Requirement	Remarks
User manual	Complete operating manual in English.	Mandatory.
Service manual	Service and troubleshooting documentation shall be supplied.	Mandatory.
Electrical documentation	Electrical wiring diagrams, circuit diagrams, and schematics for serviceable components shall be provided where permitted by manufacturer.	
Software manuals	Complete acquisition and analysis software documentation.	Mandatory.
Certificates	Calibration, source, detector, cryostat and relevant safety certificates shall be supplied.	Mandatory.

11. Installation and Commissioning

Specification	Minimum Requirement	Remarks
Installation	Complete on-site installation at Prof. Mondal's laboratory shall be carried out by qualified supplier/manufacturer personnel.	Mandatory.
Mechanical integration	Supplier shall integrate spectrometer, cryostat, transducer, detector, shielding, electronics and computer into a complete functioning system.	Mandatory.
Cryostat commissioning	Closed-cycle cryostat shall be evacuated, cooled and demonstrated over its required temperature range.	Mandatory.

Detector commissioning	Detector operating voltage, pulse processing and acquisition windows shall be optimized during installation.	Mandatory.
Velocity commissioning	Velocity-transducer operation and feedback control shall be demonstrated.	Mandatory.
Calibration	Complete α -Fe calibration shall be performed after installation.	Mandatory.
On-site training	Hands-on training covering routine measurements, cryostat operation, spectral acquisition, calibration, sample changing, analysis and troubleshooting.	Mandatory.
Training duration	Minimum three complete training sessions of atleast three days each for the hands-on training after successful installation and commissioning.	Preferred.
Number of trainees	Training shall be provided for at least five users nominated by the PI.	Preferred.
Training language	English.	Mandatory.

12. Acceptance Tests

Specification	Minimum Requirement	Remarks
Assembly test	All instrument components shall be assembled, interconnected and demonstrated to operate correctly.	Mandatory.
Electronics test	Acquisition electronics, computer interface and software communication shall be demonstrated.	Mandatory.
Detector test	Stable detector response and pulse-height spectrum shall be demonstrated using the supplied ^{57}Co source or suitable test source, that shall be procured separately and will be made available during installation.	Mandatory.
Velocity-drive test	Full velocity range and stable closed-loop operation shall be demonstrated.	Mandatory.
Velocity calibration	Velocity calibration using standard α -Fe shall be performed.	Mandatory.
α -Fe spectrum	A room-temperature transmission Mössbauer spectrum of α -Fe shall be collected and fitted.	
Spectral symmetry	Forward and reverse spectra shall show satisfactory agreement after proper calibration.	Mandatory.

Spectral linewidth	Experimental linewidth obtained for a standard α -Fe absorber shall be consistent with normal high-quality Fe Mössbauer operation and manufacturer-stated instrument performance.	Measured value shall be recorded in acceptance protocol.
Channel operation	At least 1024-channel unfolded acquisition shall be demonstrated.	Mandatory.
Cryostat base temperature	Sample stage shall reach ≤ 10 K under normal specified operating conditions.	Mandatory.
Cryostat high temperature	Stable controlled operation at ≥ 350 K shall be demonstrated or otherwise certified where installation constraints prevent immediate test.	Mandatory.
Temperature stability	Temperature stability at representative low-, intermediate- and high-temperature set points shall be demonstrated.	Recommended points: approximately 5 K, 55 K, 80 K, 150 K and 300 K.
Vacuum performance	Cryostat vacuum system shall achieve manufacturer-specified operating vacuum.	Mandatory.
Continuous operation	Stable unattended spectrometer operation shall be demonstrated for an extended acquisition period.	Preferred.
Acceptance protocol	Successful completion of the above tests shall be documented in a jointly signed installation and acceptance report.	Mandatory.

13. Warranty, Service and Technical Support

Specification	Minimum Requirement	Remarks
Comprehensive warranty	Minimum 24 months comprehensive warranty with additional 3 years on all parts from successful installation and acceptance.	Mandatory.
Preferred warranty	Two years comprehensive warranty should be quoted where available.	Preferred.
Warranty scope	Warranty shall cover spectrometer electronics, detector, velocity transducer, cryostat, compressor, vacuum equipment, Temperature controller and supplied computer/software, excluding normal consumables.	Bidder shall list exclusions explicitly.
Remote support	Remote technical assistance by email/telephone/video connection during warranty period.	Mandatory.

Response time	Technical response (Email/Online Support/Video Conferencing <i>etc.</i>) within two working days for reported instrument failure.	Preferred.
Spare availability	Essential spare parts shall remain available for at least seven years from installation.	Preferred.
Software support	Acquisition software shall remain operable and supported for the supplied operating system configuration.	Mandatory.

