

MNE

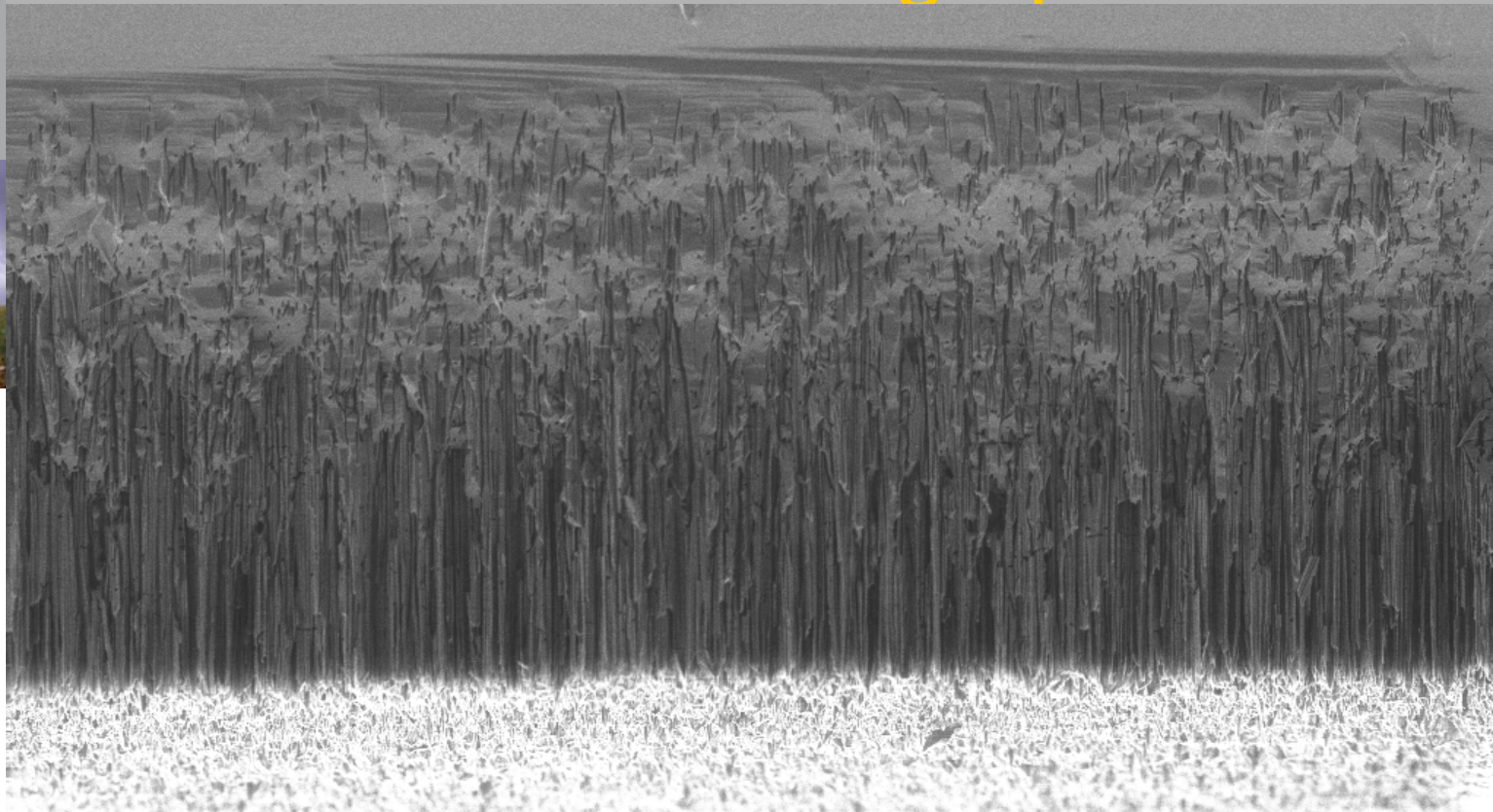


2007 micro & nano - graph Contest



micro & nano - graph
Title:

**Forest in the
mist in the
afternoon in
autumn in Aix
en Provence**



Scan Speed = 9
Mag = 759 X

20µm
|—|

EHT = 3.00 kV
WD = 5 mm

Signal A = SE2
Photo No. = 2796

Date :17 Sep 2007
Time :15:02

Description: Cross sectional image of porous silicon formed on single crystal silicon by metal-assisted catalytic reaction. The image has been taken rotating the image 180 degrees.

Magnification: 759 X

Submitted by: Jordi Teva

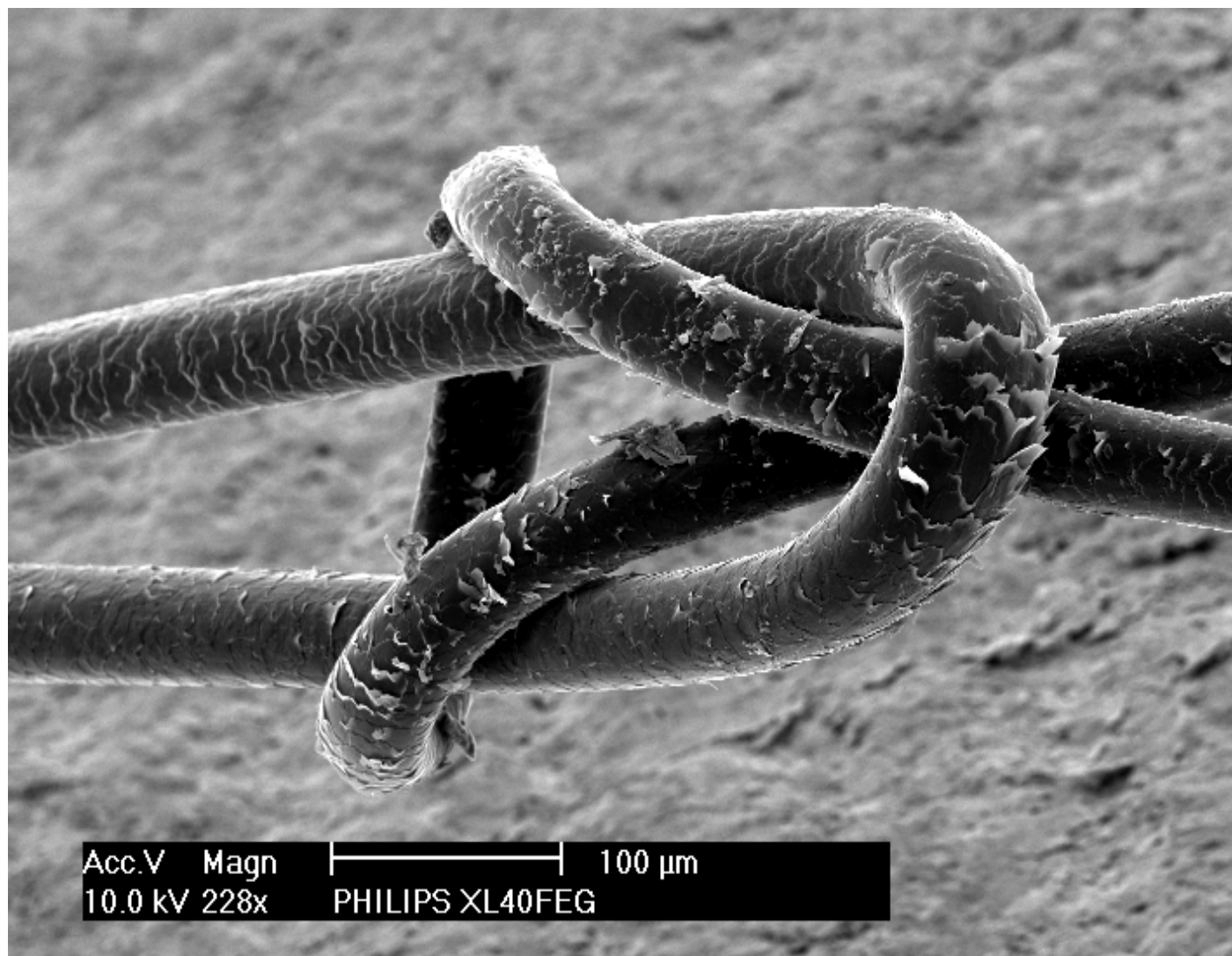
Instrument: LEO 1550 Scanning Electron Microscope

**Affiliation: MIC- Department of Micro and Nanotechnology, DTU ,
Denmark**



micro & nano - graph
Title: **Square knot**

**Tongue
Twister**



Magnification: 228 X
Submitted by: Frans Holthuysen

Instrument: Philips XL40FEG
Affiliation: Philips Research labs Eindhoven The Netherlands

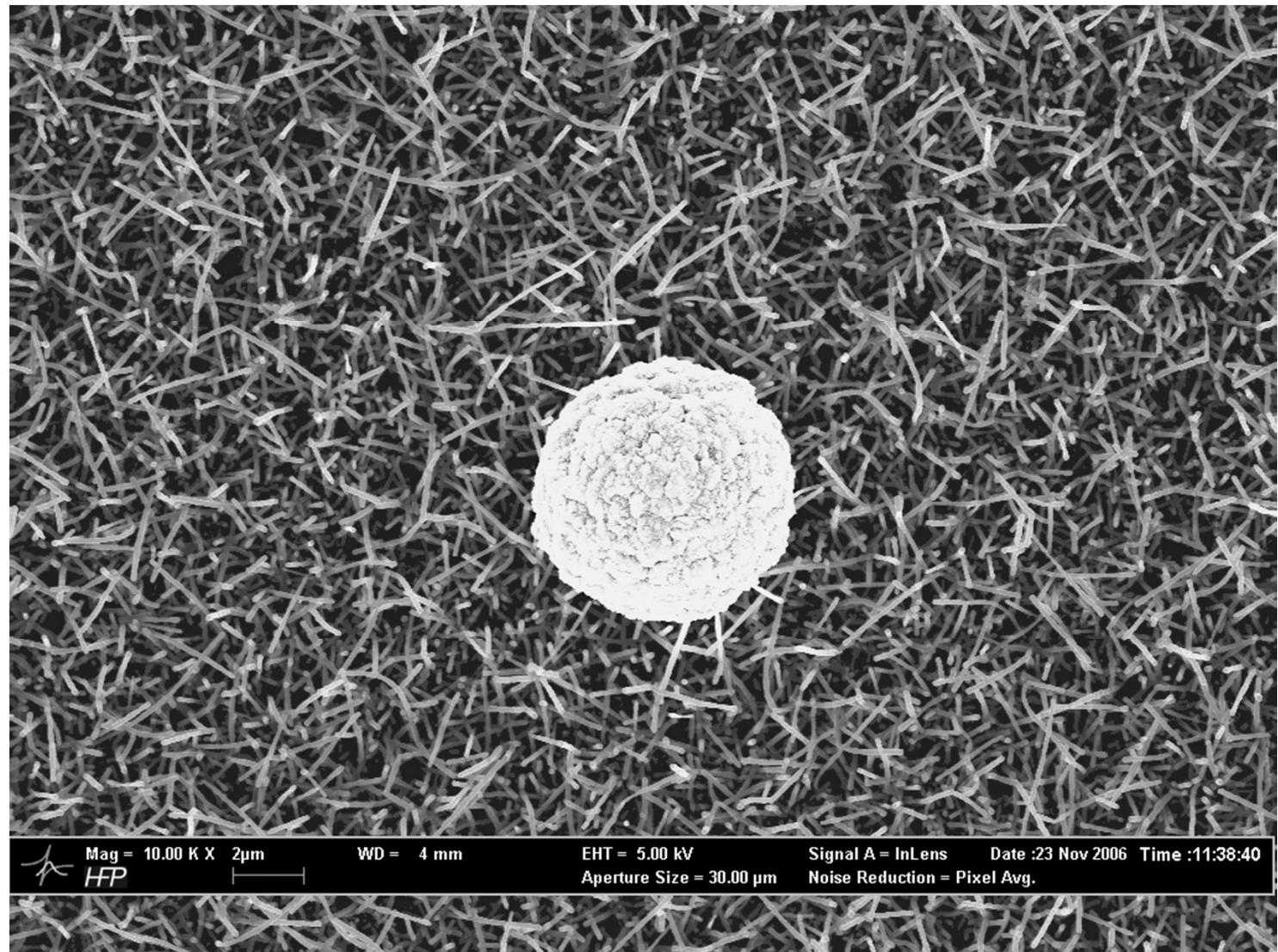


micro & nano - graph
Title:

Looking for Your Golf Ball?

Description:

SEM image: The grass consists of carbon nano rods made with CVD, the golf ball is a spherical contamination of unknown origin.



Magnification: 10k X

Submitted by: Wolfgang Schwinger

Instrument: LEO SUPRA GEMINI SEM

Affiliation: Profactor GmbH and University of Linz, Institute of Semiconductor and Solid State Physics

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2007 micro & nano - graph Contest



micro & nano - graph
Title:

Hoakie Cartoon in the Nano Kelp Bed

Description:
An unexpected diver
enters the world of
carbon nanotubes.



Magnification: 14067x

Submitted by: Michael Häffner

Instrument: Philips XL 30

Affiliation: University of Tuebingen

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2007 micro & nano - graph Contest

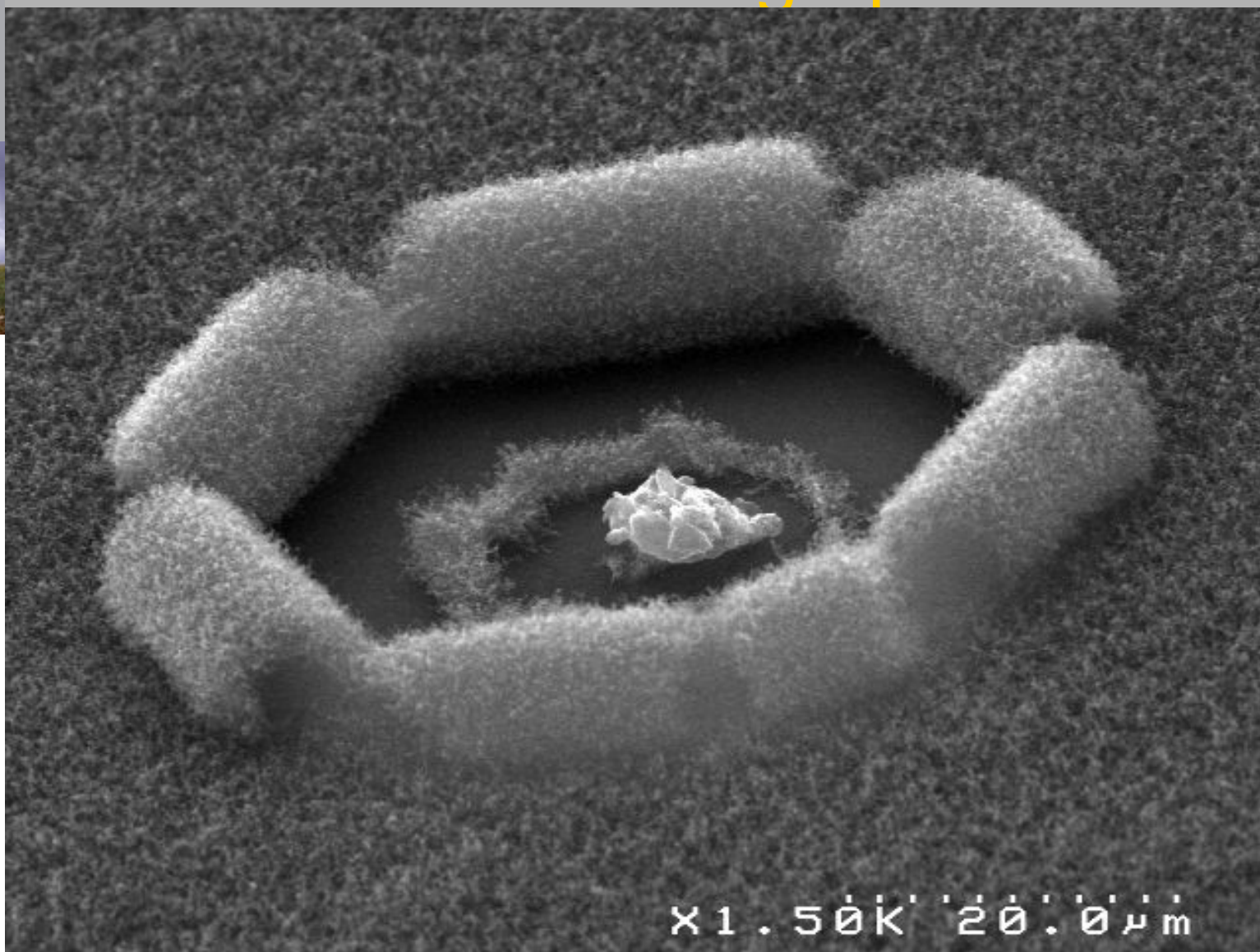


micro & nano - graph
Title:

Fuzzy Rose

Description:

Carbon nanotube carpet. The anisotropic dewetting of a catalyst film leads to the formation of rings with different height.



Magnification: 1.50 k X

Instrument: SEM Hitashi P5000

Submitted by: Jean-christophe Coiffic
& Didier LOUIS

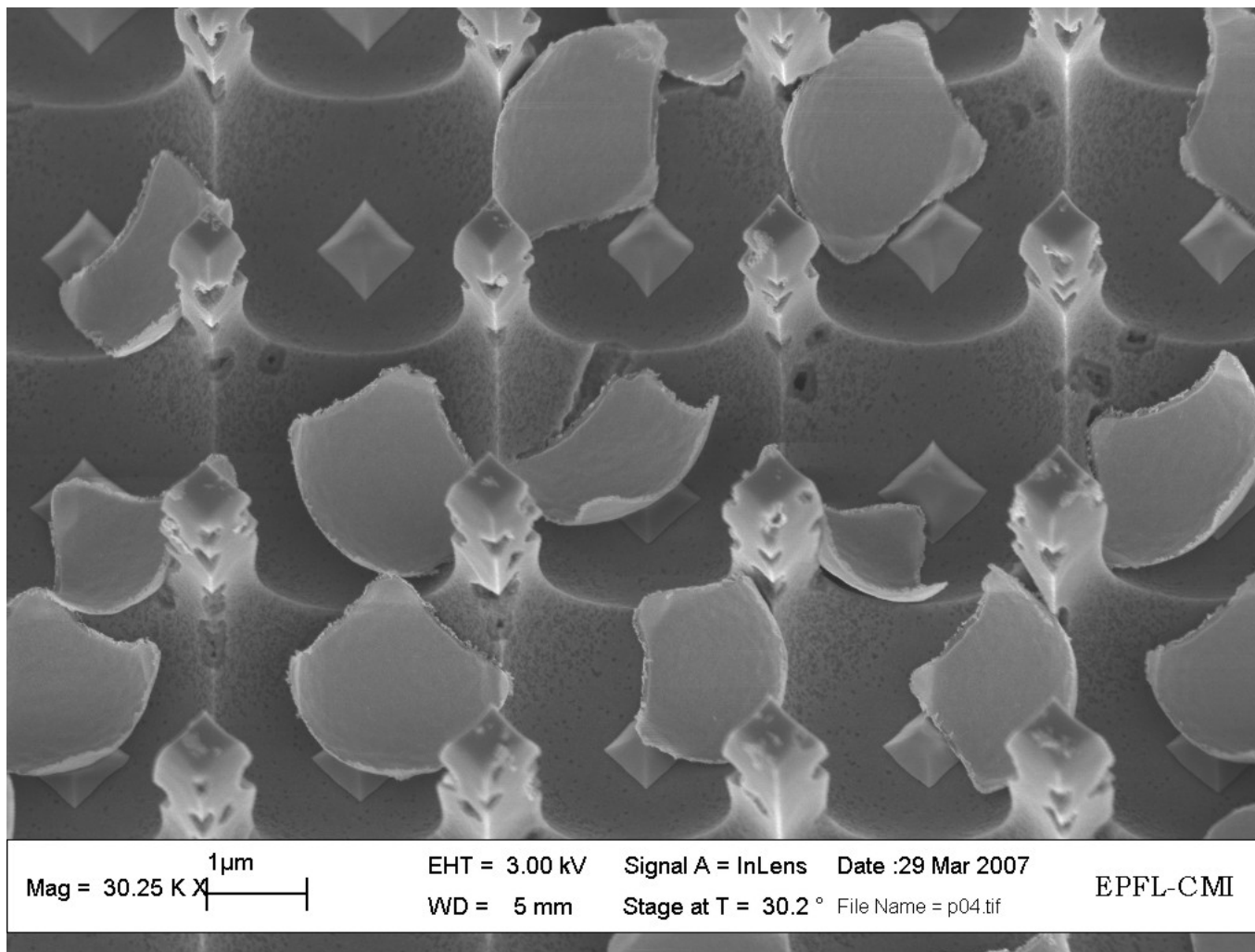
Affiliation: CEA / Leti Grenoble France



micro & nano - graph
Title:

Walking on Egg Shells

Description:
Metal island array
separated by silicon
pillars, lifted off by
chemical wet etching.



Magnification: 30.25 K X

Submitted by: Thomas Kiefer

Instrument: Zeiss LEO 1550

Affiliation: LMIS 1, EPF Lausanne, Switzerland



3rd Prize

micro & nano - graph

Title:

Virtual Vacuum Cleaner Sucking it up!

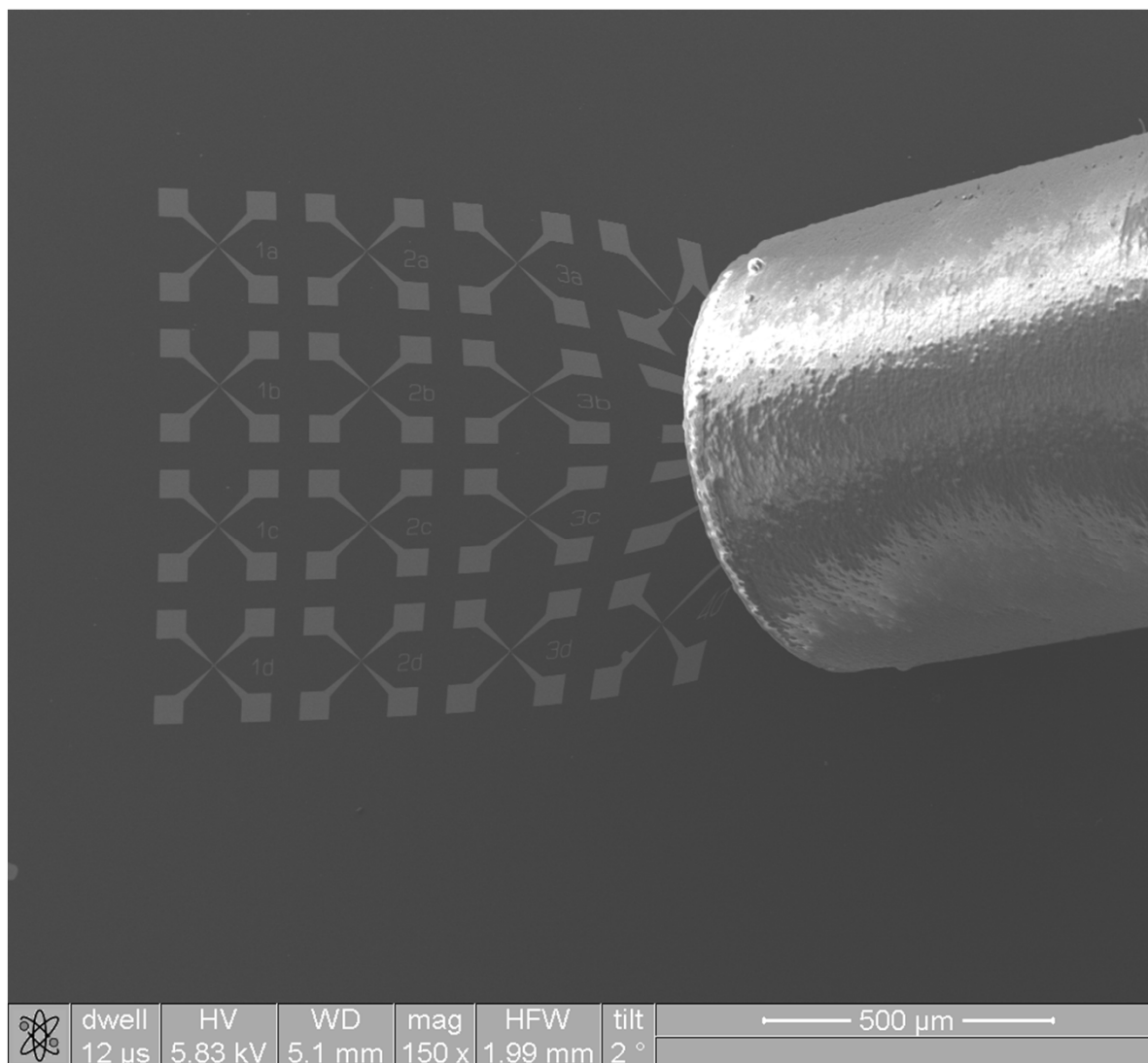
Description:

A 4 x 4 test array with 4 contact pads each is used for electron beam induced deposition (EBID) conductivity measurements.

