SemGlu

A Vacuum Adhesive for Nanoassembly and Materials Characterisation in FIB systems

EFUG — Gaeta, Italy
October 11th, 2010

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Kleindiek Nanotechnik

This is the Kleindiek team...

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Founded 1998
25 People, 6 in R&D
20 distributors
More than 1400 systems in the field

This is where we are located...

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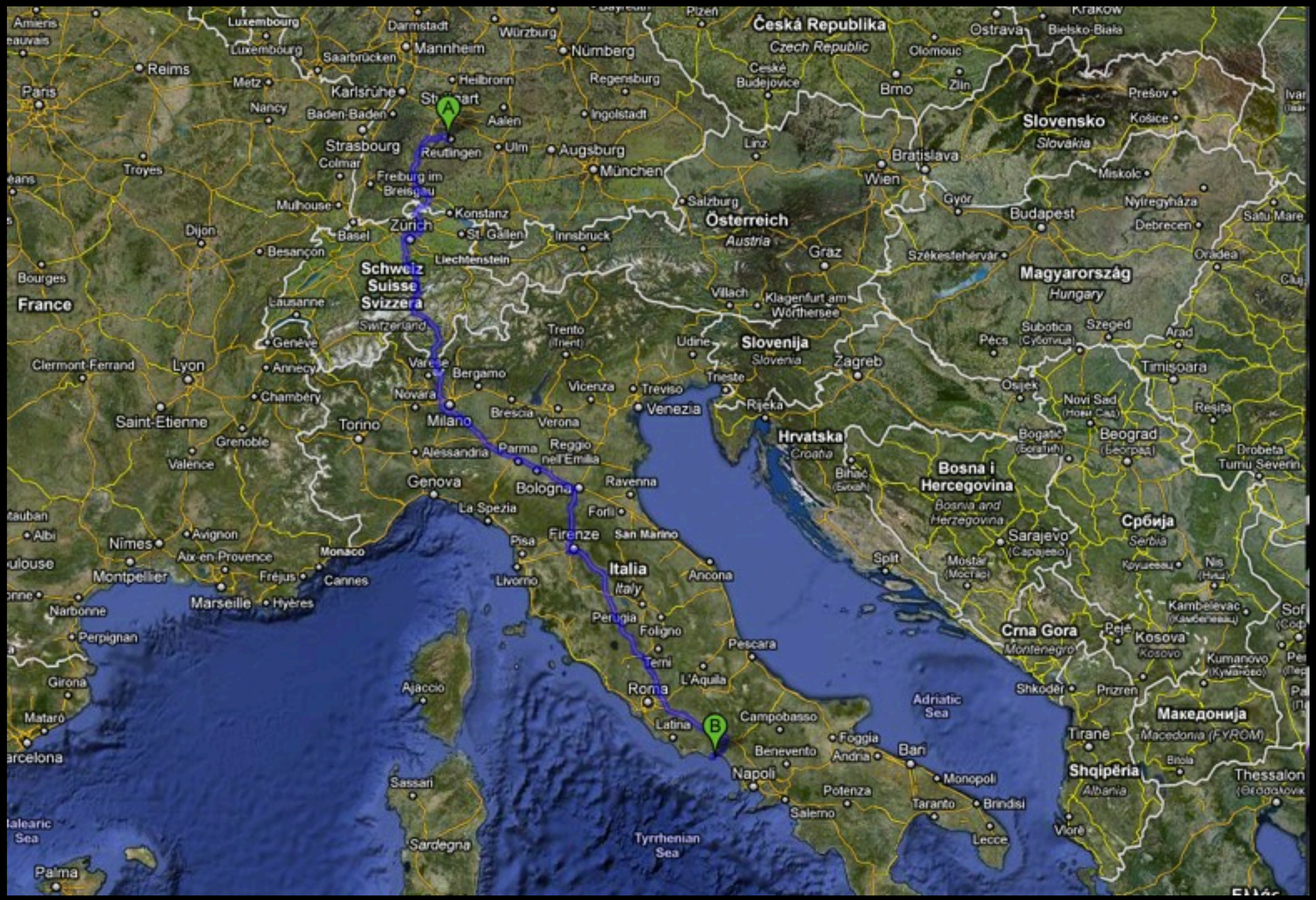

Reutlingen, Germany to Gaeta, Italy: 1200 km

This is SemGlu...

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Initial bonding test

This is what it was developed for...

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Lift Out Shuttle

Dedicated System for TEM Sample Preparation

This is where we use it most...

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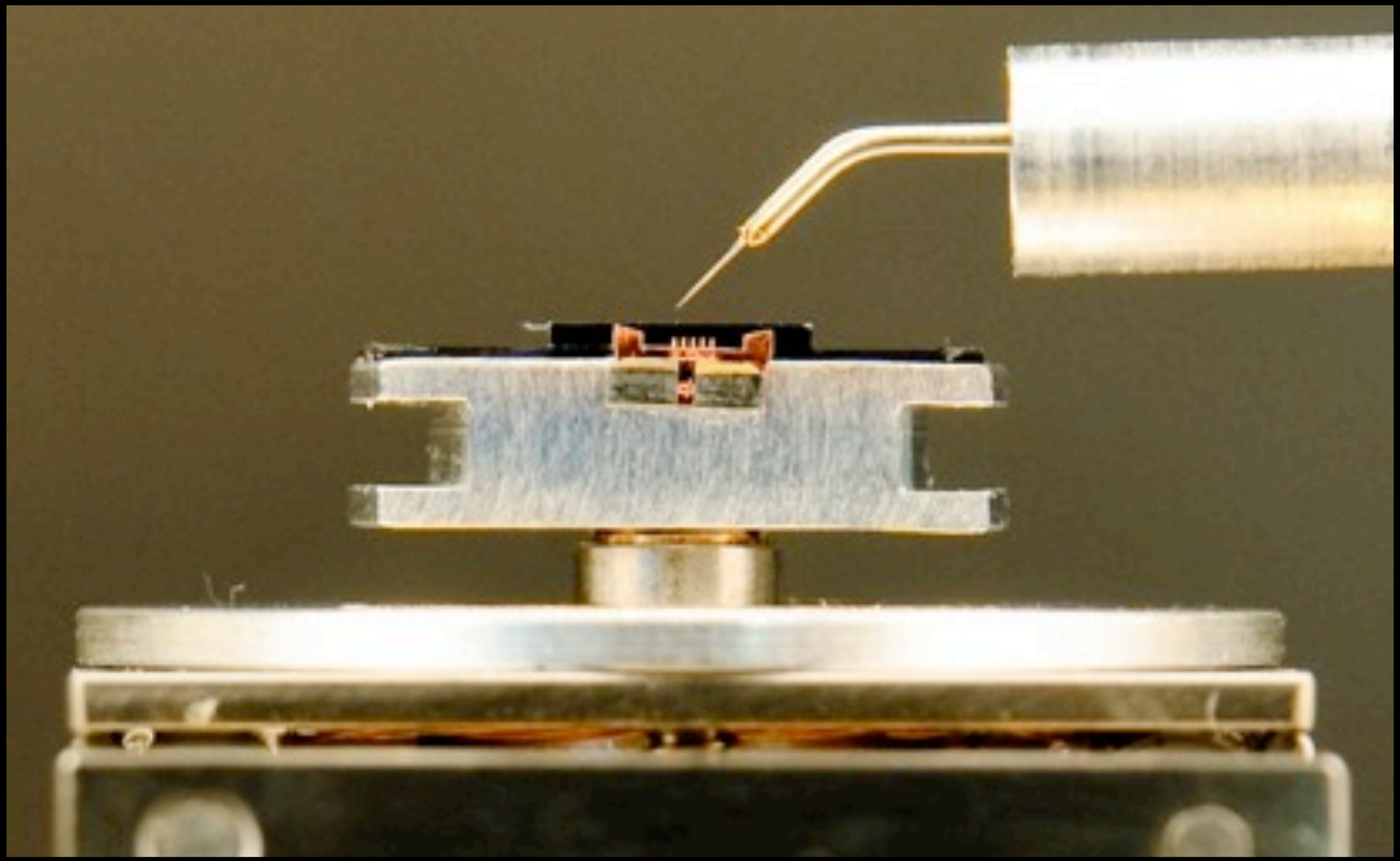

This is how we apply SemGlu to the TEM grid...