14. Essential Technical Requirements for Qualification

The following shall be treated as essential requirements for technical qualification:

1. Complete ^{57}Fe transmission Mössbauer spectrometer compatible with $^{57}\text{Co/Rh}$ Mössbauer source and accessories.
2. Scintillation detector optimized for 14.4 keV ^{57}Fe Mössbauer photons.
3. Constant-acceleration Doppler drive.
4. Velocity range of at least $\pm 20 \text{ mm s}^{-1}$.
5. Velocity non-linearity of $\leq 0.2\%$ over at least $\pm 10 \text{ mm s}^{-1}$, or equivalent/better demonstrated performance.
6. Minimum 1024 channels per unfolded spectrum.
7. Computer-controlled acquisition with access to raw/unfolded data.
8. Compatible with a Closed-cycle helium cryostat reaching $\leq 10 \text{ K}$ and $\geq 350 \text{ K}$.
9. Integrated temperature measurement and control.
10. Complete vacuum and compressor infrastructure required for cryostat operation.
11. Standard $\alpha\text{-Fe}$ calibration absorber.
12. Mössbauer spectral-analysis software.
13. Complete installation, commissioning and on-site training.
14. Demonstration of an acceptable $\alpha\text{-Fe}$ Mössbauer spectrum during final acceptance.

15. Desirable/Advanced Capabilities

The following shall be considered desirable and may be assigned additional technical merit during evaluation:

1. Two independent detector acquisition channels.
2. Two independent transducer/velocity channels.
3. Coincidence and anticoincidence acquisition.
4. Time-differential Mössbauer spectroscopy.
5. Sub-nanosecond detector timing capability.
6. External triggering and synchronization.
7. Synchronization of multiple acquisition units/transducers.
8. Optical access to the sample under cryogenic conditions.
9. Automated sample-changing capability or motor-control interface.
10. Expandability for future detectors or experimental geometries.

Prof. Abhishake Mondal

Associate Professor

Email: mondal@iisc.ac.in



11. Software-controlled detector high voltage and pulse-analysis parameters.
12. Temperature programming and automated multi-temperature acquisition.

Section 4 – Terms and Conditions

- 1) Comprehensive 2-year minimum on-site warranty with additional 2 years on all parts from the date of successful installation.
- 2) Power requirement: Indian standard power supply, 220/240 Volts AC with frequency 50 Hz.
- 3) Operation and service manual in English (electronic and hard copy) with complete user documentation.
- 4) Standard samples (if required) to be provided by the company for testing the instruments at the time of installation on site to the quoted accuracy in the given technical specification for the demonstration of the performance of equipment.
- 5) Pre-installation site preparation requirements to be indicated and specified along with the bid.
- 6) Installation and on-site training of our staff (minimum three training courses with minimum three sessions each) in operation and maintenance are essential by factory trained personal free of cost.
- 7) Bid should include all other essential auxiliary equipment and spares for its operation, even which are not explicitly specified above (please provide list with details).
- 8) All sample handling kits/consumables should also be provided.
- 9) The vendor is responsible for the complete and successful installation of the system at the institute.
- 10) The price quotation should include the cost of installation and training of potential users.
- 11) GST is applicable as per Govt. of India GST law and must be mentioned in the price bid. In case due to any error / oversight, the GST quoted by the bidder is less than the actual rate as per tariff, the bidder will not be permitted to rectify the error/oversight. The orders / contract will be placed for the total amount including the (lower) rate/s quoted by the bidder, with reduced basic amount to the extent of difference in tax/duty amount, so that the total amount (basic + actual rate as per tariff), remains same (quoted basic + quoted rate). The difference amount payable, if any, between the quoted rate and actual rate as per tariff shall be borne by the bidder. Any other applicable local taxes, duty or fees shall be fully covered by IISc.
- 12) The committee reserves the right to reject the technical bid if the above condition is not satisfied.
- 13) The lead-time for the delivery of the equipment should not be more than 6 months from the date of receipt of our purchase order.
- 14) If the supplier fails to supply, install and commission the equipment as per the specifications mentioned in the PO within the due date, the Supplier is liable to pay a penalty of @ 0.5% of order value per week of delay subject to a maximum of 10% beyond the due date. IISc reserves the right to cancel the order in case of excessive delay.
- 15) The indenter reserves the right to withhold placement of final order. The right to reject all or any of the quotations and to split up the requirements or relax any or all of the above conditions without assigning any reason is reserved.
- 16) Wherever requested data must be supplied along with technical compliance documents. Technical bids without supporting data will be deemed technically non-compliant.



