

*NanoScope is growing quickly – we have added new circuit edit and TEM sample prep. capabilities, introduced new commercial offerings for regular users and launched our new company website.*

Dear Lab Customer – Sehr Geerhte Kundin/Kunde

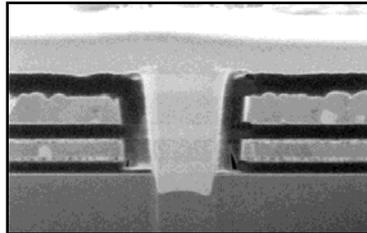
As one of our preferred clients we would like to send you updates by email rather than by post as we did previously as FEI. We invite you to update your contact information, add interested colleagues or unsubscribe, by emailing us at [correctme@NanoScopeServices.com](mailto:correctme@NanoScopeServices.com)  
As a thank-you, the next time you use our services we will pay the return shipping for your work ourselves.

### New Insulator Deposition Chemistry for Circuit Edit - What can it do?

We have just commissioned a high resistance insulator deposition process which is now available for use as part of a FIB repair. Applications which require insulator deposition are

- "Through Metal Vias" for connecting to a node which is covered by another metal layer.

**This image shows a contact to substrate made through 2 metal layers without shorting or cutting them. The material around the new contact is Ion Beam deposited SiO<sub>2</sub>**



- "Re-passivating" new connections added to a device prior to plastic encapsulation need to be protected if the new fix is to survive.
- "TEM foil protection" if you are interested in analysing materials in your TEM foil that contain Platinum or Tungsten, then SiO<sub>2</sub> is an excellent alternative for foil protection.
- "Multi level fixes" for high density modifications. Sometimes it's just easier to cross new tracks than go around. This allows a first round fix to be re-passivated and another new track to run right over the top of it with no shorting.

NanoScope is the only service lab in Europe to offer Insulator deposition capability to its customers.

Learn more at

<http://www.nanosopeservices.com/job.html#4>

### Focus on - Customised TEM foils

TEM foils can be machined and extracted from almost any materials surface, and from any specific location or orientation, but they can also be **customised for specific TEM applications.**

This requires additional effort but enables certain types of TEM analysis. Low amorphous content (low kV Polishing) and ultra thin foils (sub 100nm) can be done to order.

Standard TEM foils fabricated by FIB are 15-20 microns wide, 8-10 microns high/deep and ~100nm in thickness – of this up to 30% can be amorphised depending on the material. While this is irrelevant for many metrology applications – some applications require a higher crystalline proportion for success.

- Low kV cleaning of a foil at 10 or 5KV can reduce the amorphous film to a few % of total thickness.
- Ultra thin foils are interesting for higher resolution TEM studies – NanoScope has some unique techniques for routinely producing foils below 100nm.

The exact eventual foil thickness remains material dependant as always though!

**Christmas time**  
We will be closed to non-urgent work from the 22<sup>nd</sup> Dec -2<sup>nd</sup> Jan 2007 If you need work during this time – call our mobile +44(0)7856507502

Find us on the web @

[www.NanoScopeServices.com](http://www.NanoScopeServices.com)

NanoScope is pleased to launch our new company WebSite. Find everything you need to support your projects, FIB and SEM and TEM applications, microscopy and applications consultancy or training for your own engineers on the tools you already have. Bookmark this page to stay up to date as we bring new services on line.

Each month we will be adding something new to our portfolio of services to make sure we can be as effective a partner to you as we can. If there is something you need that you don't see yet – email us your request at [contact@NanoScopeServices.com](mailto:contact@NanoScopeServices.com) and if we can't offer it ourselves we can probably find it for you. And if we know its something you need regularly, we can add it.



### Coming soon - Live WebCam

Send your work to us today and you can consult with us real-time while watching it being processed live on the web, tomorrow. All you need is your own webcam and some downloaded shareware - we can even provide you with the webcam. Save your travel budget and an early morning start – and stay in the comfort of your own office while your analysis is being done. Have the image files and other results arrive direct to your desktop as they are captured. You could also discuss and direct your chip modification as if you were sitting next to the machine, specify new measurements as process anomalies become clear during analysis, or just make sure you are getting what you need as it happens.

Learn more at <http://www.nanosopeservices.com/job.html#4>



QuickCam®  
9.5.5



### Why select NanoScope?

### The NanoScope service commitment

NanoScope is committed to providing the highest levels of service to our customers – both in the time it takes to get to the correct result and in the quality of the work and results we provide.

- **Our instrumentation offers the highest resolution imaging and most accurate milling** in Europe today; we also have the widest range of pre-cursor gases and support equipment for every application.
- **Our engineers are the most qualified full time microscopists** –having been trained within companies that manufacture and service microscopes –we are experts in FIB, SEM and DualBeam for all applications, as our engineers have helped in developing some of them! Because of this, we can complete your work faster – which costs you less.

NanoScope is an independent company dedicated to supporting you, our customers, we don't 'fit you in' around our own company projects. When you need a result you need to choose a partner that gives your project the full attention of their most experienced people, and uses the best equipped instruments available.

- **Fast and Expert Service, Applied – when you need it.**



### Regular contract discounts

Companies needing regular or high volume support can sign up for a special discount contract. In exchange for committing to a small regular minimum order (monthly, quarterly or annually) - you can enjoy priority scheduling for all your FIB and Microscopy work and a **discount of up to 25%** (5% per 2hrs/per month up to 20% max). For using NanoScope exclusively we offer another 5%. Discounts must be agreed before work starts. If you routinely need TEM samples for your research, or you are a fabless design house and need to track your foundry's performance vs. their design rules, or you just need a lot of work done - this solution provides welcome extra cost control for you.

NanoScope now offers the highest quality, the fastest turnaround, and now the most cost effective service solution in Europe.

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