Experimental conditions induced a thin insulating film on the gas supply needle shown on the right. As a result the needle charges up positively and distorts the image due to the high local fields as shown in the image.

Magnification: **150 X**

Submitted by: **Aurelien Botman**



Instrument: **FEI Nova NanoSEM 200**

Affiliation: **Philips Research Labs - Eindhoven**

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2007 micro & nano - graph Contest



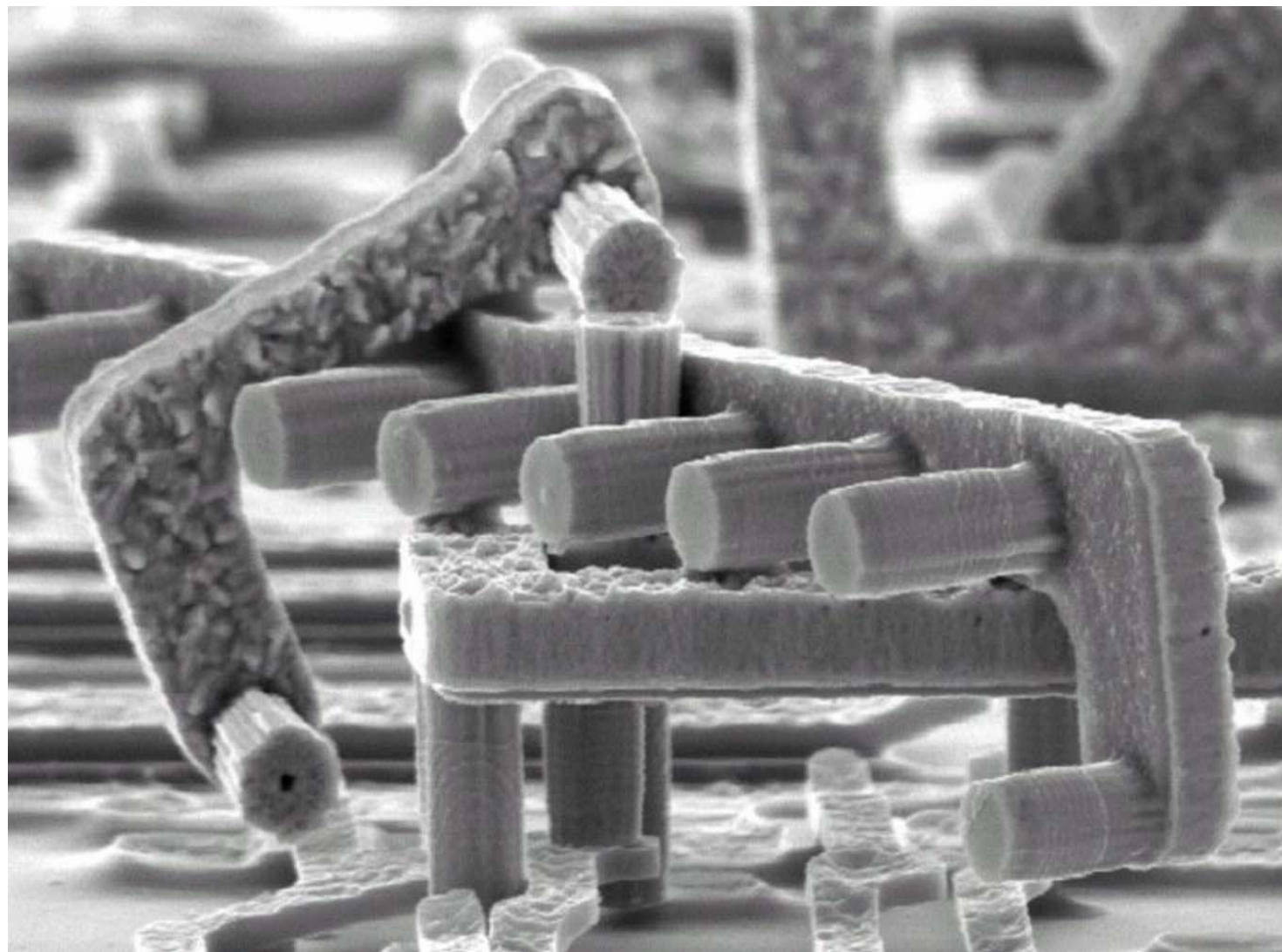
2nd Prize

micro & nano - graph Title:

The Ruins of Damascene

Description:

**The isolation material
between the metal lines
was etched away.**



Magnification: 10.000 X

Submitted by: Frans Holthuysen

Instrument: Philips XL40FEG

Affiliation: Philips Research labs Eindhoven The Netherlands



1st Prize

micro & nano - graph

Title:

Hall of the Mountain King

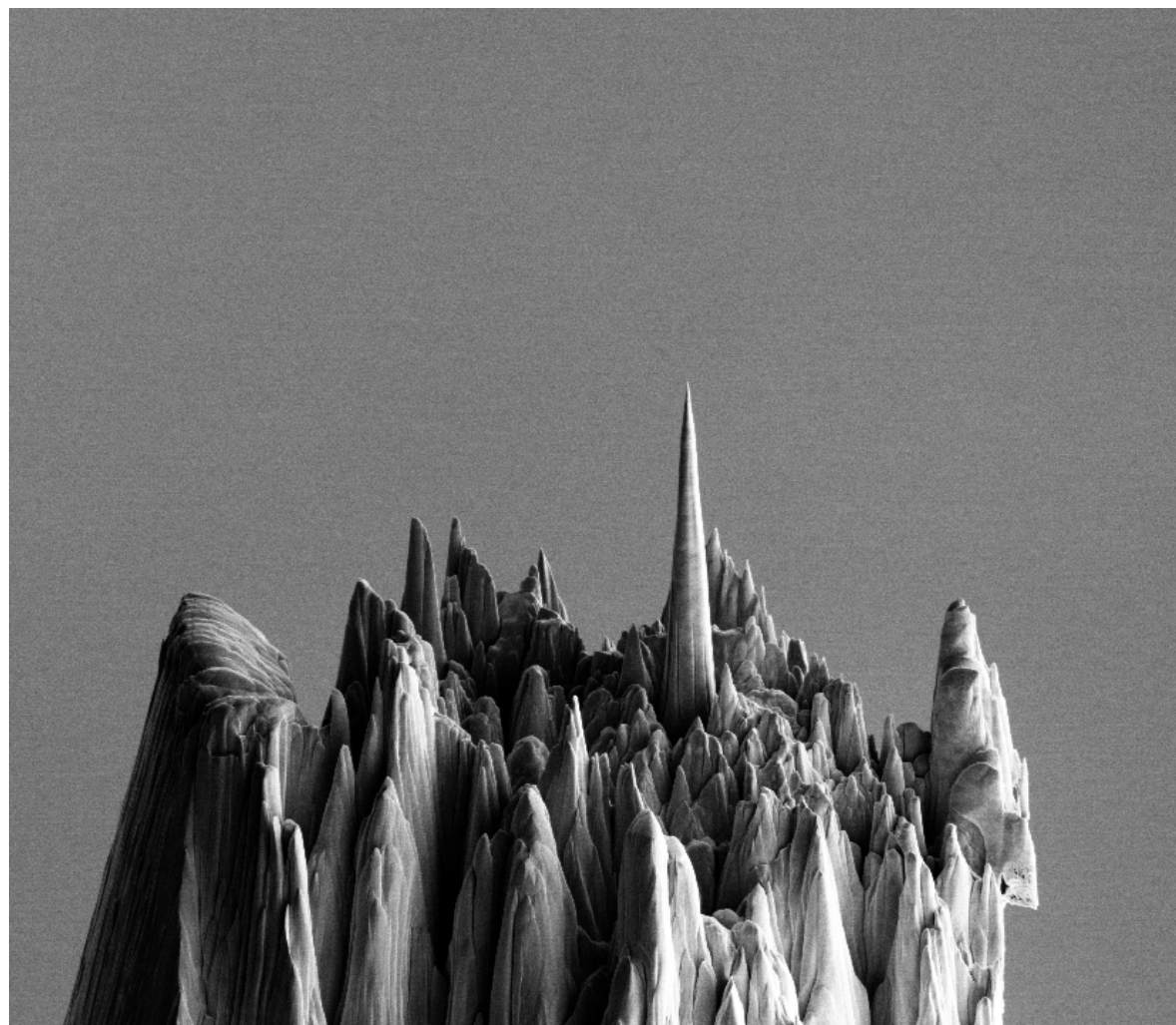
Description:

Explain what we are looking at and how it came to be:

STM tungsten tip
sharpened by FIB
milling

Magnification: 6.5 k X

Submitted by: Gian Carlo Gazzadi



E-Beam 5.00 kV	Det SED	Mag 6.50 kX	Tilt 52.0°	Spot 3	10 μm 500pA, Rin=.1, Rout=1.5um
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Instrument: SEM (FEI Dual Beam 235M)

Affiliation: CNR – INFM S3, Modena, Italy

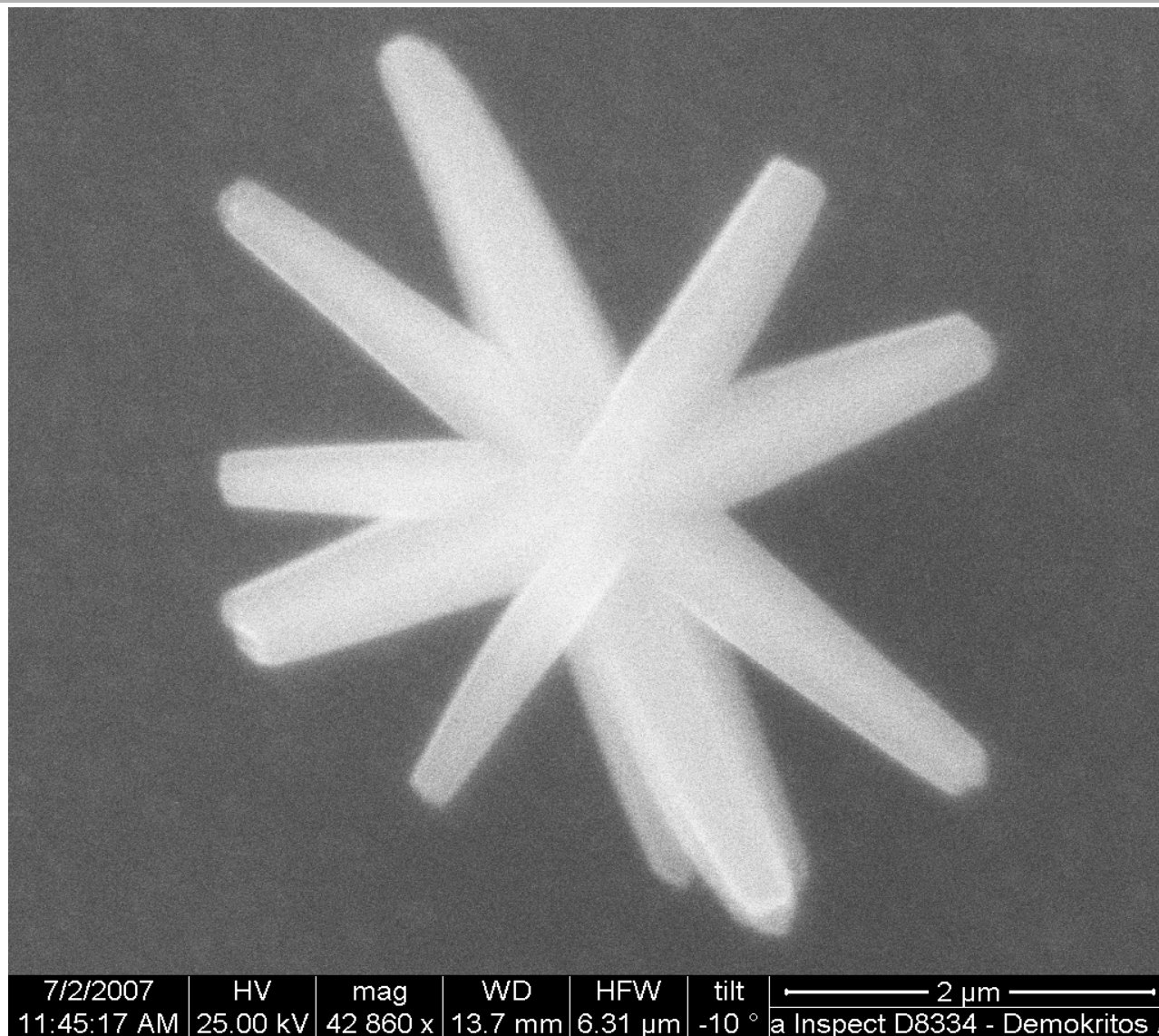


micro & nano - graph
Title:

ZnO Star

Description:

ZnO nanorods grown
on ZnO seeding layer
atop Si via a low-T
hydrothermal process



Magnification: 42.86k X

Submitted by: Eleni Makarona

Instrument: LEO 440

Affiliation: Institute of Microelectronics, NCSR "Demokritos"

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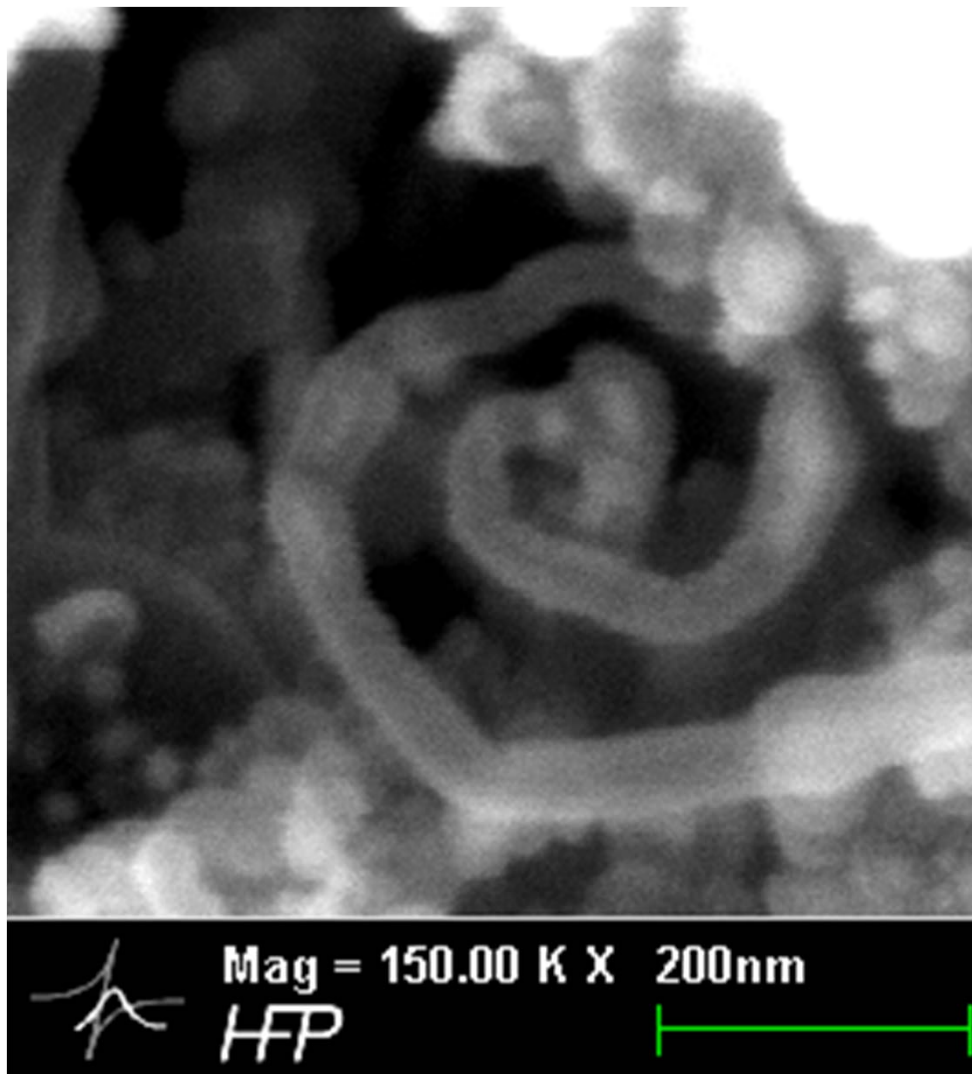
2007 micro & nano - graph Contest



micro & nano - graph
Title:

Nano @

Description:
SEM image of a carbon
nano fiber with the
shape of an @



Magnification: **150k X**

Submitted by: **Wolfgang Schwinger**

Instrument: **LEO SUPRA GEMINI SEM**

Affiliation: **Profactor GmbH and University of Linz, Institute of
Semiconductor and Solid State Physics**



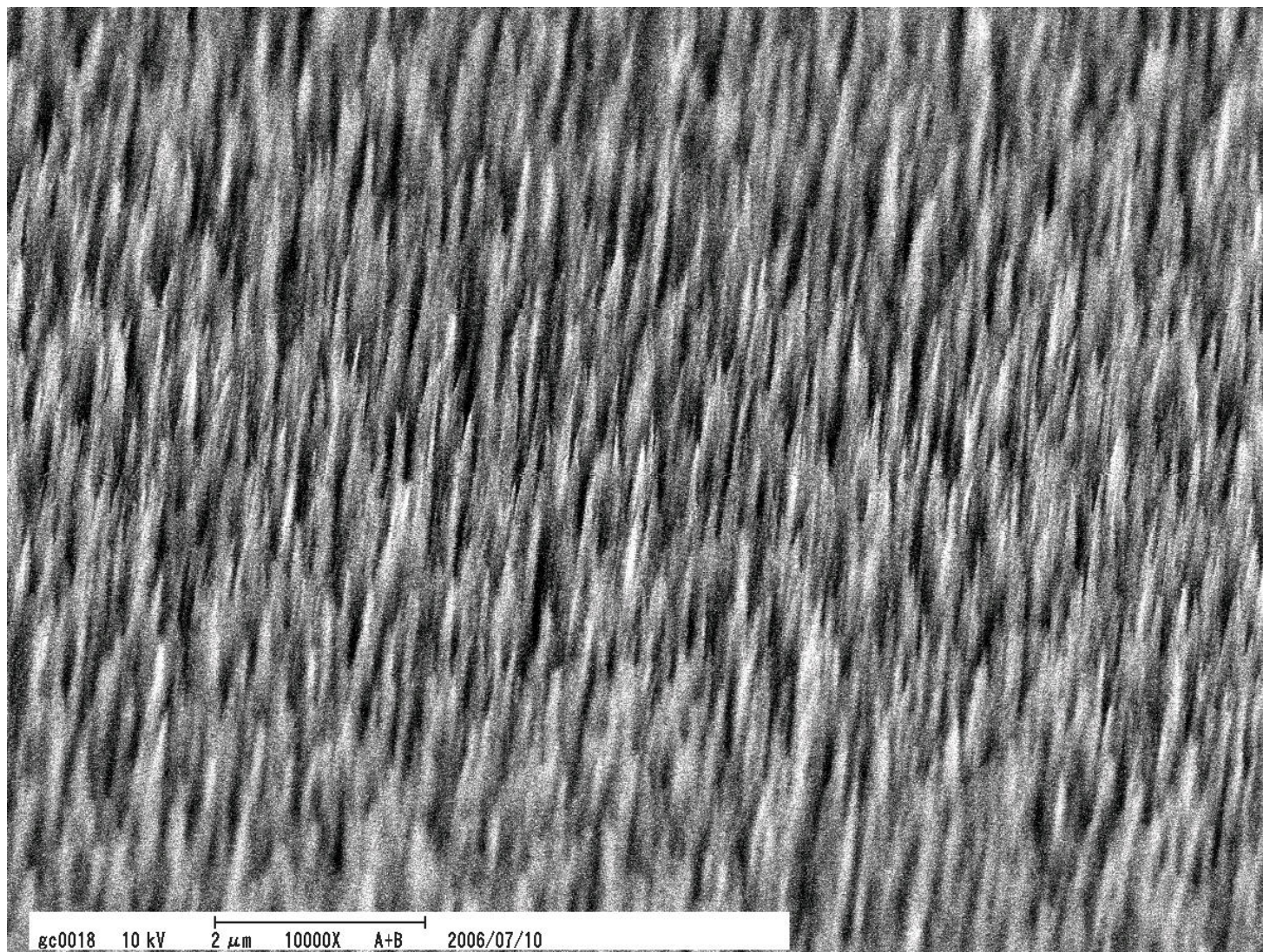
micro & nano - graph
Title:

Nano Turf

Description:

Glassy carbon surface,
after oxygen dry etching.

Observation angle is 75°



Magnification: 10 k X

Submitted by: Jun Taniguchi

Instrument: SEM ERA-8800FE (ELIONIX)

Affiliation: Tokyo University of Science, Japan

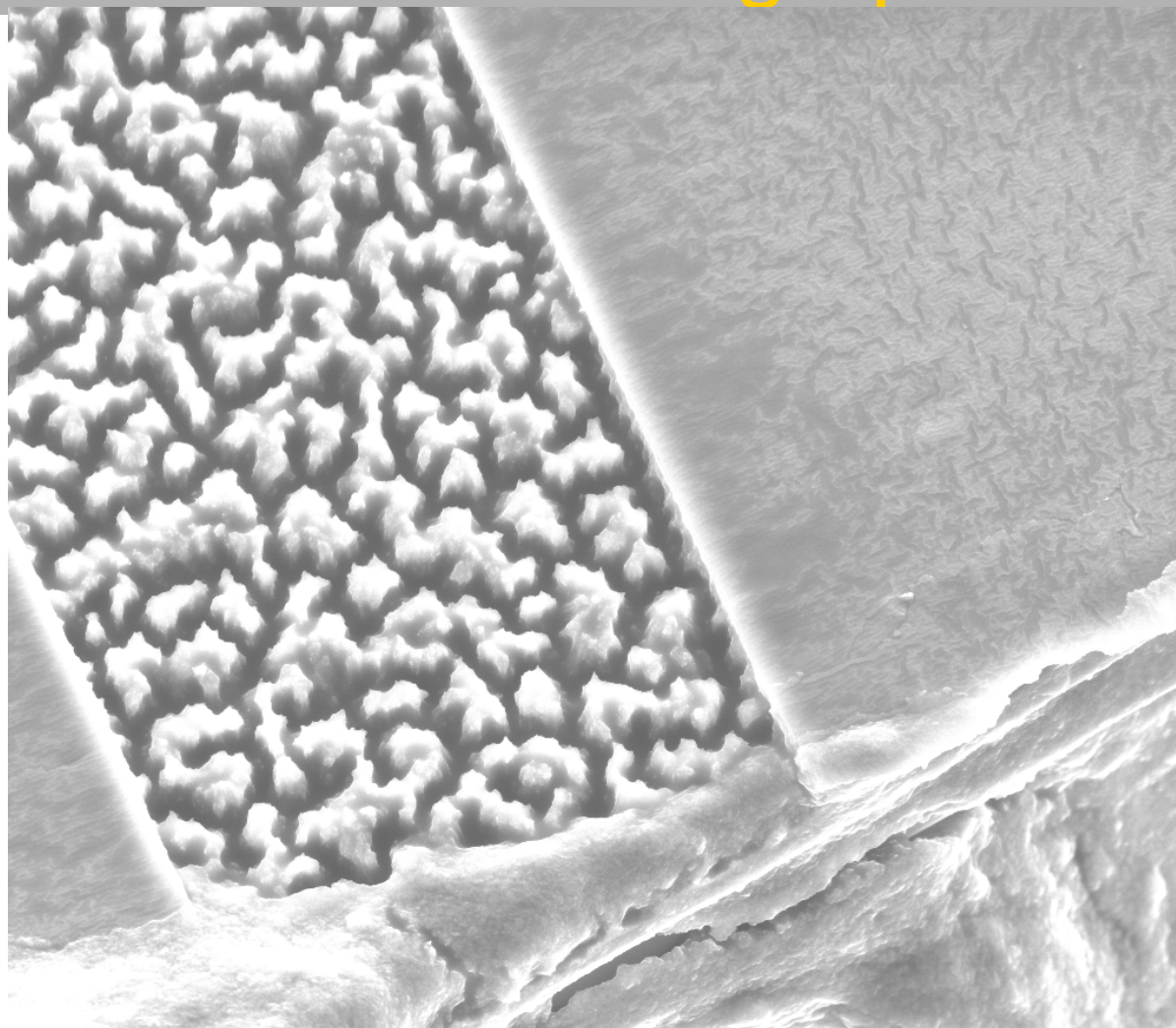


micro & nano - graph
Title:

A road with frozen trees

Description:

Dry-etched polymer region with plasma-induced roughness



6/11/2007	HV	mag	WD	HFV	tilt	100 μm
6:20:47 PM	25.00 kV	954 x	11.2 mm	283 μm	20 °	anta Inspect D8334 - Demokritos Ath

Magnification: 954 X

Submitted by: Angeliki Tserepi

Instrument: SEM

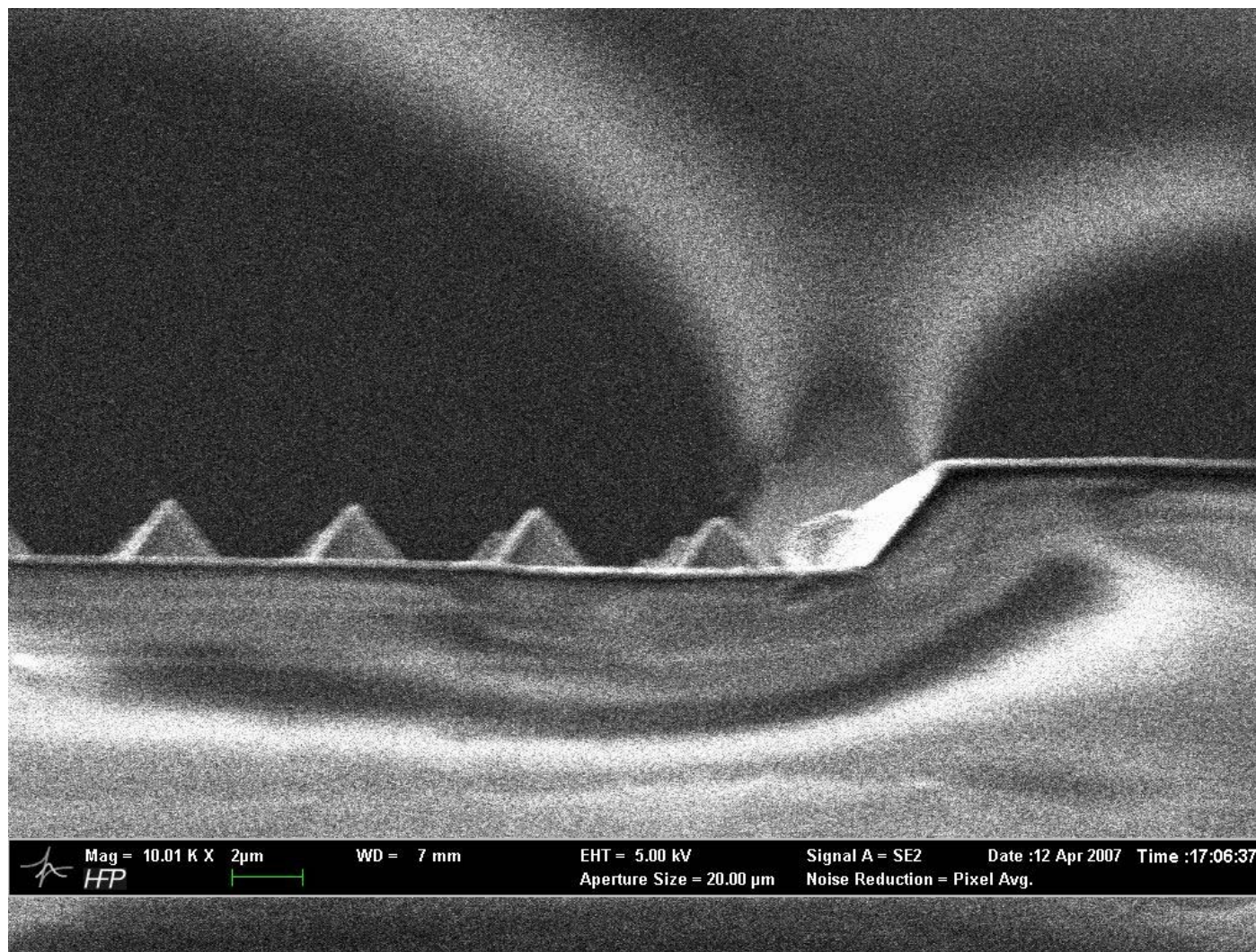
Affiliation: NCSR "Demokritos" Institute of Microelectronics,
Greece



micro & nano - graph
Title:

Sand Storm over the Pyramids of Nano

Description:
SEM image of a PDMS
stamp cast from an
anisotropically etched
silicon master



Magnification: 10.01 k X
Submitted by: Iris Bergmair

Instrument: LEO SUPRA GEMINI SEM
Affiliation: Profactor GmbH and CD Lab of Surface Optics



micro & nano - graph
Title:

HOT NANO WORLD

Description:
Optical micrograph in
dark field mode of a
dried droplet of
CdSe/ZnS core shell
nanoparticles



Magnification: 0.1 k X

Submitted by: Wolfgang Schwinger

Instrument: Nikon Optical Microscope

Affiliation: Profactor GmbH and University of Linz



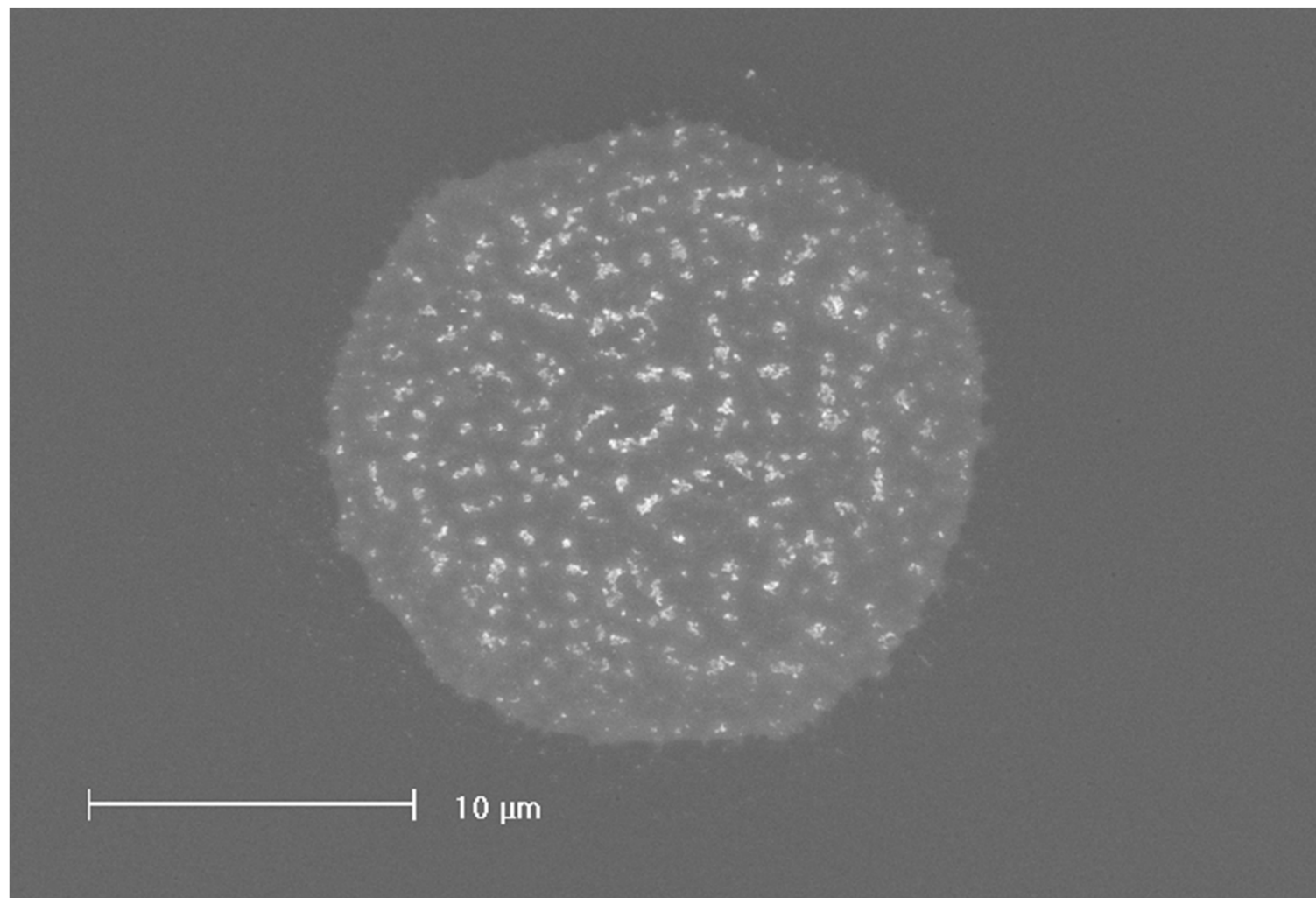
micro & nano - graph

Title:

**Archaeoglobus
lithotrophicus
magnetotacticus
or
micro-pizza with
anchovies**

Description:

Contamination on the
Si substrate after resist
development



Magnification: 10 μ m

Submitted by: Vadim Sidorkin

Instrument: FEI XL30S

Affiliation: Delft University of Technology, Delft, Netherlands



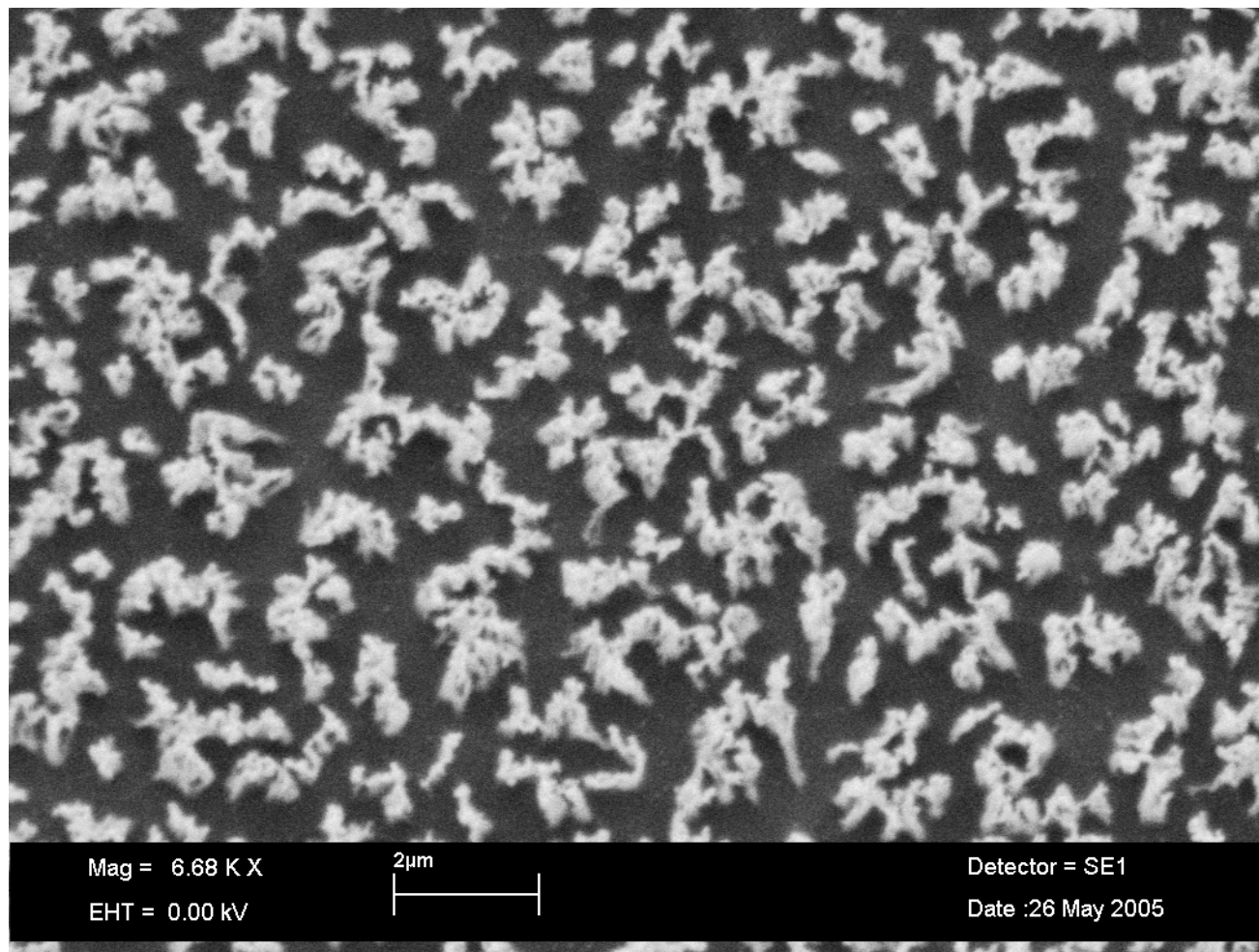
micro & nano - graph

Title:

Rocky ground

Description:

Plasma-induced
roughness on polymer
surface



Magnification: **6.68 k X**

Submitted by: **Angeliki Tserepi**

Instrument: **SEM Leo 440**

Affiliation: **NCSR "Demokritos", Institute of Microelectronics**

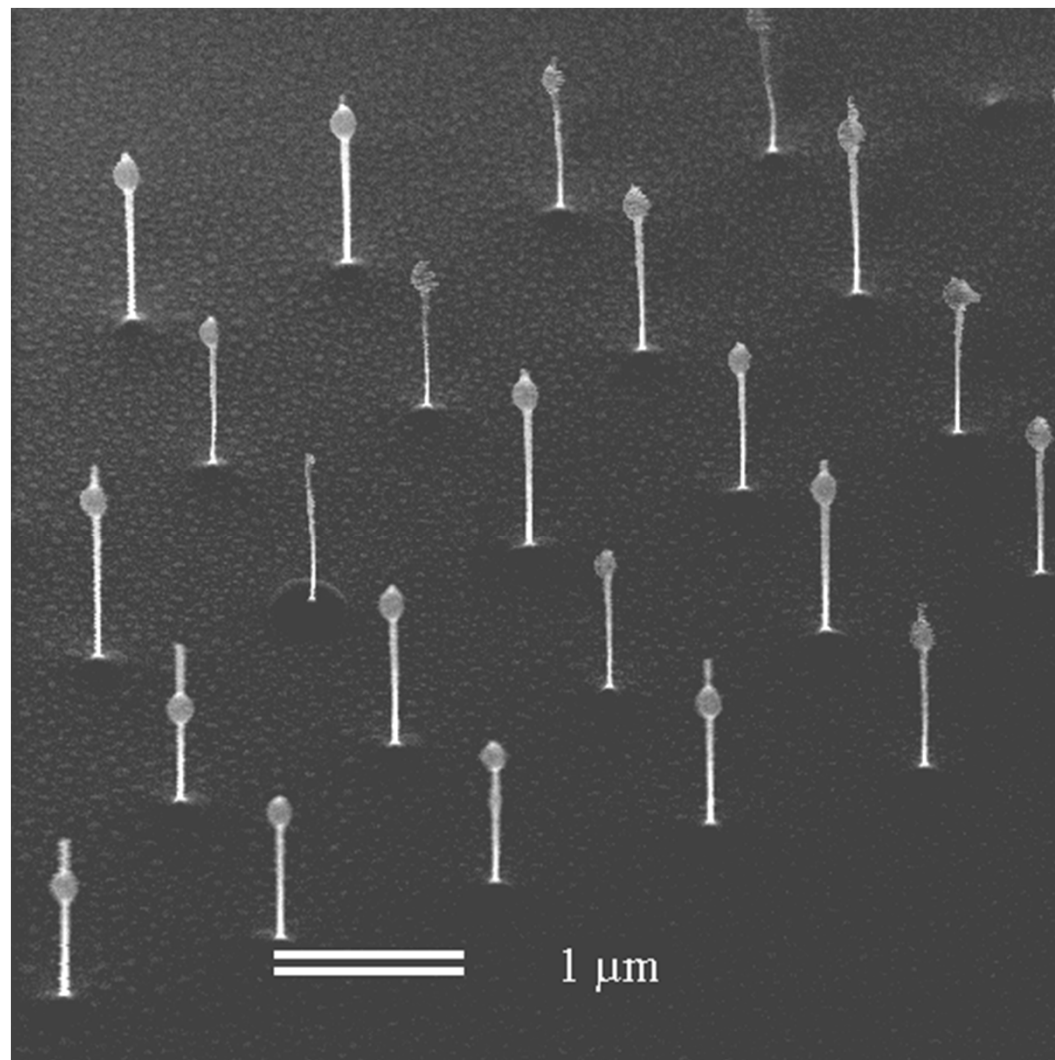


micro & nano - graph
Title:

GaAs nanowires

Description:

GaAs nanowires made by ICP-RIE etching process from Ni lift-off nanopatterns (we can observe the catalysis of Ni on the nanowires)



Magnification: ??? k X

Submitted by: **Laurent JALABERT**

Instrument: **Transmission Electron Microscopy**

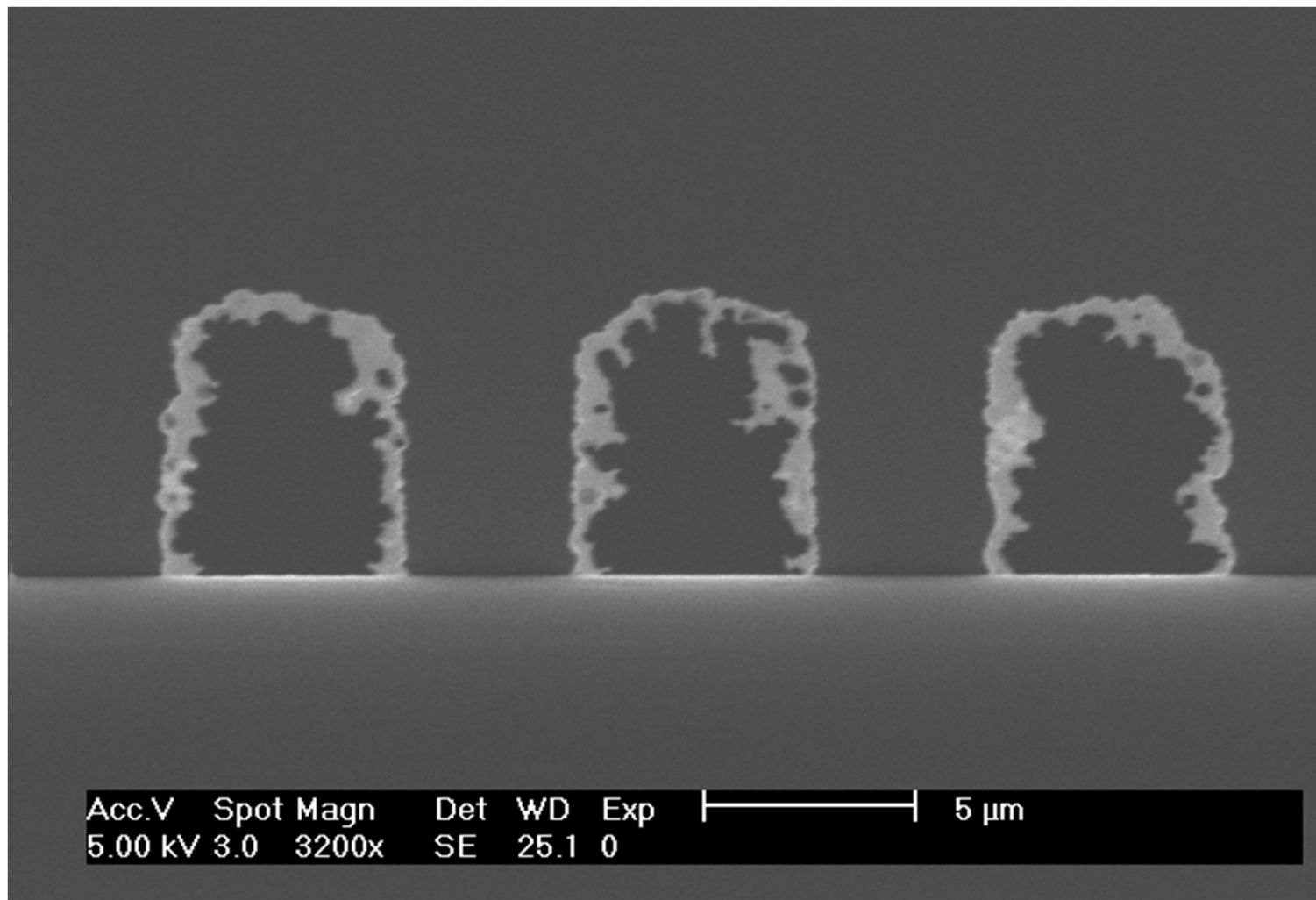
Affiliation: **LAAS-CNRS, Toulouse, France**



micro & nano - graph
Title:

Evil doors

Description:
Openings in tungsten
film after incomplete
dry etching



Magnification: 3.200 k X

Submitted by: Vadim Sidorkin

Instrument: FEI XL30S

Affiliation: Delft University of Technology, Delft, Netherlands

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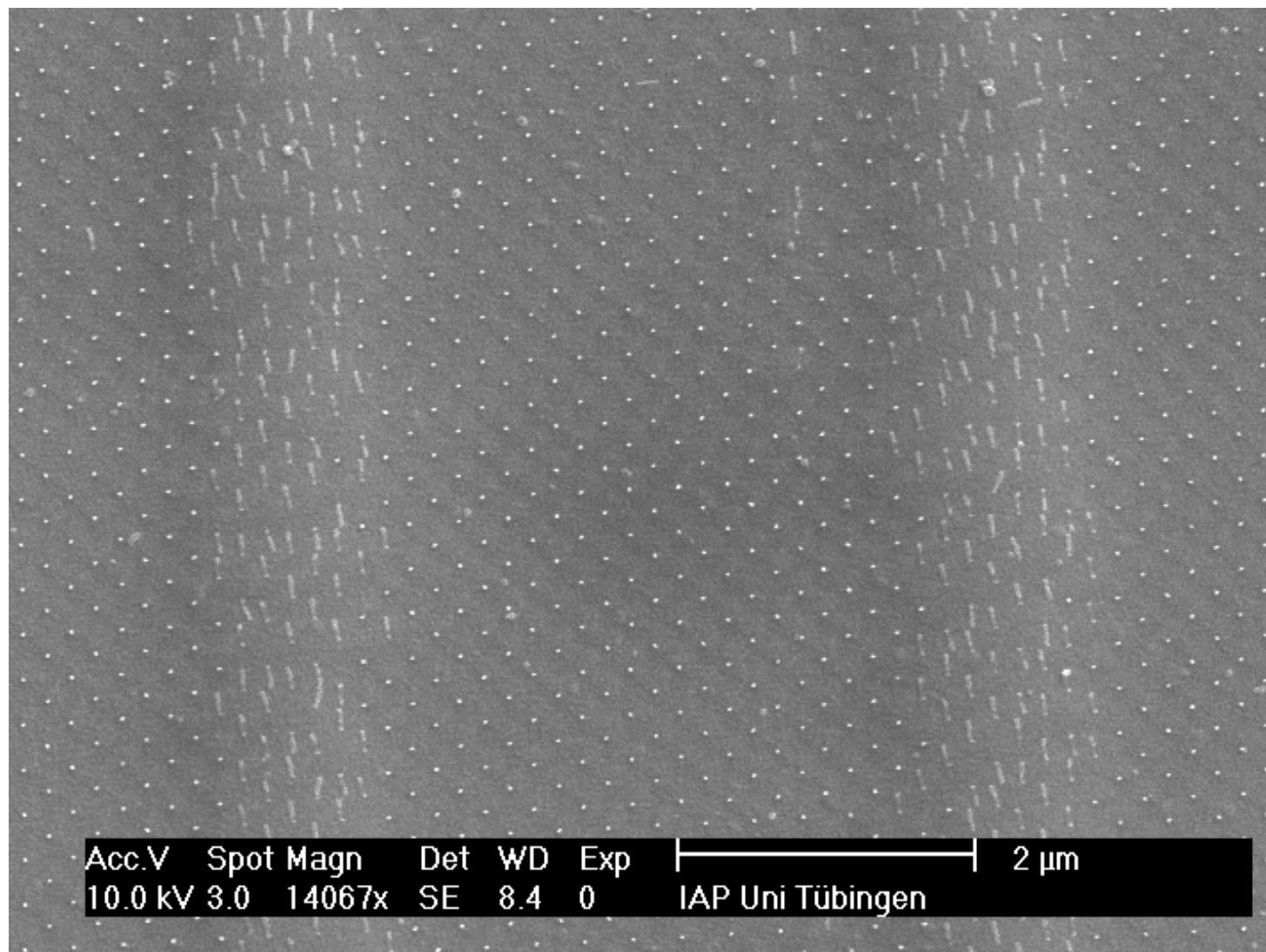


micro & nano - graph
Title:

Storm

Description:

A storm destroys parts
of a nano-pillar forest.