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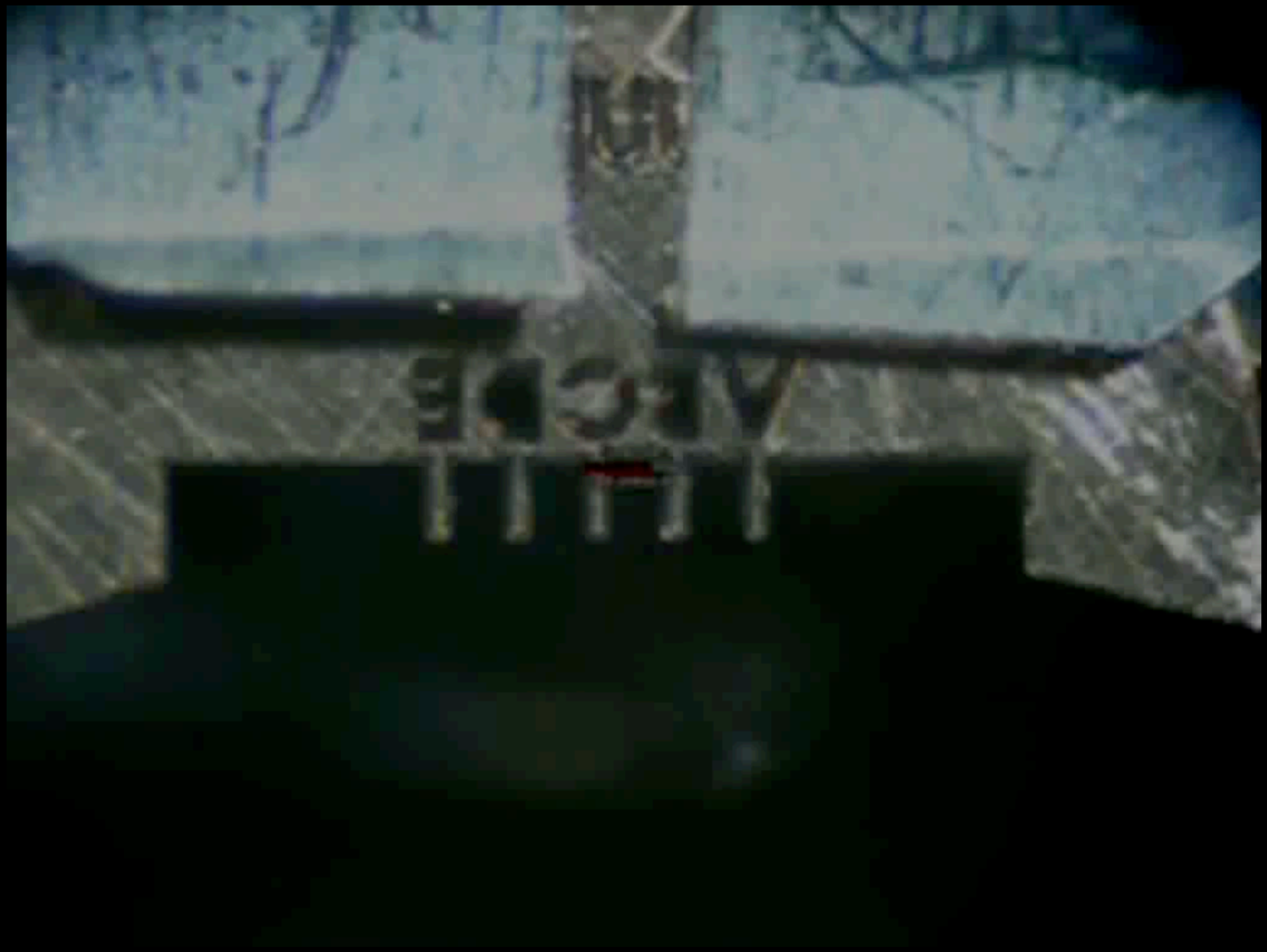

This is how we Glue lamella to TEM grids...

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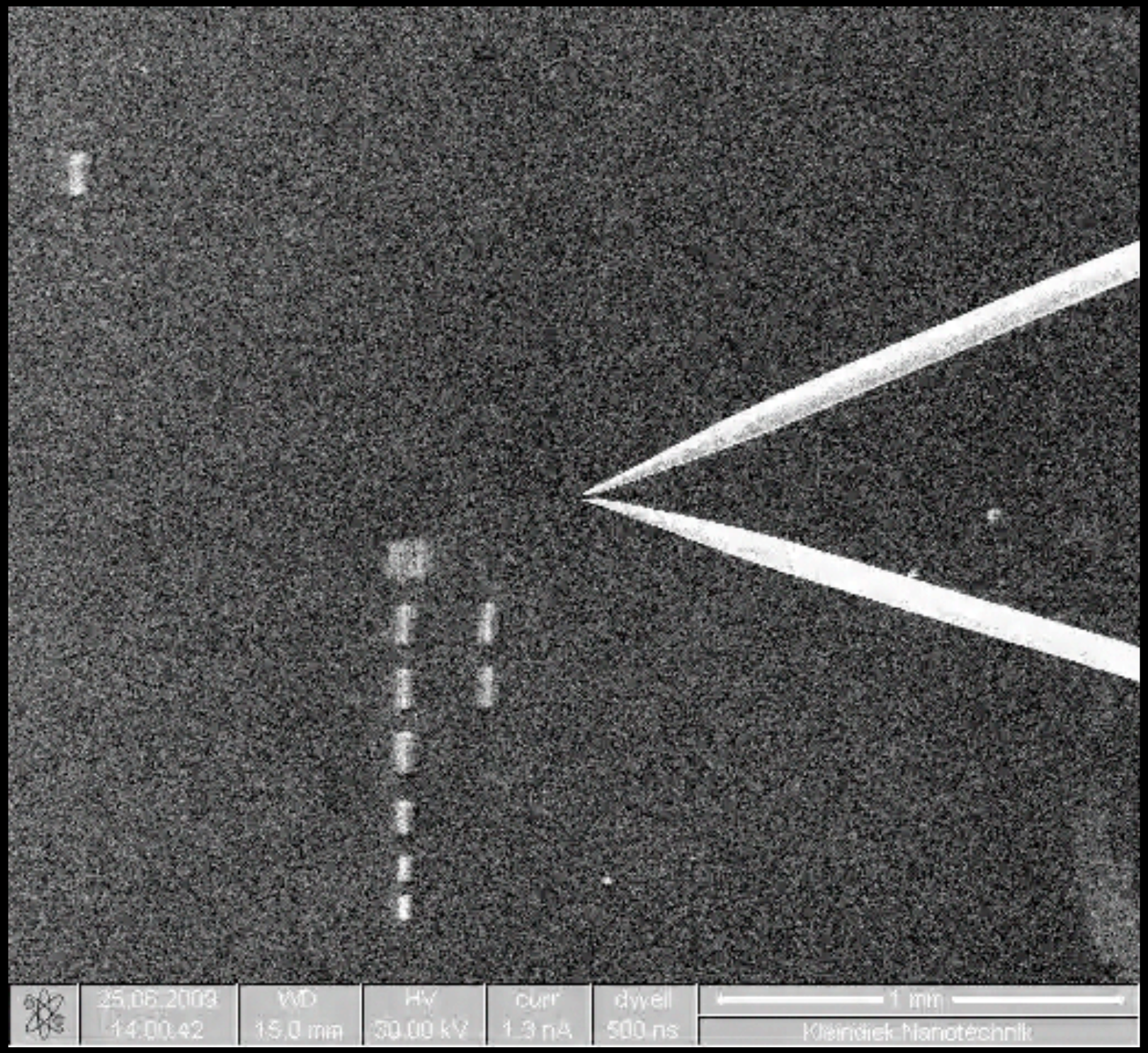

3 lift-outs in 12 minutes!

This is how we speedily approach samples...