- 17) All guaranteed specifications may have to be demonstrated at the time of installation. Any necessary standard samples for that purpose should be brought by the service engineers.
- 18) Technical evaluation by the institute may include a demonstration to verify functionalities and capabilities of the system quoted. The institute reserves the right to provide samples after opening the technical bids for verification of promised specifications. Any discrepancy between the promised specifications and measurements will be deemed as technical non-compliance. Committee also reserves the right to modify the stipulated eligibility criteria at any time during the tenure of procurement.
- 19) 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, Bengaluru subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed on to IISc, Bengaluru.
- 20) 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, Bengaluru.
- 21) All imported items should be shipped on C.I.P. Bengaluru basis.
- 22) All quotations must be valid for at least 90 days at the time of submission.
- 23) **Payment:** - No advance payment will be made for indigenous purchase. However, 90% payment against delivery and 10% after installation are agreed to wherever the installation is involved. In case of import supplies the payment will be made only through 100% Letter of Credit i.e., (90% payment will be released against shipping documents and 10% after successful installation wherever the installation is being done). Any loss due to fluctuation in foreign exchange rates will be at the beneficiary account.
- 24) **Accept / Reject:** IISc Bengaluru reserves the full right to accept / reject any tender at stage without assigning any reason.
- 25) **Settlement of Disputes:** 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 Bengaluru in Karnataka.
- 26) **Evaluation of the offer:**

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 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 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 the 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 construe that the BIDDER had accepted the clauses as of the tender and no further claim will be entertained. 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, pre-processing and post processing, optional items, recommended spares, warranty, annual maintenance contract."

Pre-requisites:

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

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 3 months 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. For acceptance, the vendor must demonstrate the technical specifications mentioned in the tender. After successful installation and inspection, the date of taking over of the 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 for the local facility technologists and users.

Section 5 – Technical Bid

Annexure – 1:

Details of the Bidder: The Bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Sr. No.	Type	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,

Prof. Abhishake Mondal,
Solid State and Structural Chemistry Unit,
Chemical Sciences Building,
Indian Institute of Science,
Bengaluru – 560012, India

Ref: Tender No: XXXXXXXXX

Dated: XXXXX

Supply and installation of a closed-cycle helium cryostat and accessories compatible with High-End Research Grade Mössbauer spectrometer.

Sir,

I have 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 a closed-cycle helium cryostat and accessories compatible with High-End Research Grade Mössbauer spectrometer.

(Signature of the Bidder)

Printed Name Designation, Seal

Date:



Annexure-3:

Declaration of track record

To,
Prof. Abhishake Mondal,
Solid State and Structural Chemistry Unit,
Chemical Sciences Building,
Indian Institute of Science,
Bengaluru – 560012, India

Ref: Tender No: XXXXXXXXX

Dated: XXXXX

Supply and installation a closed-cycle helium cryostat and accessories compatible with High-End Research Grade Mössbauer spectrometer.

Sir,

I have 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 am competent officer in my company / firm to make this declaration.

OR

I declare the following:

Sr. No.	Country in which the company is debarred/ blacklisted / having pending case	Blacklisted / debarred by Government / Semi Government Organizations or Institutions / having pending case	Reason	Time Period

(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).

(Signature of the Bidder)

Printed Name Designation, Seal

Date:



Annexure-4:

Declaration of acceptance of terms and conditions

To,
Prof. Abhishake Mondal,
Solid State and Structural Chemistry Unit,
Chemical Sciences Building,
Indian Institute of Science,
Bengaluru – 560012, India

Ref: Tender No: XXXXXXXXX

Dated: XXXXX

Supply and installation of a closed-cycle helium cryostat and accessories compatible with High-End Research Grade Mössbauer spectrometer.

I have carefully gone through the Terms & Conditions contained 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 am an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully
(Signature of the
Bidder)

Printed 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 the technical bid.
3. Bidders should clearly indicate compliance or non-compliance with the technical specifications provided in the tender document.

Section 6 - Commercial Bid

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

Addressed to:

The Chair

Solid State and Structural Chemistry Unit

Chemical Sciences Division

Indian Institute of Science (IISc)

Bengaluru, India - 560012

Kind attention: **Prof. Abhishake Mondal**

Email: mondal@iisc.ac.in

The sealed bids should be sent to the following address:

Prof. Abhishake Mondal

Solid State and Structural Chemistry Unit

Room F-213, F-Block, Second Floor

Chemical Sciences Building

Indian Institute of Science (IISc)

Bengaluru, India - 560012.

Ph: +91-9932207177

Email: mondal@iisc.ac.in

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 essential items)				
2.b					
3.	Accessories for operation and installation				

4.	All consumables, spares and software to be supplied locally				
5.	Warranty (3 years)				
6.	AMC 3 years beyond warranty				
8.	CIP/CIF IISc, Bengaluru				

Any additional items, such as Spares and Hardware/PCBs Likely to go obsolete after the next 3 Years

Section 7 - Checklist

(This should be enclosed with a technical bid- Part A)

The following items must be checked before the bid is submitted:

1. Sealed Envelope “A”: Technical Bid

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 of track record
- d. Annexure 4: Declaration of acceptance of terms and conditions
- e. Annexure 5: Details of item quoted
- f. Declaration of Local Content by Local supplier

2. Copy of this tender document duly signed by the authorized signatory on every page and sealed.

3. Sealed Envelope “B”: Commercial Bid

Your quotation must be submitted in two envelopes: Technical Bid (**Envelope A**) and Commercial Bid (**Envelope B**), superscribing on both the envelopes with, Tender description, 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 superscribed with Tender No., Tender description & Due Date.