



Sept 13th, 2022

## To Whom It May Concern

### Global Tender for a contact stylus profilometer system

This is an RFQ (Request for Quote) for procurement of a contact stylus profilometer system as part of a global tender for the Centre for Nano Science and Engineering (CeNSE) at IISc, Bangalore. The quote will be accepted only from original OEM's.

CeNSE is a multidisciplinary research department at IISc that houses a 14,000 sq. ft. cleanroom and characterization facility used by 50 faculty members from various disciplines at IISc. CeNSE also runs a program called Indian Nanoelectronics Users Program (INUP) which has allowed 4200 participants from more than 700 universities and institutes all over India to use the facilities at CeNSE. Consequently, any tool in CeNSE receives significant exposure to scientific community at IISc and beyond. The vendors are requested to factor in the value of this exposure in to their quotes. Details of existing facilities and INUP program can be gleaned from:

<http://nnfc.cense.iisc.ac.in/>

<http://www.mncf.cense.iisc.ac.in/>

<https://www.inup.cense.iisc.ac.in/>

Also, CeNSE hosts equipment on behalf of vendors, as a national standard or 'model' system. If the vendor is interested, CeNSE can consider working out a similar arrangement for the Dektak system.

#### 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 4<sup>th</sup> October 2022, 5:30 pm Indian Standard Time.** Proposals should arrive at the Main office, GF-15, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India, by the above deadline.
3. The decision of purchase committee will be final.
4. The technical proposal should contain a compliance table with 5 columns. The first column must list the technical requirements, in the order that they are given in the technical configuration below. The second column should describe your compliance in a "Yes" or "No" response. If "No" the third column should provide the extent of the deviation (please provide quantitative responses). The fourth 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.
5. Any additional capabilities or technical details, that you would like to bring to the attention of the purchase committee, can be listed at the end of the technical table.



6. Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors
7. If multiple systems can fulfill the requirements, vendors can submit multiple bids.
8. In the commercial bid, please provide itemized cost of the system and *required* accessories, such as software, power supply, etc.
9. 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.
10. The quotations should be CIP-Bangalore airport.
11. Vendors are allowed to quote for a refurbished system. The manufacturing of the tool should be less than 15 years. Appropriate supporting documents should be submitted along with the quote.
12. Please indicate the warranty provided with the tool. Warranty of 3 years or more is preferred.
13. Any questions can be directed to Dr. Savitha P, GF-20, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India. ([savithap@iisc.ac.in](mailto:savithap@iisc.ac.in))

#### Technical Requirements

1.	Primary application	<ul style="list-style-type: none"><li>• Contact Stylus Profilometer to measure step height and roughness of samples</li></ul>
2.	Secondary application	<ul style="list-style-type: none"><li>• Measure stress on thin films</li><li>• Capable of generating 3D profiles</li></ul>
3.	Tool capability	<ul style="list-style-type: none"><li>• Step height repeatability: <math>&lt;4\text{\AA}</math> on 100nm vertical step height standard</li><li>• Maximum vertical range: 1mm</li><li>• Stylus diameter: 12.5um</li><li>• Stylus force: 1-15mg (controllable by software)</li><li>• Scan length: upto 150mm with automatic scan stitching</li><li>• FOV: Digital zoom 1-4mm</li><li>• Measurement range: 1mm Vertical, measure full 6" wafer horizontally</li><li>• Stage: Motorized X-Y positioning</li><li>• Max Sample thickness: 2mm</li><li>• Stress and strain measurement capabilities</li><li>• Step detection: Automatic valleys and hills detection</li><li>• Anti-vibration platform: Integrated solutions for vibration negation to be part of the tool.</li></ul>
4.	Footprint& weight	<ul style="list-style-type: none"><li>• The system should be compatible with placing in the clean Class 1000 environment. Please specify the total footprint in cm x cm, and weight. Real estate is valuable, a compact system preferred.</li></ul>
5.	Periodic Maintenance	<ul style="list-style-type: none"><li>• The system should require only minimal maintenance.</li><li>• Mention the recommended preventive maintenance schedule for the system. Any accessories needed for periodic preventive maintenance</li></ul>



		<p>for 3 years e.g. O-rings, should be mentioned in separately the itemized quote.</p> <ul style="list-style-type: none"><li>• Can the preventive maintenance be done by a trained on-site engineer or requires a specialist from the OEM? If the latter, please provide cost of a 3 year AMC with required kit/consumables.</li><li>• The system should be supported by a trained local representative and should have a 48hour window of response</li></ul>
6.	Installation and Training	<ul style="list-style-type: none"><li>• Installation and training at customer site, by the experts from principals should be part of the package.</li><li>• During the installation all the specifications of the tool should be verified for acceptance by the customer.</li><li>• If periodic maintenance can be done by the on-site engineer, please include the cost of training the engineer.</li></ul>
7.	Power& utilities	<ul style="list-style-type: none"><li>• The instrument should work with Indian standards</li><li>• Mention the power requirement.</li><li>• Mention any utility requirement (water, air, exhaust, etc.)</li></ul>
8.	Safety	<ul style="list-style-type: none"><li>• Mention any special safety requirement of the tool</li><li>• The tool must come with a complement of interlocks to prevent common user errors.</li></ul>
9.	Recommendation	<ul style="list-style-type: none"><li>• The vendor must submit references from atleast 3 previous installations where the system has been used to measure samples after processes like Etching, deposition etc in a semiconductor set up</li><li>• The names and contact addresses of the referees must be submitted with the proposal, so the purchase committee can contact them independently.</li></ul>

Thanking you,

Shankar Kumar Selvaraja, Ph.D.  
Associate Professor  
Centre for Nano Science and Engineering  
Indian Institute of Science, Bangalore, India 560012.  
Office : +91-80-2293-3342  
E-mail: [shankarks@iisc.ac.in](mailto:shankarks@iisc.ac.in)