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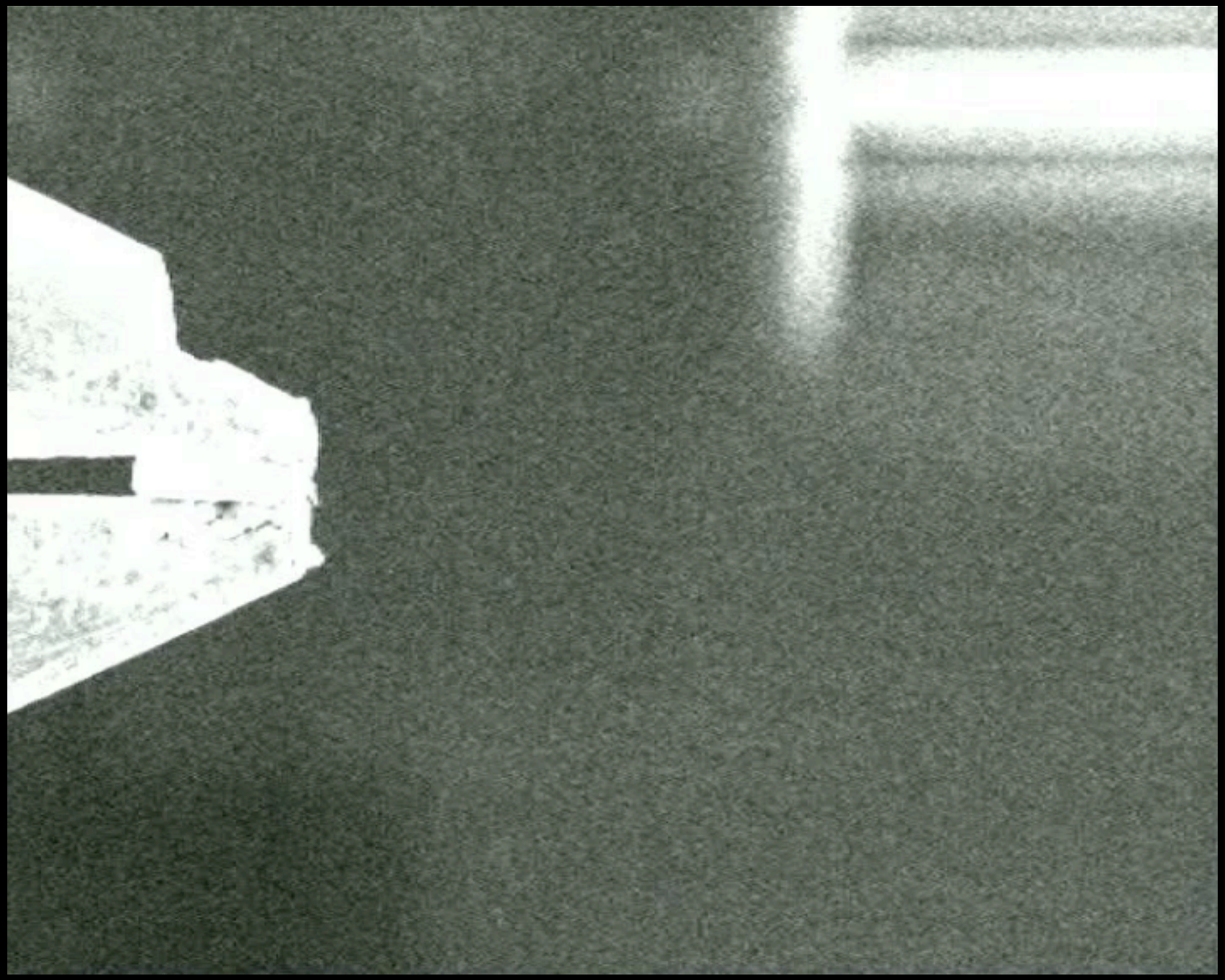

This is how strong it is...

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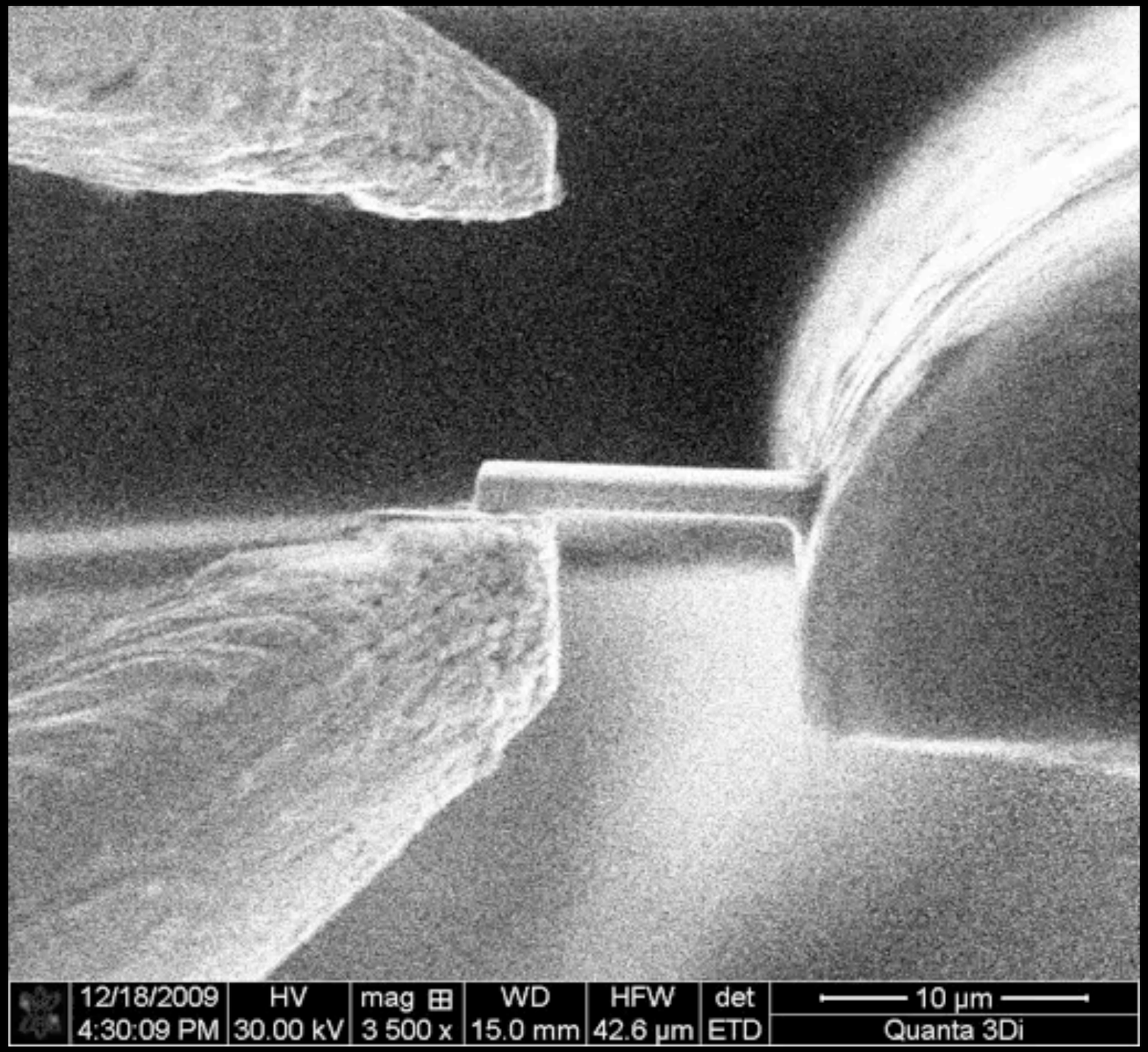

SemGlu's strength is similar to that of epoxy

This is how SemGlu is used to retreive CNTs...

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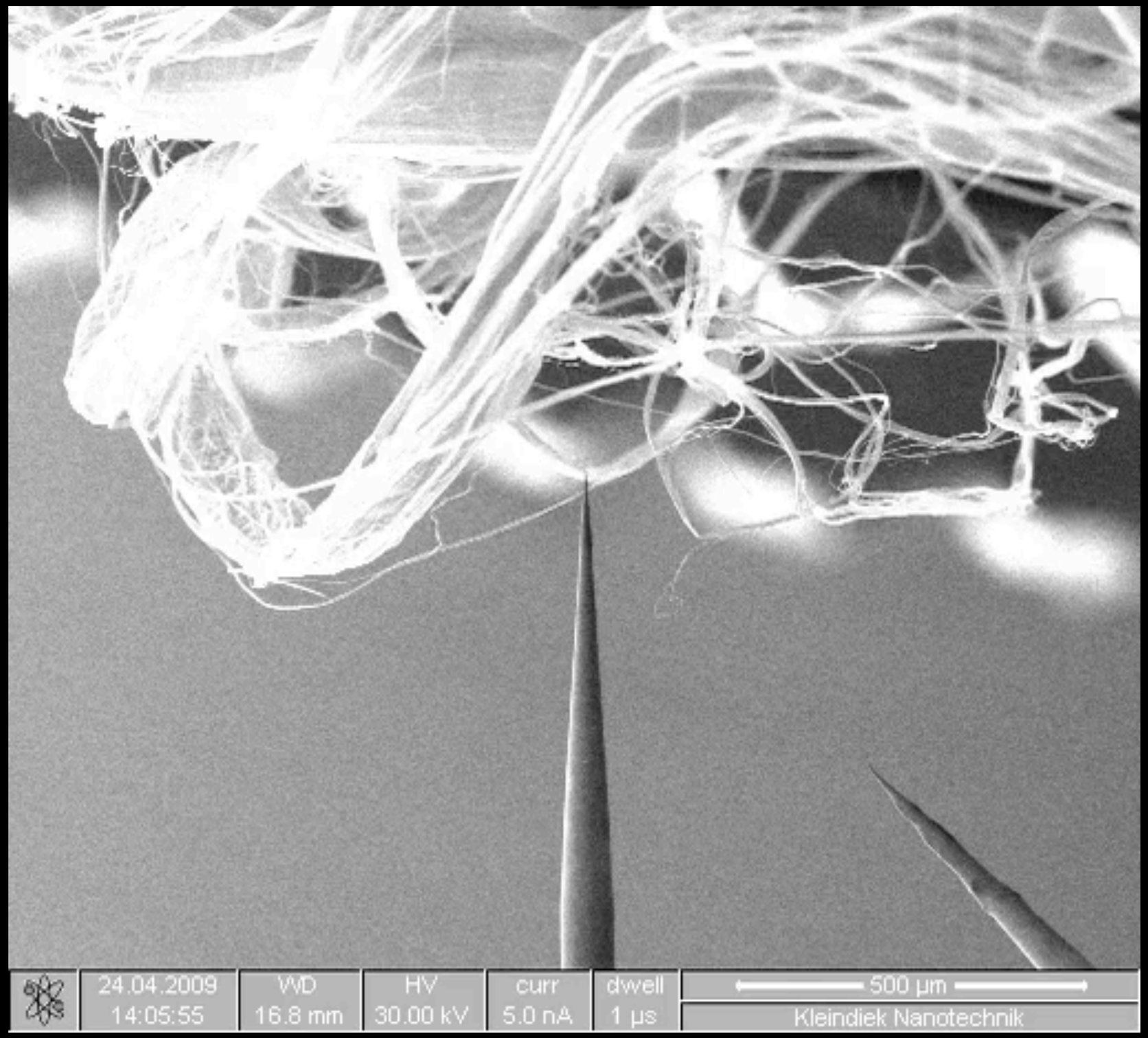

Courtesy of Mark Schulz and Vesselin Shanov University of Cincinnatti

This is our force measurement system...

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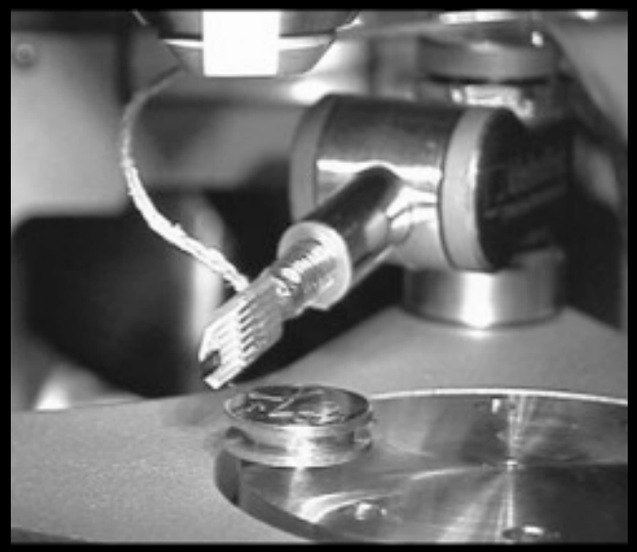

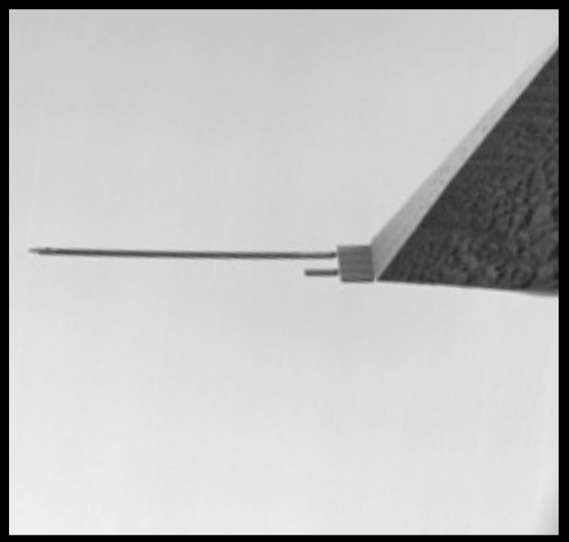

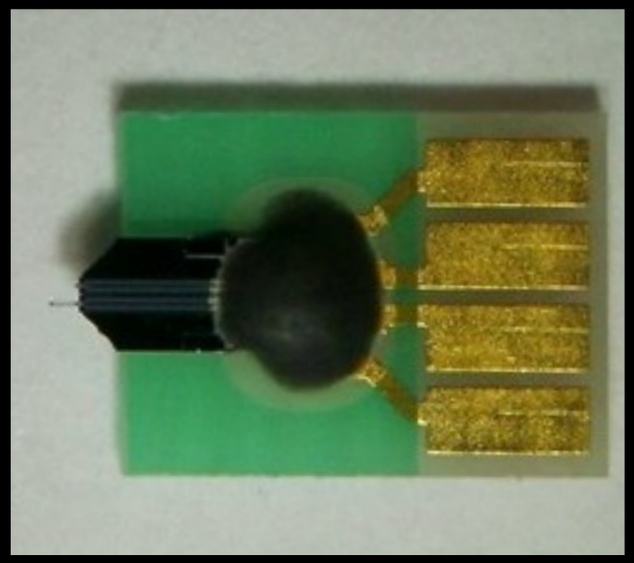

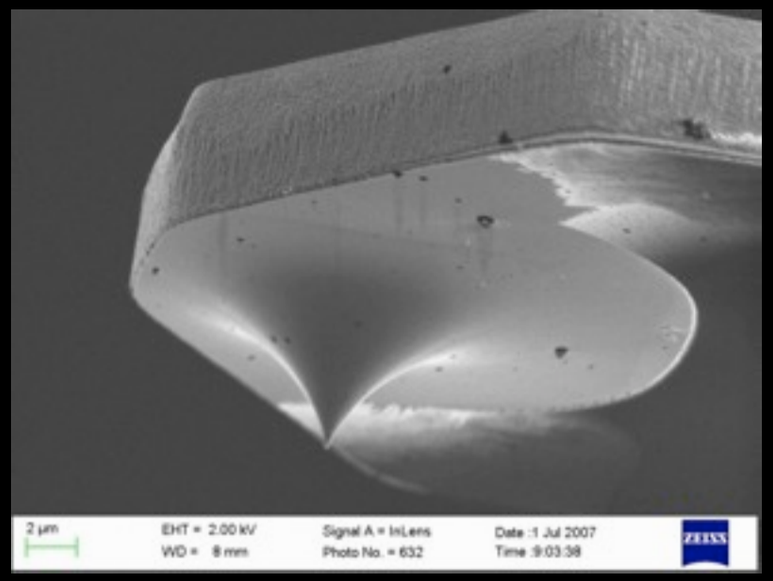

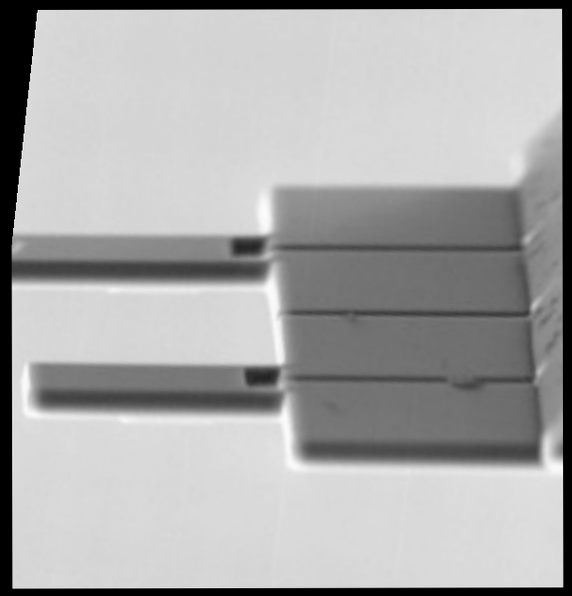

100 µN Force Measurement with 1 nN resolution

This is how SemGlu is used to mount samples...

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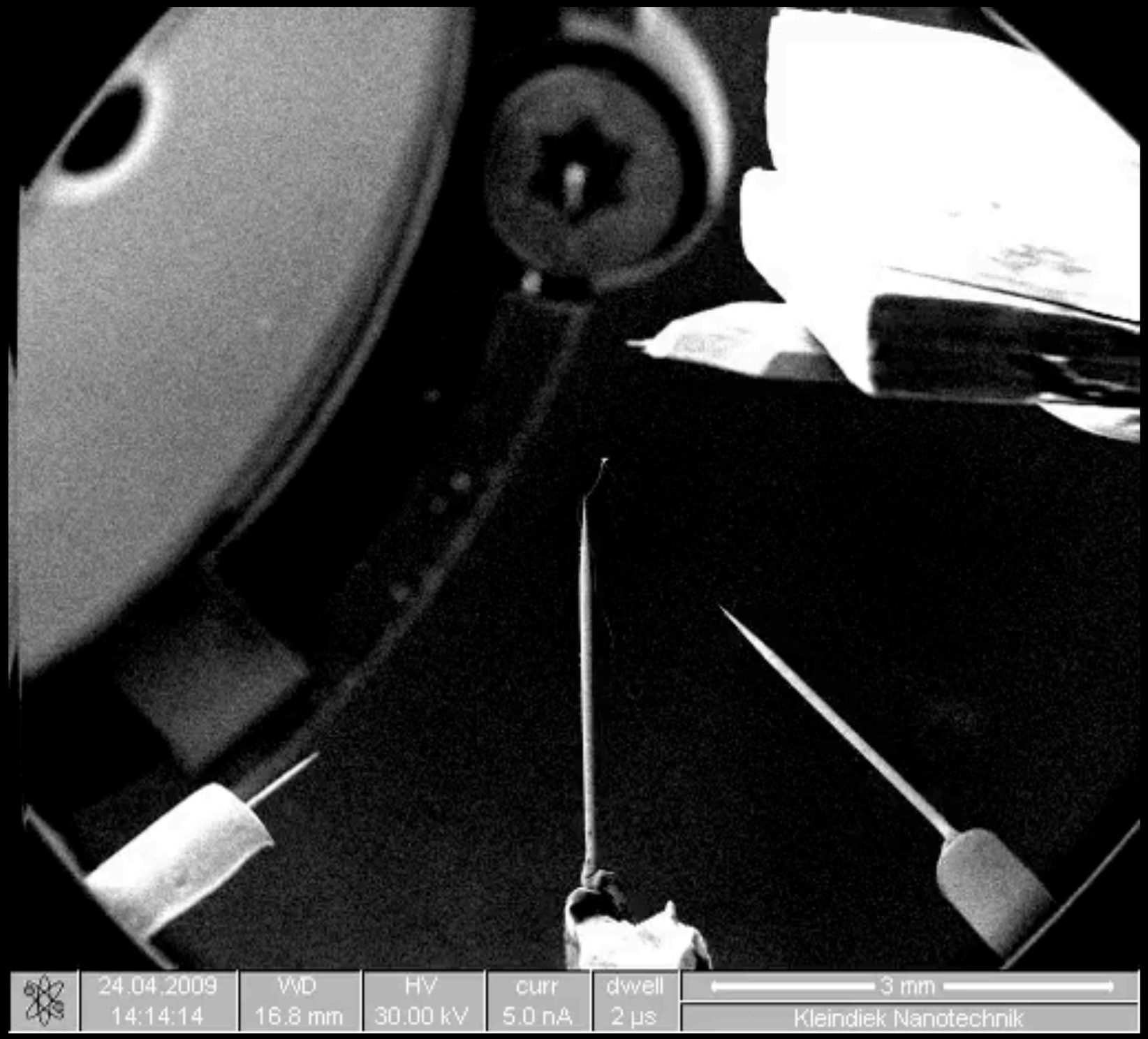

Courtesy of Mark Schulz and Vesselin Shanov University of Cincinnatti

This is the subsequent tensile test...

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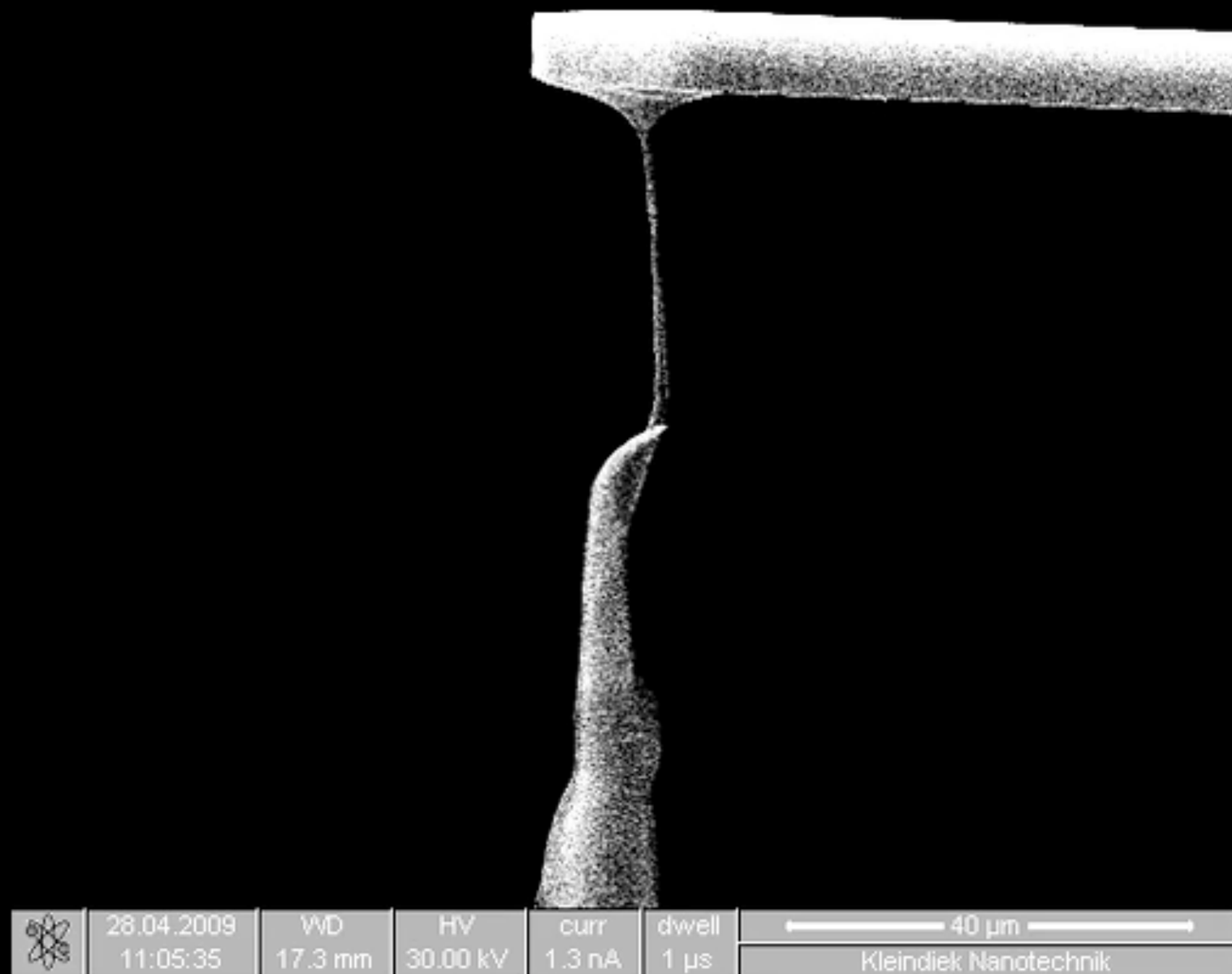

Courtesy of Mark Schulz and Vesselin Shanov University of Cincinnatti

This is the result of the tensile test...

