

EOI for a vibration isolated laboratory at CeNSE Building (Last date: 30th May 2022)

This is an Expression of Interest (EOI) from Indian vendors for the reconstruction of an existing room at the Centre for Nanoscience and Engineering (CeNSE) to build a vibration isolated laboratory. CeNSE is a multidisciplinary research department at IISc that houses a 14,000 sq. ft. cleanroom and characterization facility used by 200 faculty members from various disciplines at IISc. CeNSE also runs a nationwide program which has allowed 4200 participants from more than 700 universities and institutes all over India to use the facilities at CeNSE. Consequently, any utility/facility at CeNSE receives significant exposure to scientific community at IISc and beyond. The vendors are kindly requested to factor in the value of this exposure in their quotes.

Procedure: -

1. CeNSE intends to invite Expression of Interest from vendors for the selection of conceptual design for “the reconstruction of the room GF 22 at CeNSE building to make a vibration isolated laboratory” that will house a nano-Raman set up.

2. CeNSE intend to float a RFP (Request for Proposal) as soon as possible with necessary schedules for the purpose of inviting the technical and commercial bids to implement the project.

3. Vendors will be required to visit our office, discuss the plan and conduct the site survey. For site visit and verification please contact:

Dr. Sreetosh Goswami
Assistant Professor
Centre for Nano Science and Engineering
Indian Institute of Science
Bangalore – 560012, India

Without site survey, no vendor will not be considered for tenders. Bids should reach the Main office, GF-15, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India, on or before 30th May 2022, 5.30pm.

4. Please find below:

- Required technical specifications of the reconstructed laboratory
- Annexure: The building layout of CeNSE and a depiction of the proposed extension

5. Vendors are encouraged to highlight the advantages of their design.

6. The conceptual design proposals must include references of three previous design & installations (in India) of similar scope which is of five years or older. The referees must belong to semiconductor/ nano spectroscopy facilities. Please provide the names and contact addresses of the referees, so that the CeNSE committee can contact them independently.

7. The vendor referees must be able to provide the following information:

- a. The vibration isolated laboratories built by the vendor.
- b. The application for which those were designed.
- c. Certify that the vendor has capability to meet the desired vibration specs.
- d. Certify that the design implemented by the vendor has stood the test of time. The

performance must match the design specifications and the system must be functional.
e. Certify that the vendor provides high-quality service and support, since installation.

8. For site visit and any questions please contact:

Dr. Sreetosh Goswami
Assistant Professor
Centre for Nano Science and Engineering
Indian Institute of Science
Bangalore – 560012, India
Email: sreetosh@iisc.ac.in

Thank you,
Sreetosh Goswami

Technical specifications for the laboratory reconstruction

The following summarises the technical requirements regarding the extension and reconstruction of the GF22 room at CeNSE ground floor. This is needed to house the nano Raman facility comprising a Raman spectrometer and an atomic force microscopy (AFM), coupled with each other.

1. The space requirement to accommodate this system along with associated electrical appliances is 30 ft × 15 ft. The current dimension of GF22 is 15 ft × 12.5 ft which would require lengthwise extension of about 17.5 ft. A suitable space is available for this extension towards the CeNSE garden.
2. This instrument has stringent vibrational requirements which will require reconstruction of the floor. Below we provide the technical requirements for this facility.
 - Vibration velocity < 4 μm/s (preferably 2 μm/s) for frequencies higher than 10 Hz is preferred for atomic resolution
 - Acoustic noise < 20 dB
 - Humidity < 70%
 - Air flow should not cause mechanical vibration in the set up
 - To maintain the precision of the equipment, dust and dirt particulates are not permitted. Filters should not however cause additional vibration

Annexure 1

Existing location of GF22 and its proposed extension:

