Indian Institute of Technology, Delhi
(Nanoscale Research Facility)

Notice Inviting Quotation (NIQ) for the purchase of atomic force microscope (AFM) probes compatible with Bruker's Dimension ICON

Date: 25/10/2013

Last Date for submitting quotations: 18/11/2013

Ref: IITD/NRF/2013-14/AFM Probes

We are in the process of buying AFM probes which can be used for analysis with the Dimension ICON AFM by Bruker. The probes will be used to study a variety of materials. Consequently a wide range of specifications are desired and have been included below. Suppliers are also requested to read the terms and conditions specified below.

S. No.	Item description	Quantity
1.	Type 1 (for contact mode imaging) a. <u>Tip specifications</u> Radius: 2-20 nm Front Angle: 0-35 deg. Back Angle: 0-35 deg. Side Angle: 0-35 deg. Height: 5-20 µm Coating: None b. <u>Cantilever specifications</u> Spring Constant: 0.01-1.00 N/m Length: 100-450 µm Width: 20-50 µm Thickness: 0.5-2.0 µm Resonant frequency: 10-100 kHz Front Side Coating: None Back Side Coating: Reflective	40

2.	Type 2 (for non-contact and intermittent contact mode imaging) a. <u>Tip specifications</u> Radius: 5-15 nm Front Angle: 0-35 deg. Back Angle: 0-35 deg. Side Angle: 0-35 deg. Height: 5-20 µm Coating: None b. <u>Cantilever specifications</u> Spring Constant: 40-50 N/m Length: 100-200 µm Width: 25-50 µm Thickness: 2.5-5.0 µm Resonant frequency: 250-400 kHz Front Side Coating: None Back Side Coating: Reflective	60
3.	Type 3 (for magnetic mode imaging) a. <u>Tip specifications</u> Radius: 20-40 nm Front Angle: 0-35 deg. Back Angle: 0-35 deg. Side Angle: 0-35 deg. Height: 5-20 µm Coating: Magnetic b. <u>Cantilever specifications</u> Spring Constant: 2.0-6.0 N/m Length: 100-250 µm Width: 25-35 µm Thickness: 1.5-3.5 µm Resonant frequency: 50-200 kHz Front Side Coating: Magnetic Back Side Coating: Reflective	10
4.	Type 4 (for electrical mode imaging) a. <u>Tip specifications</u> Radius: 20-40 nm Front Angle: 0-35 deg. Back Angle: 0-35 deg. Side Angle: 0-35 deg. Height: 5-20 µm Coating: Conductive	10

	b. Cantilever specifications Spring Constant: 2.0-4.0 N/m Length: 100-250 µm Width: 25-35 µm Thickness: 1.5-3.5 µm Resonant frequency: 50-200 kHz Front Side Coating: Conductive Back Side Coating: Reflective	
5.	Type 5 (for electrical mode imaging) a. Tip specifications Radius: 25-50 nm Front Angle: 0-35 deg. Back Angle: 0-35 deg. Side Angle: 0-35 deg. Height: 5-20 µm Coating: Conductive diamond/doped diamond b. Cantilever specifications Spring Constant: 40-60 N/m Length: 100-250 µm Width: 25-35 µm Thickness: 2.0-5.0 µm Resonant frequency: 250-400kHz Front Side Coating: Conductive diamond/doped diamond Back Side Coating: Reflective	10

Terms and Conditions

1. The quotation in a sealed envelope marked as **"Ref: IITD/NRF/2013-14/AFM Probes"** should reach the undersigned **before 5 pm on 18th November 2013.**
2. Technical and Financial bids should be enclosed in separate sealed envelopes and clearly marked.
3. Quotations should be addressed to the undersigned while any enquiries may be directed to Dr. Raman Kapoor (E-mail: rkapoor.cstaff@physics.iitd.ernet.in, Tel: +918376886511).
4. The prices quoted should be on **FOB** basis.
5. The maximum, minimum and nominal values of different parameters relating to the tip and the cantilever should be clearly specified.

6. A technical compliance sheet for the items quoted may be provided in the technical quotation.
7. High resolution images such as SEM images which clearly show the geometry of the probes (tip+cantilever) should also be supplied.
8. It should also be mentioned if any of the quoted probes can also be used to image in fluid medium.
9. It should also be specified if any of the quoted probes can be specifically used to study biological samples and ultra-soft samples.
10. Any standardized measurements which show the image quality from the quoted probes may also be included.
11. Institute reserves the right to accept/reject all/any quotation without assigning any reason thereof.
12. Incomplete and conditional submitted quotations would be summarily rejected.
13. The mode of payment and delivery period should be clearly indicated.
14. The quotation should be valid for at least 3 months.
15. Necessary certificates such as propriety certificate wherever applicable should be enclosed by the vendor.
16. The specified quantity may change. Hence, price for single probe or minimum purchasable quantity should also be mentioned.
17. In case the quotation is being submitted by authorized agent of the principal company, the AUTHORIZED SALES AGENCYSHIP certificate from the principal company should be furnished along with the quotation.
18. Special discounts/rebate wherever admissible keeping in view that items are being procured for academic research at a public institution of national importance may please be indicated.

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