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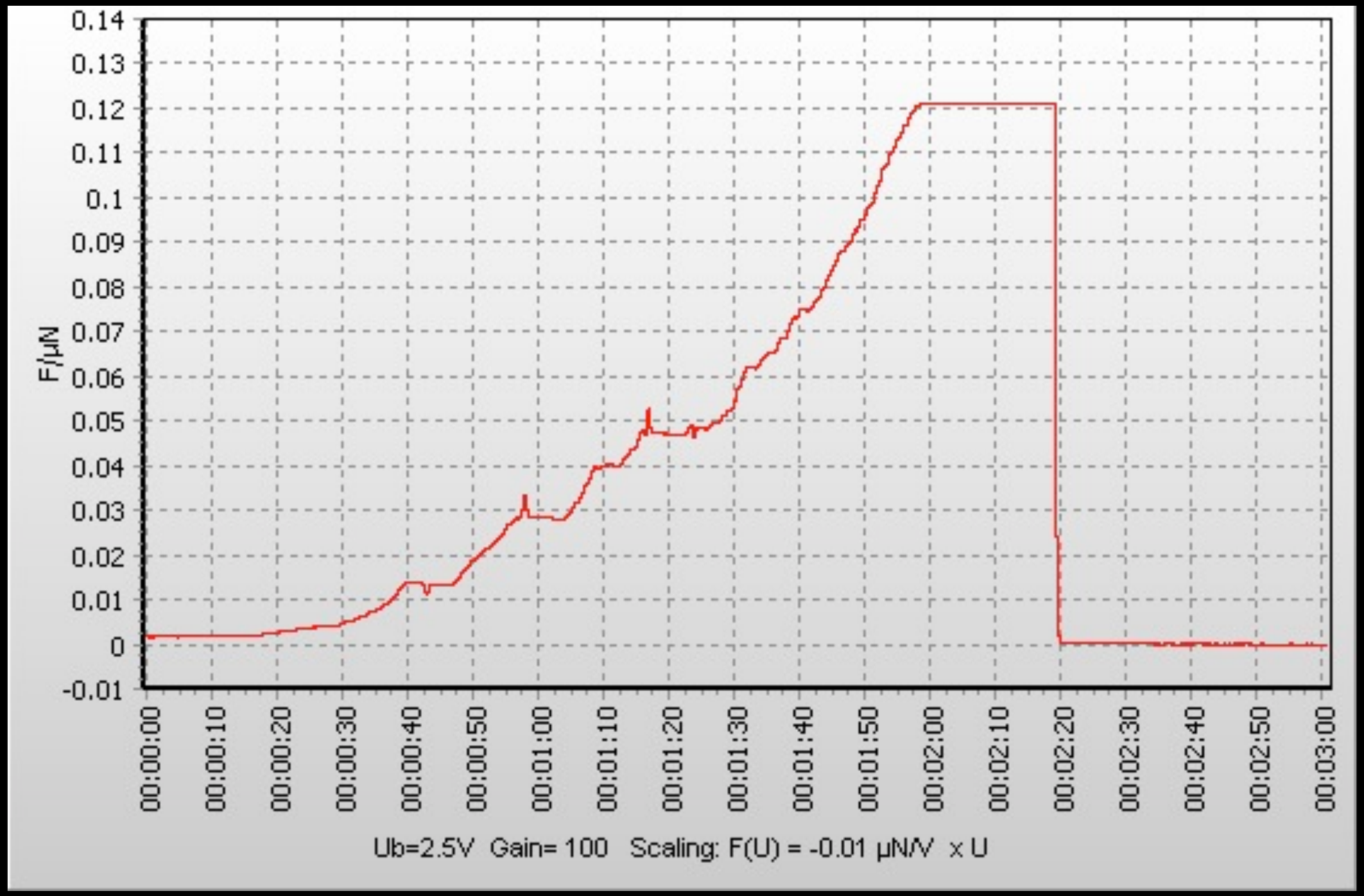

This is another way to characterize CNTs...

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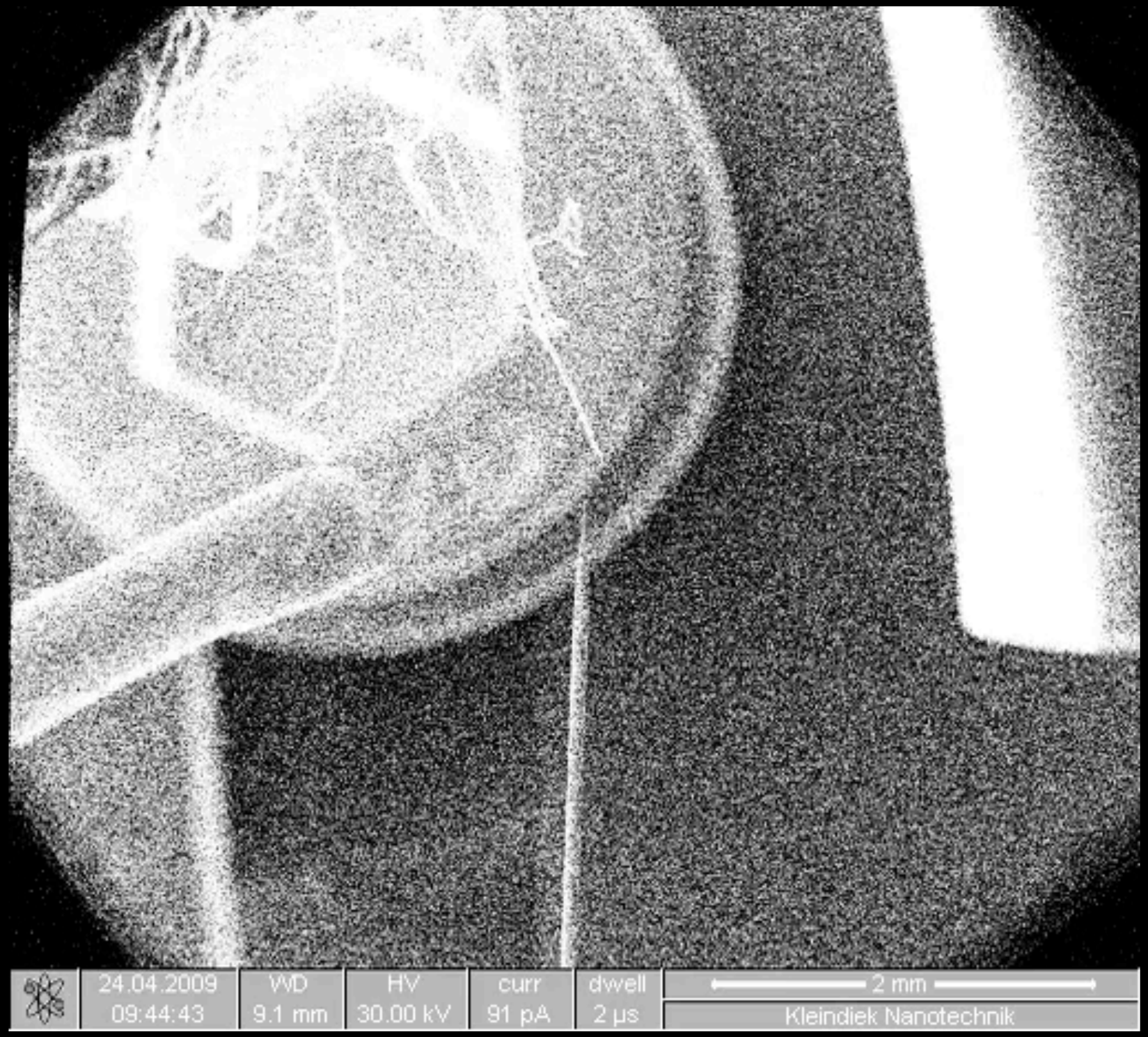

Courtesy of Mark Schulz and Vesselin Shanov University of Cincinnatti

This is an example of how we can arrange nanowires...

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This is our gas injection plug-in...

... for solid/liquid precursors

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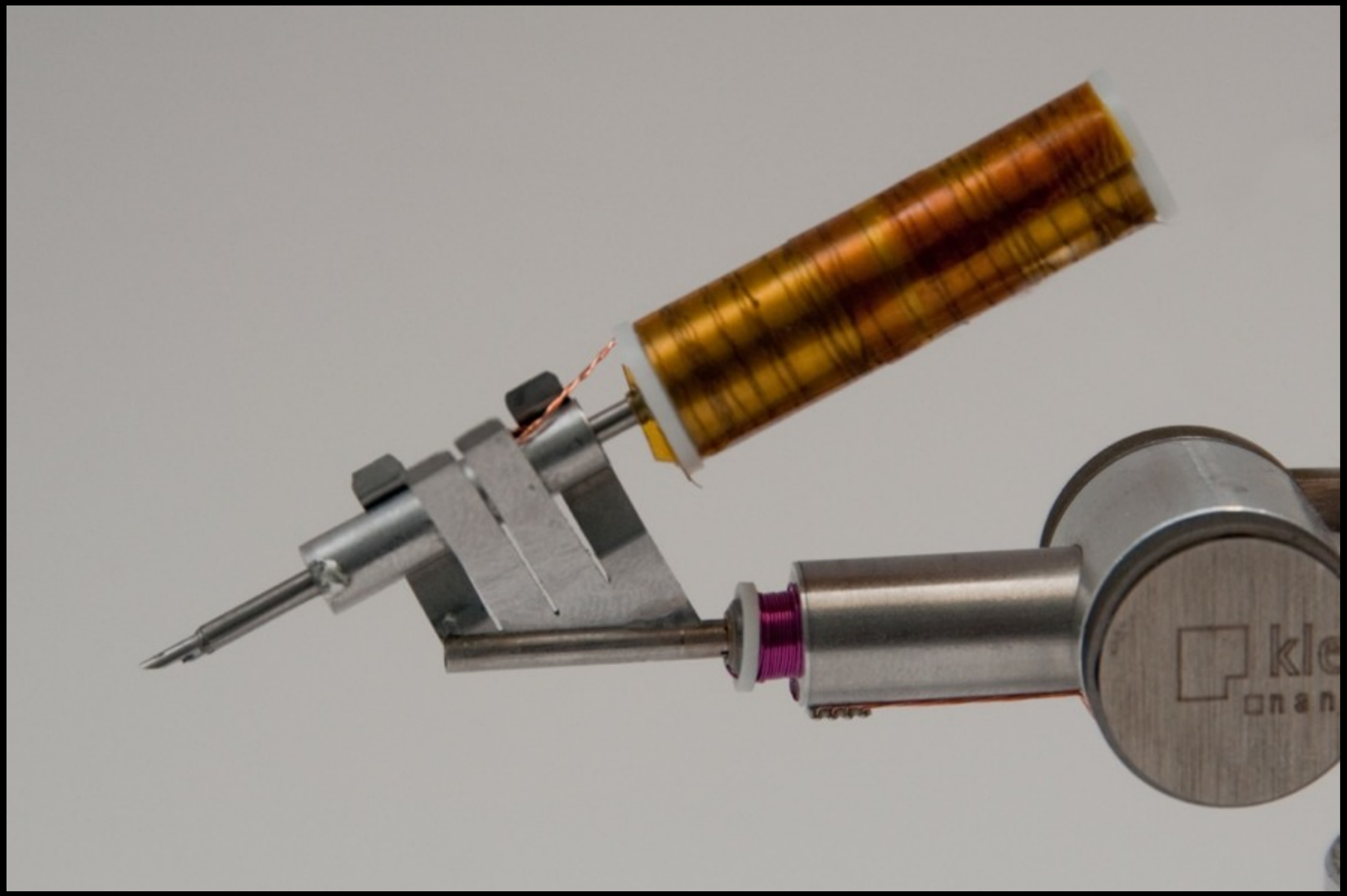

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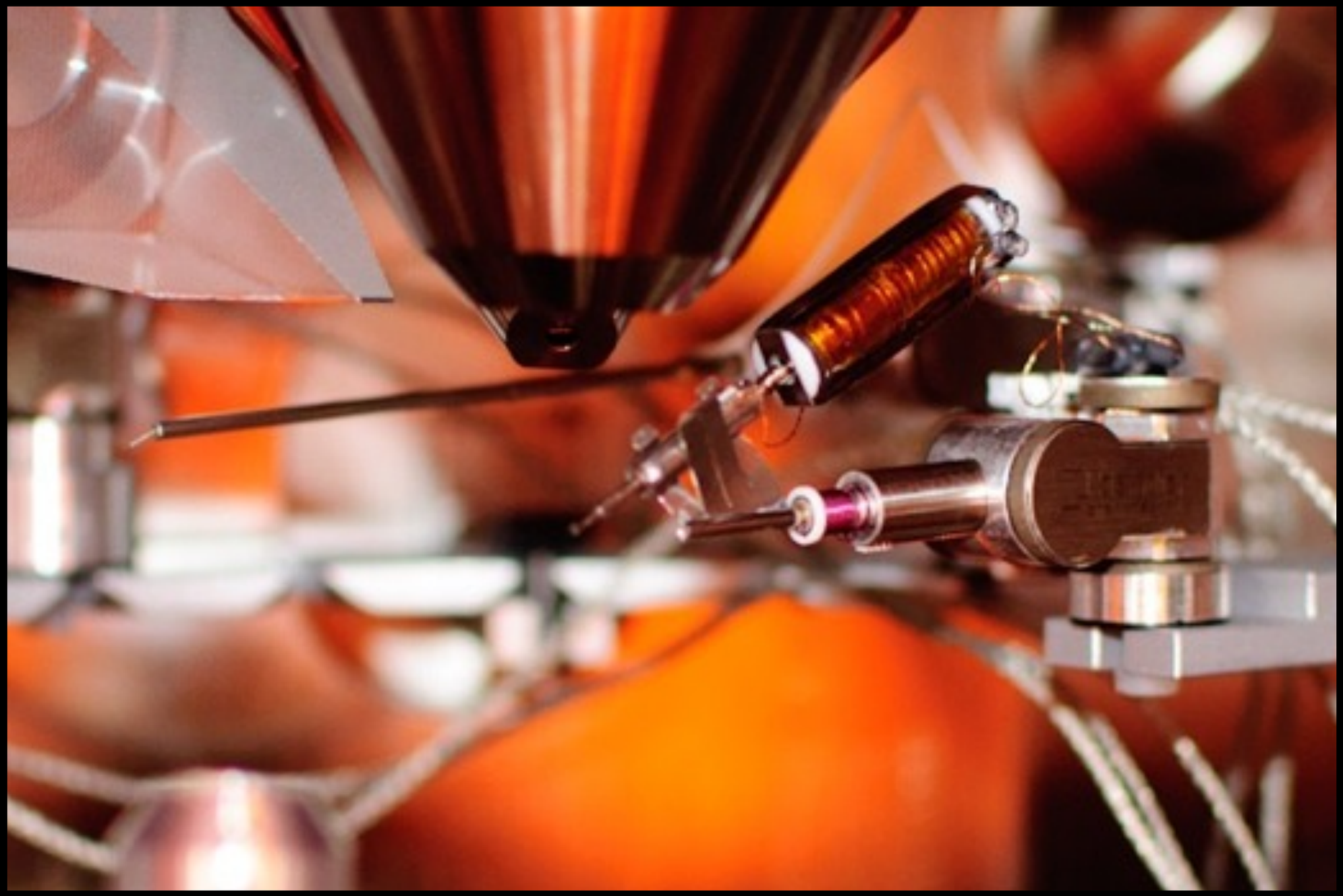

This is IBID deposited tungsten...

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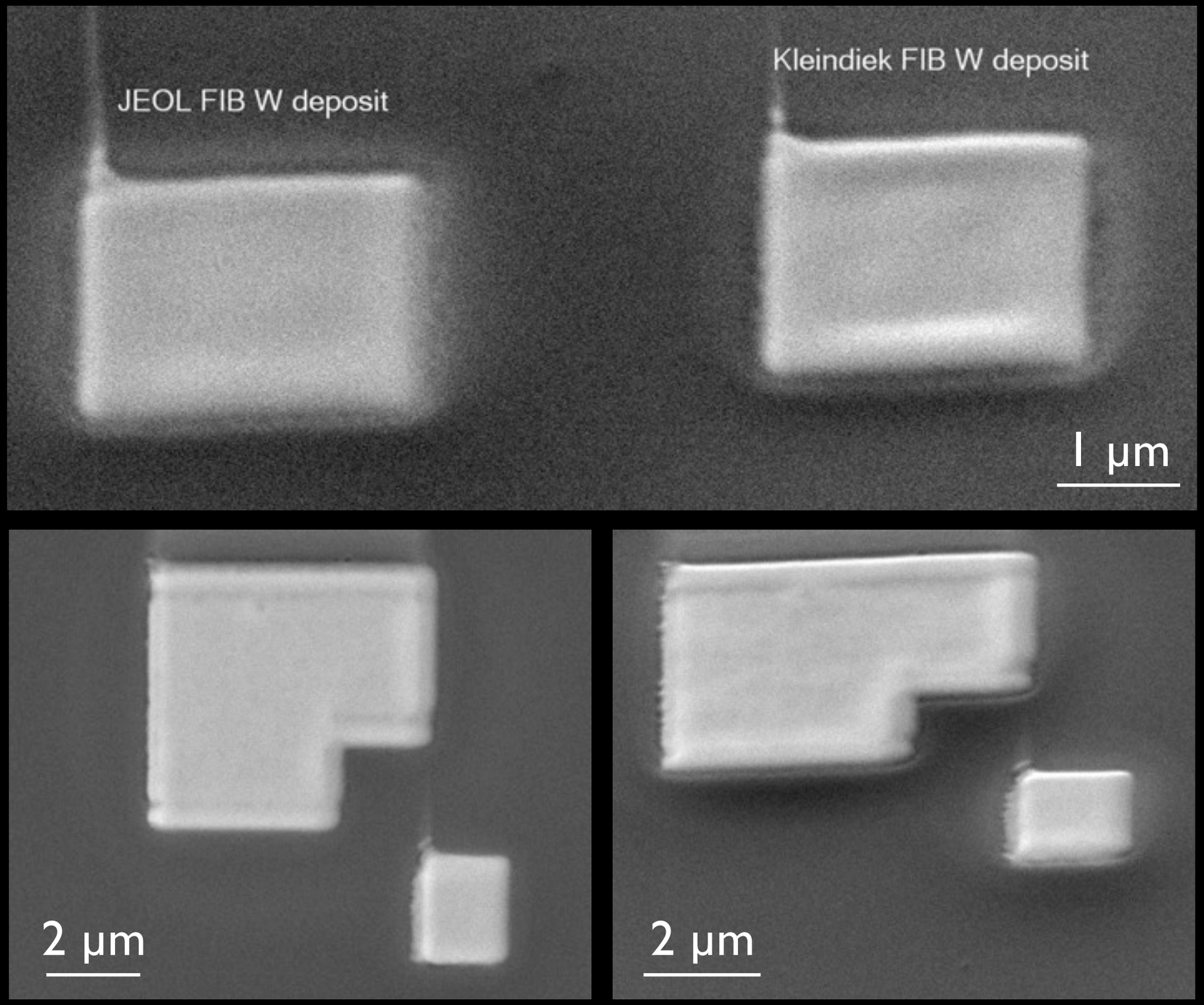

Courtesy of Greg McMahon of Boston College

This is our gas injection plug-in...

