SOLID STATE AND STRUCTURAL CHEMISTRY UNIT
Indian Institute of Science, Bangalore

Request for Quote for the procurement of Fluorescence Spectrometer
Indian Institute of Science, Bangalore
(Last Date: 17th February 2021)

This is an RFQ (Request for Quote) for *Instrumentation for Emission and Excitation Spectrum Characterization* at IISc, Bangalore. Only Domestic bidders OEM or its distributors are invited for submitting bids for the item.

Procedure:

1. Vendors will be required to submit a technical proposal and a commercial proposal in **two separate sealed envelopes**. Only vendors who meet the technical requirement will be considered for the commercial negotiation.

2. **The deadline for submission of proposals is the 17th February 2021, 5:30 pm Indian Standard Time.** The proposals should arrive in hardcopy at the office of The Chairman, Solid State and Structural Chemistry, Indian Institute of Science, Bangalore 560012, India, by the above deadline.

3. The technical proposal should contain a technical compliance table with 5 columns.

    a. The first column must list the technical requirements, in the order that they are given in the technical requirement below.
    b. The second column should provide specifications of the instrument against the requirement (please provide quantitative responses wherever possible).
    c. 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.
    d. The fourth column should **clearly state the reasons/explanations/context** for deviations, if any. Without clear explanation, just stating “Yes” and “No” will not be considered.
    e. 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. Any other feature that you would like to bring to the attention of the purchase committee, can be listed at the end of the compliance table.

4. The technical specifications given below are “highly desired”. However, committee reserves the right to lower technical specifications, to obtain a more competitive price.

5. The commercial proposal should have the price of the item. All the accessories needed for the tool to function as per the technical specification, must be listed. Please provide itemized quotes for the tool and any other attachments/software.

6. As an option, please provide itemized cost for any suggested accessories/add-ons that may enhance the usability, capability, accuracy, or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits.

7. Provide itemized cost for required spares for 2 years of operation. For sake of this calculation, the vendor may assume active tool usage of 20 hours/ week. The system will remain powered on continuously. This number will be used to estimate the life cycle cost of the tool.

8. The commercial bid must include the price of the item in Indian currency, indicating the following separately:
    a. equipment price
    b. Freight and Insurance: To be included.
    c. Shipping: Cost of shipping should be included.
    d. Total

9. Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors.

10. If multiple systems can fulfil the requirements, vendors can submit multiple bids.

11. Any questions can be directed to the Chairman, Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore 560012, India. chair.sscu@iisc.ac.in

Terms and Conditions:

1. The decision of purchase committee will be final
2. Your quotation should clearly indicate the terms of delivery, delivery schedule, entry tax, and payment terms.
3. The validity period of the quotation should be at least 90 days.
4. Final instalment will be made only after satisfactory installation and demonstration of critical capabilities.
5. The vendor is responsible for the installation of the system at the IISc campus.
6. The RFQ must include references of 5 previous installations, preferable in India. Please provide the names and contact addresses of the referees, so that the committee can contact them independently. Details of such systems with model numbers and users should be provided. The reference letters can be

used to disqualify vendors with poor track record of service, build quality, system performance, or poor availability of spares.

7. The vendor must also submit a list of 50 customers where similar systems have been installed.
8. The vendor should be able to repair and maintain the equipment once it is installed in India. Clarify if periodic (preventive) maintenance can be done by a trained on-site engineer (i.e. IISc employee) or requires a specialist from the OEM. The vendor should have qualified technical service personnel for the equipment based in India and must assure a response time of <24 hours after receiving a service request.
9. If the maintenance can be done by training a IISc employee, please specific the cost of this training, as an additional option. If maintenance must be done by OEM, as an additional option, provide cost of an annual maintenance contract (AMC) for 3 years, post warranty. The AMC must cover 1 scheduled and 1 emergency visit per year. It must also indicate who will service the AMC, an Indian agent, or the OEM. The AMC cost must also include an itemized list of spares that are essential for the scheduled visits.
10. Necessary training to operate the procured setup and required literature support should be provided without additional cost.
11. Vendors should undertake to support the system with spares and software bugfixes, if any, for the next 5 years.
12. Please indicate the warranty provided with the tool. No travel claims must be made by vendor for servicing during the warranty/guarantee period.
13. Provide itemized cost for required spares for 2 years of operation. For sake of this calculation, the vendor may assume active tool usage of 10 hours/ week. This number will be used to estimate the life cycle cost of the tool.
14. The lead-time for the delivery of the equipment should not be more than 3 months from the date of receipt of our purchase order.
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.
16. Wherever requested in this specifications sheet, data must be supplied along with technical compliance documents. Technical bids without supporting data will be deemed as technically non-compliant.
17. All guaranteed specifications will have to be demonstrated, upon request, in an active installation. Failure to demonstrate any promised specifications will be deemed as technical non-compliance.
18. Printed literature and published papers in support of all compliance to the prescribed specifications may be provided.
19. Technical evaluation by the institute must include demonstration to verify functionalities and capabilities of the system quoted. Any discrepancy between the promised specifications and demonstrated specifications will be deemed as