Magnification: **14067x**

Submitted by: **Michael Häffner**

Instrument: **Philips XL 30**

Affiliation: **University of Tuebingen**

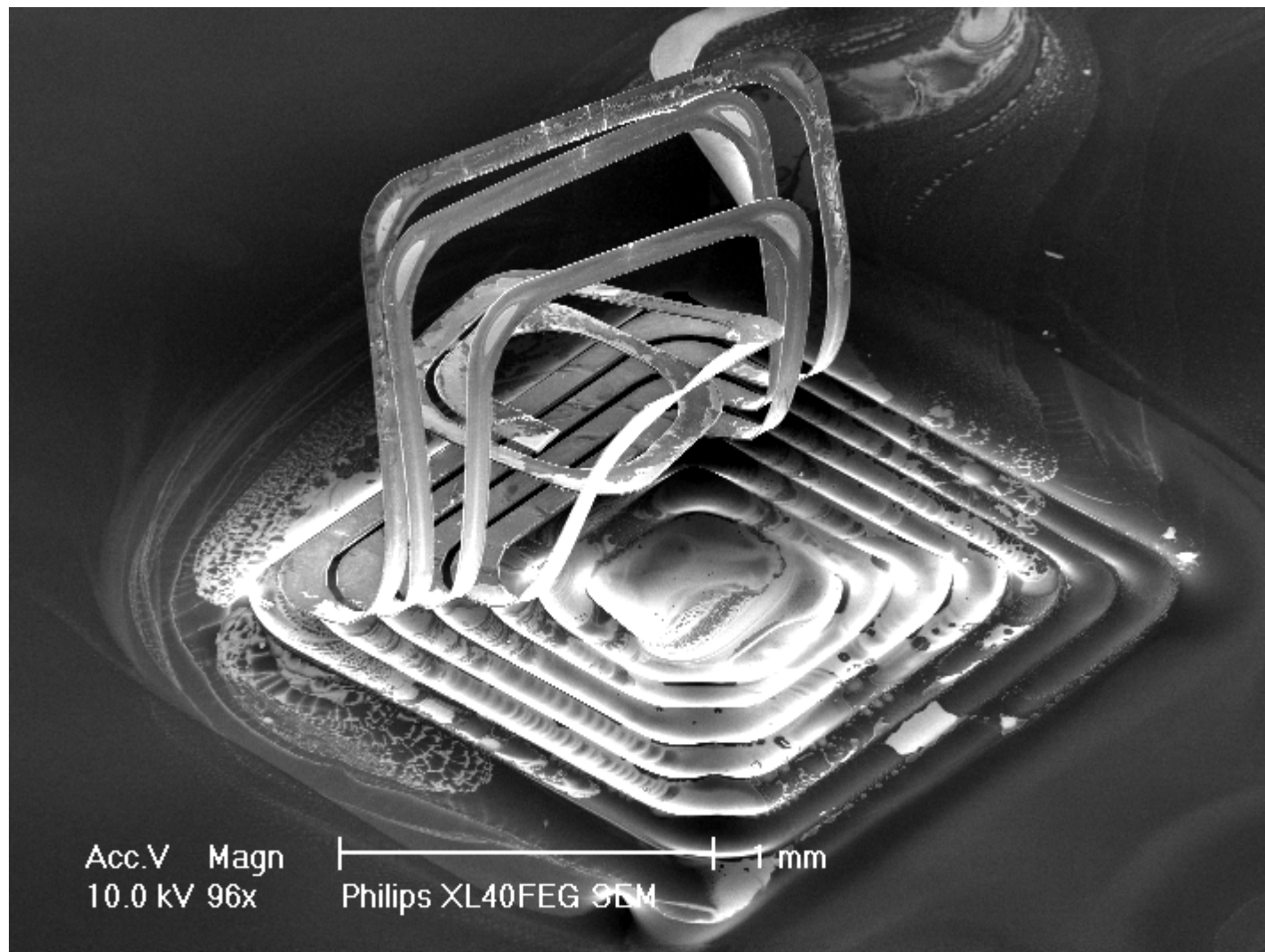


micro & nano - graph
Title:

Mission impossible

Description:

Under etching of the walls of this structure yielded this surprising construction.



Magnification: 96 X

Submitted by: Frans Holthuysen

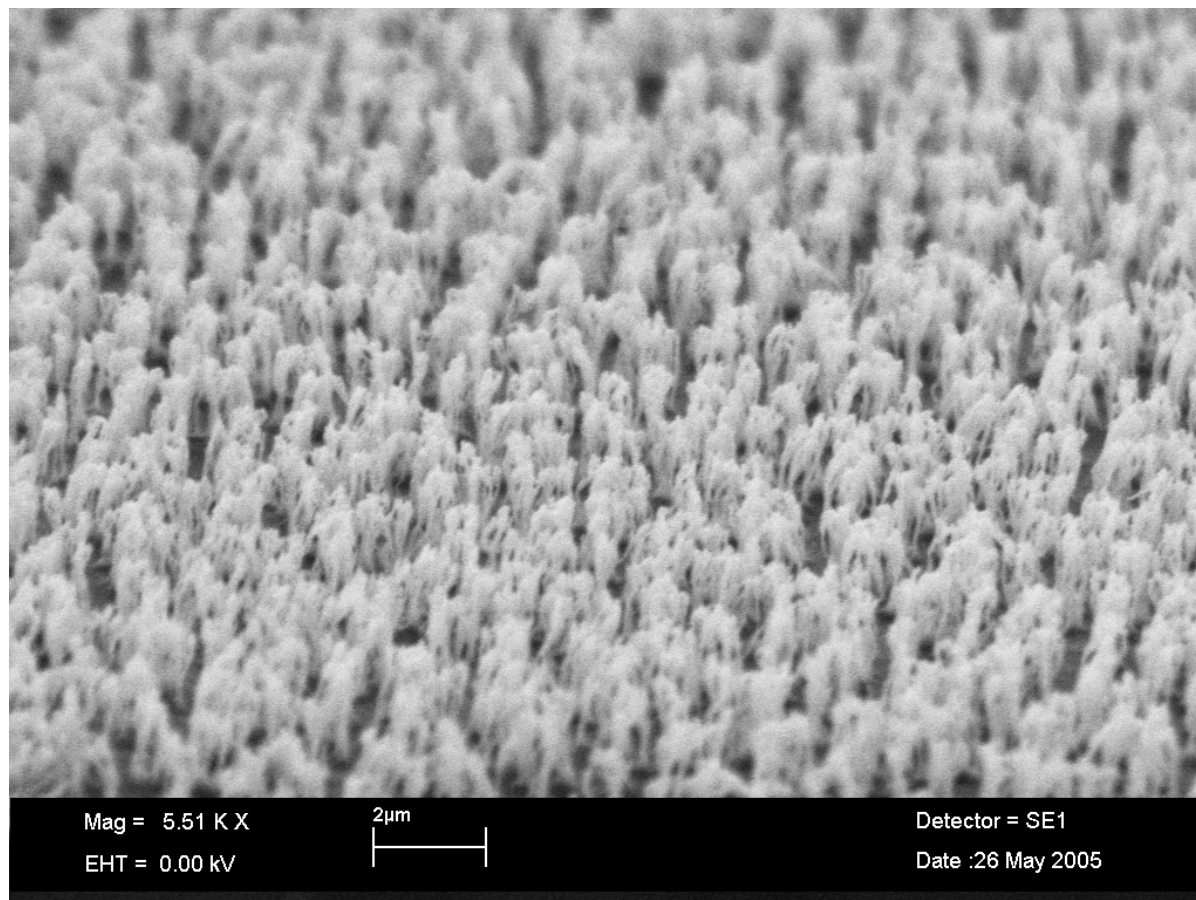
Instrument: Philips XL40FEG

Affiliation: Philips Research labs Eindhoven The Netherlands



micro & nano - graph
Title:
Fine-spun material

Description:
Plasma-induced
roughness on polymer
surface



Magnification: 5.51 X

Submitted by: Angeliki Tserepi

Instrument: SEM Leo 440

Affiliation: NCSR "Demokritos", Institute of Microelectronics

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2007 micro & nano - graph Contest



micro & nano - graph
Title:

Artist

Description:

An unexpected artist
enters the world of
carbon nanotubes.