... for gaseous precursors

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This is charge compensation on a glas substrate using Ar...

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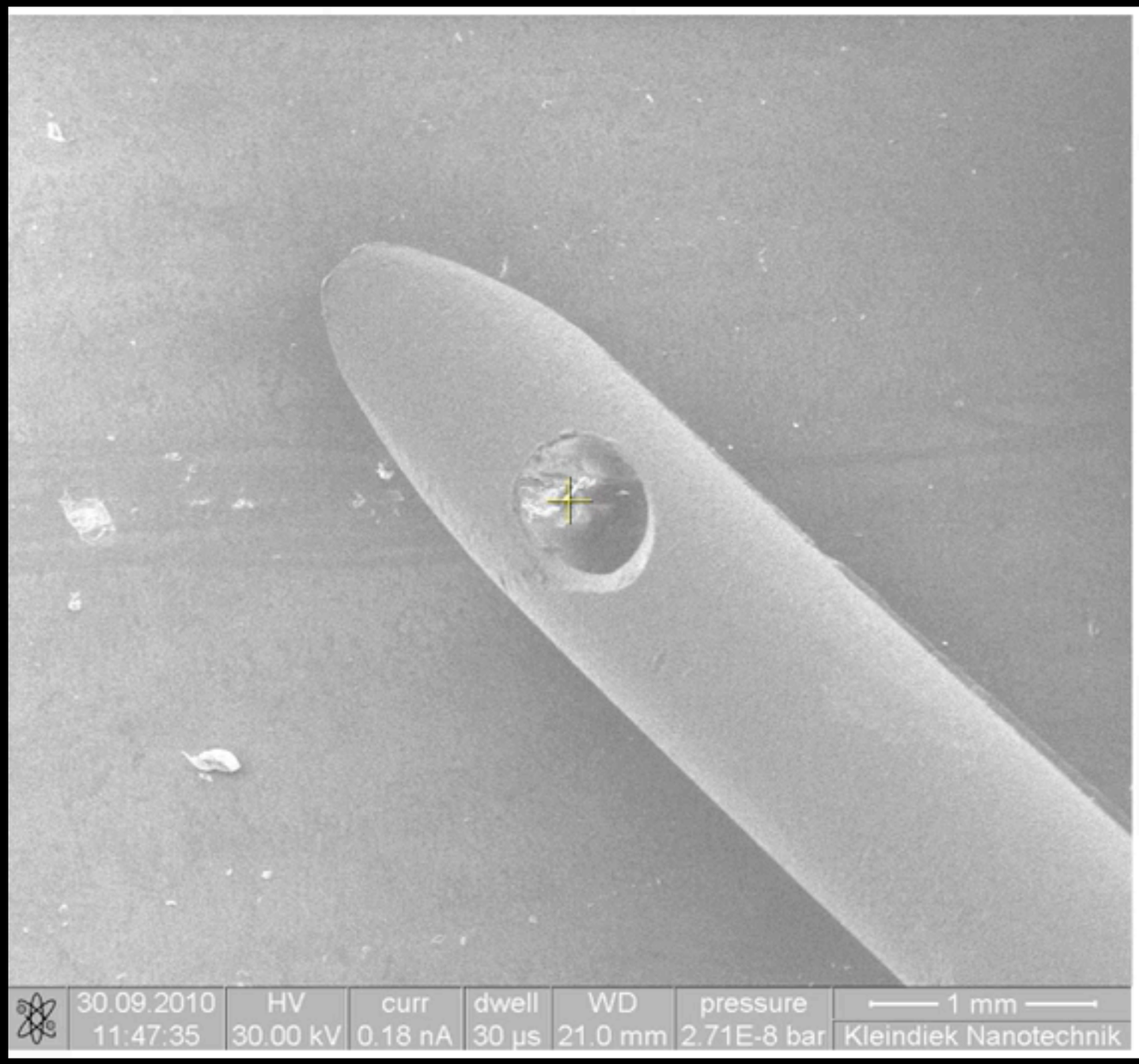

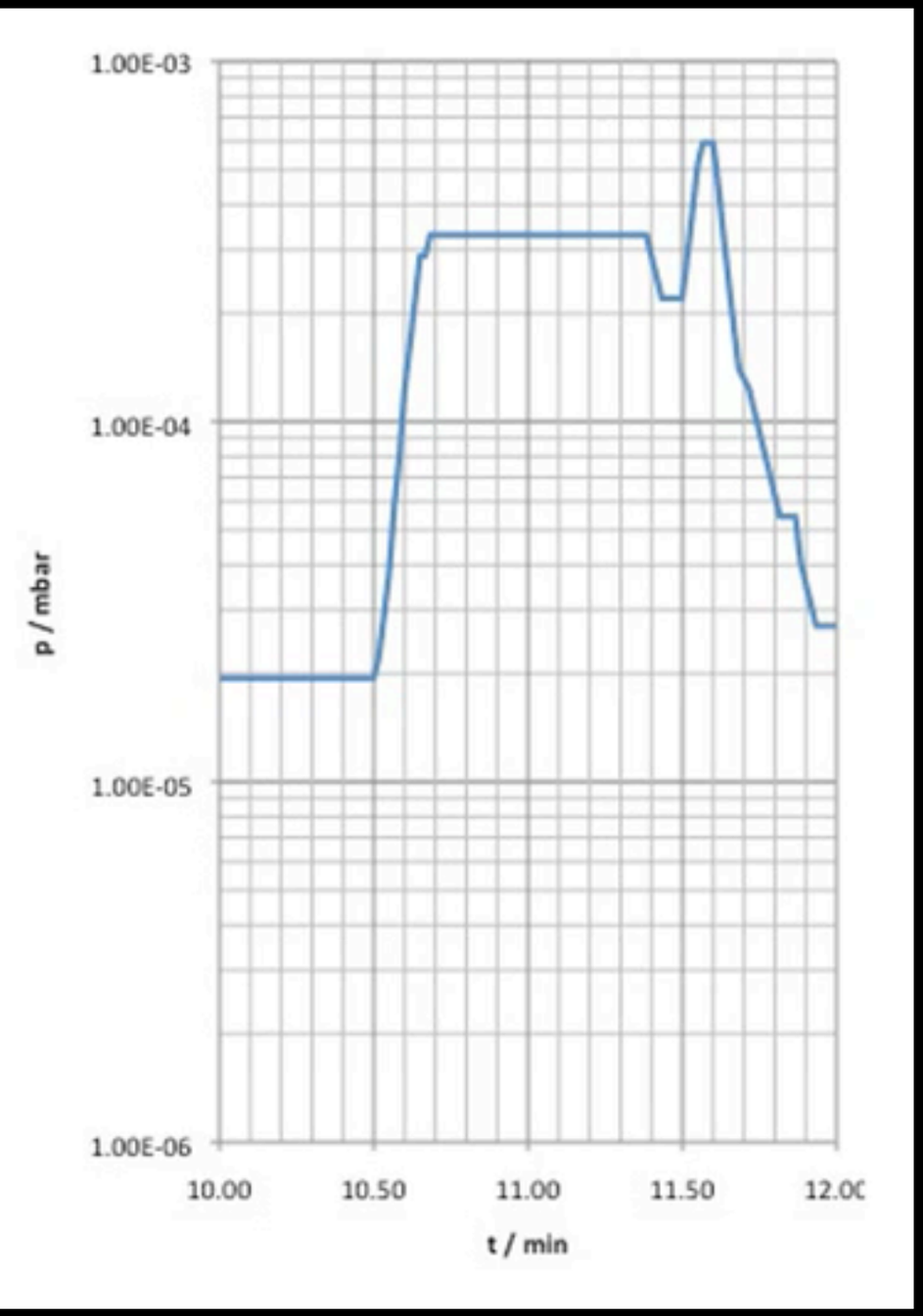

This is the Kleindiek team (again)...

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Thank you!