

The Problem

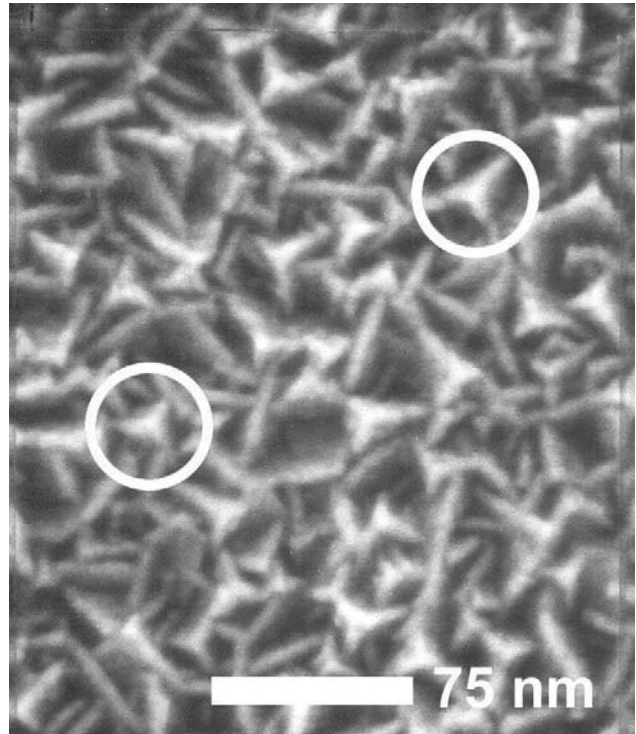
The physical probe used in AFM imaging is not ideally sharp. As a consequence, an AFM image does not reflect the true sample topography impartially, but rather represents the interaction of the tip with the sample surface. There is no avoiding this imperfection, which sets real limits on what may be validly inferred from an AFM image.

Whether one is engaged in detailed, quantitative metrology or is simply using AFM images as an interpretive aid, it is imperative that one is able to assess these limits. The key here is to possess a reliable estimate of the sharpness of the tip apex. Reverse imaging is the most convenient means of obtaining the effective radius of the probe. For this purpose, the ideal characterization sample would consist of small, stiff, spiked features.

The Practical Answer is Nioprobe

Consider the following advantages offered by Nioprobe:

- ⇒ The surface structure of the Nioprobe film is densely populated by tiny peaks. This makes the film very suitable for the small piezo movements characteristic of precision AFM work.
- ⇒ Feature peaks exhibit imaging radii of less than 5 nm, as sharp as anything else on the market. This feature size permits one to measure an accurate apex radius for medium- to small-scale work (such as biomolecular imaging)
- ⇒ The random orientation of the Nioprobe features are suitable for applying blind tip reconstruction methods.
- ⇒ The sample is resistant to the duress of contact mode scanning.



Nioprobe's price is competitive with that of other characterization samples on the market. The film is supplied on a chip of silicon, ready to be placed in your AFM. Instructions are provided to allow easy determination of the apex radius. If stored in a clean, dry place, the sample can provide years of service.

For further information on the Nioprobe device, or to place an order, please contact one of our distributors in your area or:

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