technical non-compliance. If need arises, the vendor must be ready to physically visit IISc for a techno commercial discussion.

Technical Requirements:

The system should be Research Grade Spectrometer with following specifications;

1. **Excitation Source:** 150W or higher ozone free [Xe] source for doing steady state photon emission spectrum determination and Pulsed [Xe] source having power of 10W or more, pulse width of 1-2 micro seconds and maximum Repetition rate of 20Hz or better for doing steady state phosphorescence measurements. It should come with dual lamp housing with power supply. The changing of sources should be computer controlled.

2. **Excitation and Emission Management:** The system should be off-axis paraboloid reflector based achromatic focusing system, and precise imaging for micro samples

3. **Excitation Range:** 1.31-6.20 eV should be optimized in the UV

4. **Excitation Management Components:** Spectrometer with CT geometry and 1200 lines/mm, 3.54-4.13 eV blaze single diffractive optic

5. **Emission Wavelength Range:** 1.31-6.20 eV should be optimized in the 1.55-2.47 eV bandwidth

6. **Emission Collection Components:** Spectrometer with CT geometry and 1200 lines/mm, 2.25-2.48 eV blaze, single diffractive optic

7. **Bandpass:** Atleast from 0-30nm should be continuously adjustable from computer

8. **Scan speed:** 0-80 nm/sec, Variable

9. **Accuracy:** +/- 0.5 nm or better

10. **Signal to Noise Ratio:** Minimum 16,000:1(RMS Method), 6000:1 (FSD Method) using water Raman signal obtained with 3.54 eV at 3.12 eV, Bandpass 5nm and 1sec integration time. Vendors have to mention both FSD and RMS values.

11. **Reference Detector:** Reference photodiode detector must be provided

12. **Emission Detector:** Photomultiplier tube detector should cover the wavelength range from 4.96 eV-1.46 eV and should operating in event counting mode

13. **Quartz Cuvette** 10 mm path length quartz cuvette (4ml) should be provided

14. **Microliter cuvette:** 500 microliter cuvette with adapter should be provided.

15. **Solid sample holder:** One number of Solid sample holder should be provided for thin film, powders, pellets.

16. **Bandpass filters:** Bandpass filters with 3.87 eV, 3.65 eV and 3.35 eV should be provided with suitable adapter.

17. **Sample Variable Temperature Accessory** Peltier for varying temperature from -15 to 100 deg C or better should be provided for liquid samples.

18. **Polarization Anisotropy Accessory:** Automated dual polarizers should be provided for doing anisotropy measurements

19. **Control and Analysis Software:** Software for data collection and system control. On start-up, the system automatically calibrates and presents itself for new experiments.

20. **Computer** with adequate specifications and windows based operating system loaded with the system software.

21. **Warranty:** Minimum one year from the date of installation.

22. **FIELD UPGRADABILITY:** System must be field upgradable to the following;
    1. Time Corelated Single Photon Counting Technique with at least 3 ns non-deconvoluted time resolution with appropriate excitation sources and electronics
    2. Emission measurements up to 0.83 eV or lower energies

A DETAILED COMPLIANCE STATEMENT WITH RESPECT TO ABOVE MENTIONED SPECIFICATION SHOULD BE ENCLOSED ALONG WITH THE OFFER.

Thanking you,

The Chairman
Solid State And Structural Chemistry Unit
Indian Institute of Science, Bangalore, India 560012.
Cell:
Office: 08022932616
E-mail: chair.sscu@iisc.ac.in