Magnification: **14067x**

Submitted by: **Michael Häffner**

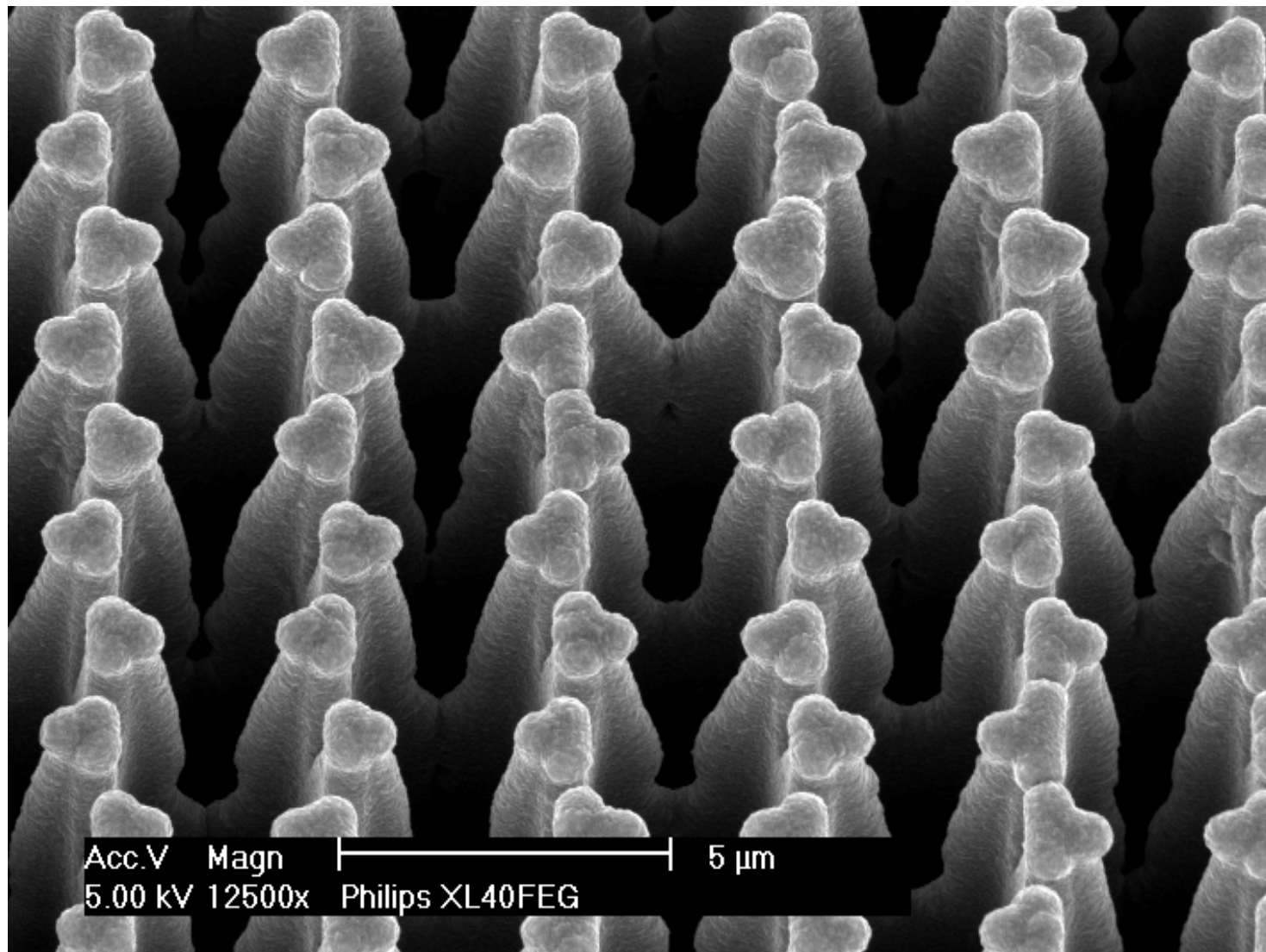
Instrument: **Philips XL 30**

Affiliation: **University of Tuebingen**



micro & nano - graph
Title:
My Teddy Bears

Description:
Wet etched Macro
porous silicon



Magnification: 12.500 X
Submitted by: Frans Holthuysen

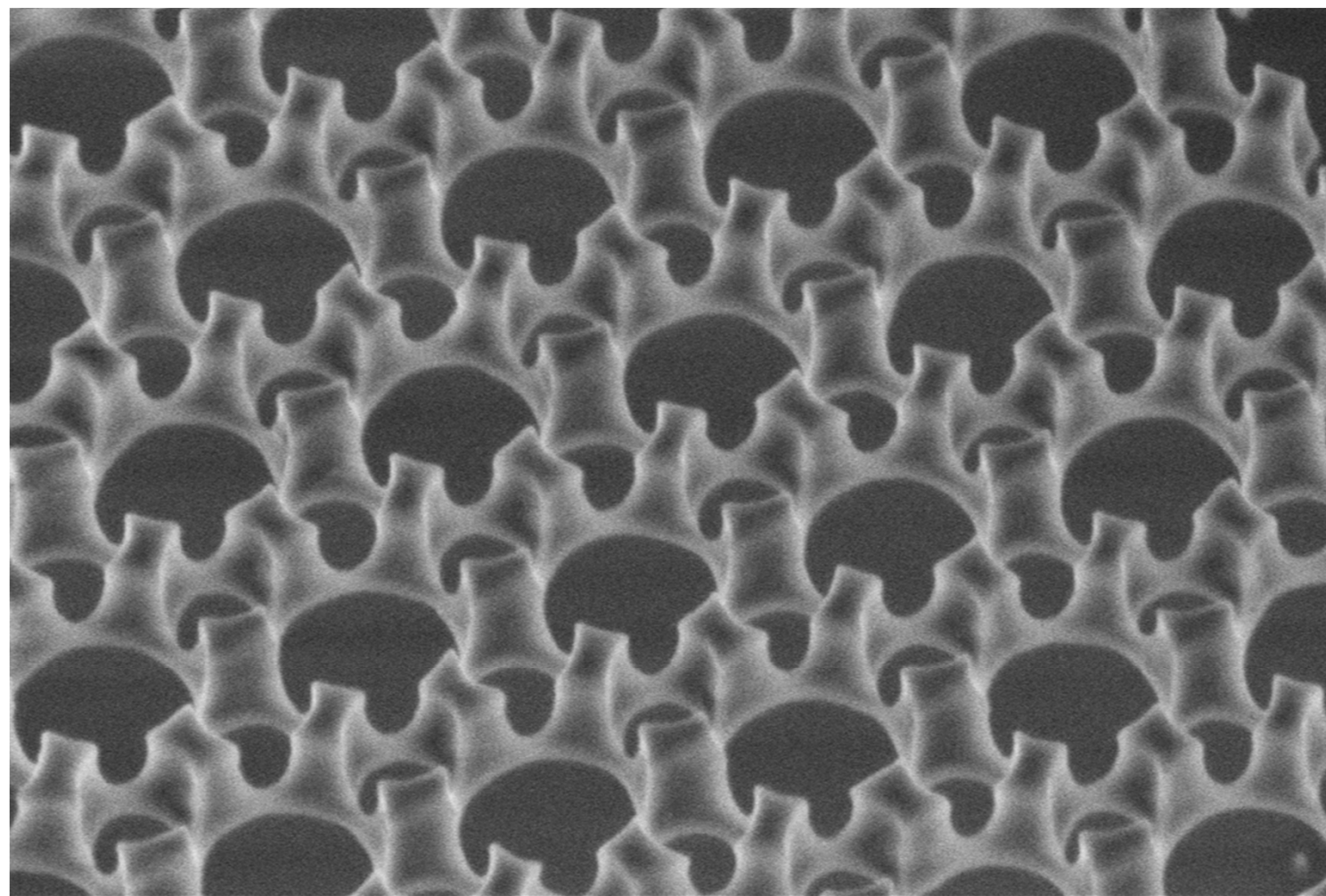
Instrument: Philips XL40FEG
Affiliation: Philips Research labs Eindhoven The Netherlands




micro & nano - graph
Title:

The Egg-Box

Description:
Free standing silicon nitride membrane as a result of a failed etching process; supposed to be a photonic structure with cylindrical holes (small and big diameter)



BESSY - AZM	100 nm 	EHT = 2.00 kV WD = 5 mm	Signal A = InLens	Date :10 Jul 2007 Time :9:51:55
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Magnification: 150 k X

Submitted by: Josef Kouba

Instrument: Zeiss LEO 1560

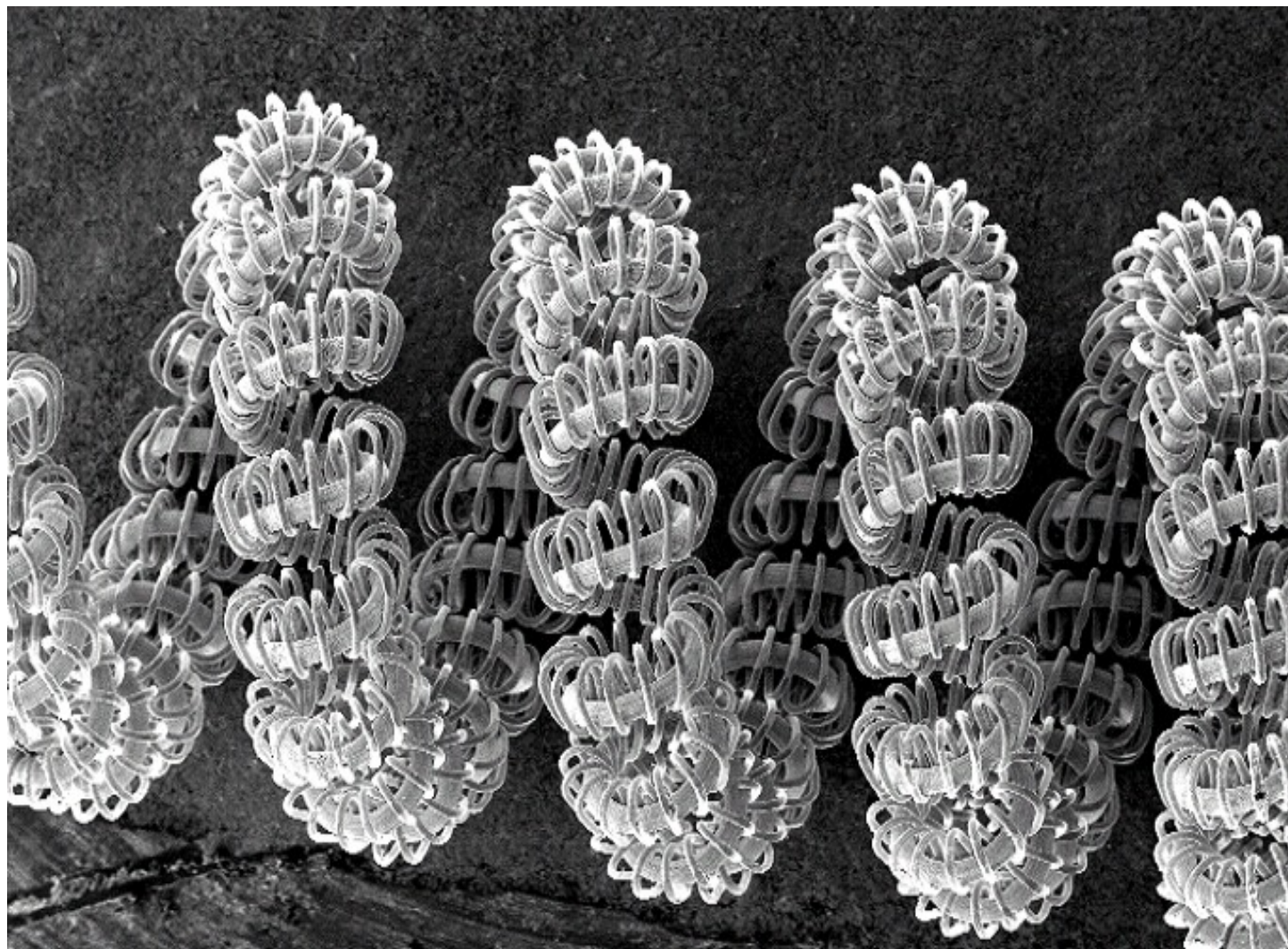
Affiliation: BESSY GmbH, AZM



micro & nano - graph
Title:

Shoelance

Description:
Filament of a 150
watt halogen lamp.



Magnification: 500 X

Submitted by: Frans Holthuysen

Instrument: Philips XL40FEG

Affiliation: Philips Research labs Eindhoven The Netherlands

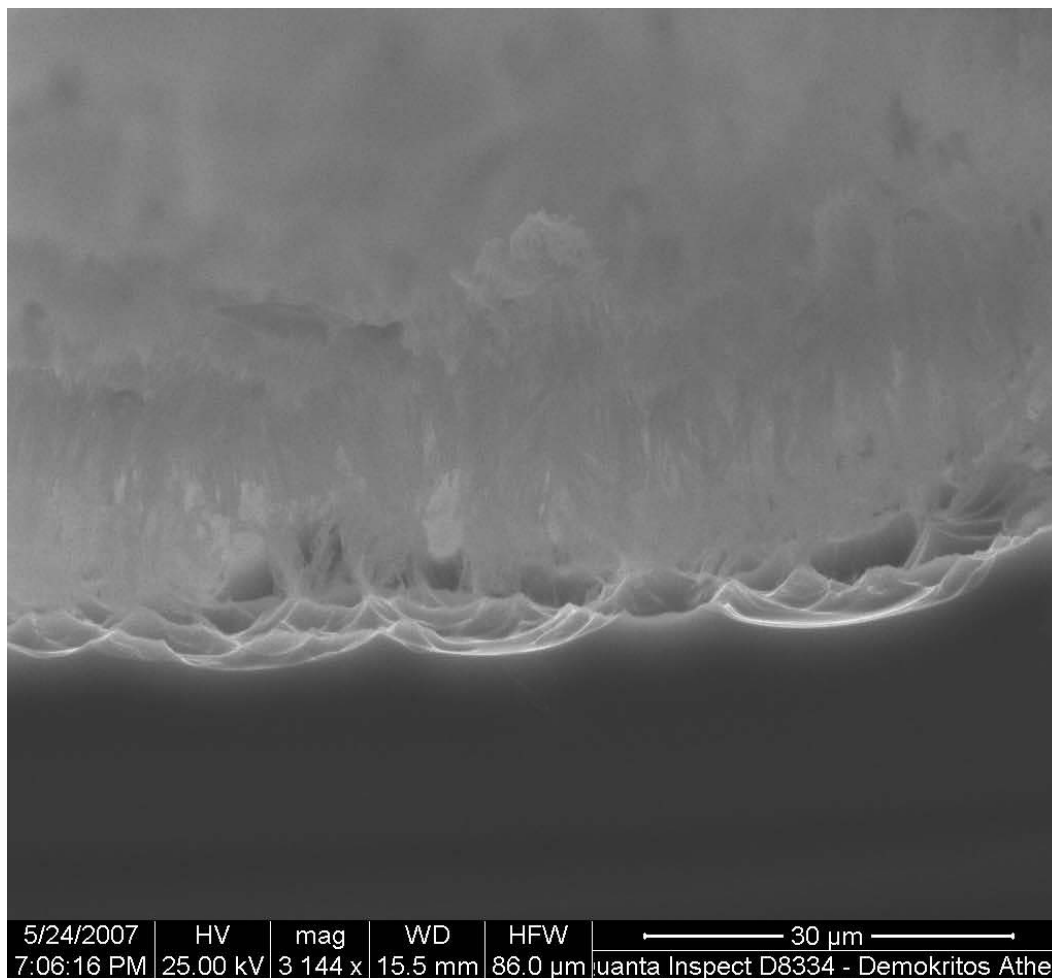


micro & nano - graph
Title:

Needle-forest

Description:

Plasma-transferred
roughness on Si, from
the polymer above



Magnification: 3144 X

Submitted by: Angeliki Tserepi

Instrument: SEM

Affiliation: NCSR "Demokritos", Institute of Microelectronics

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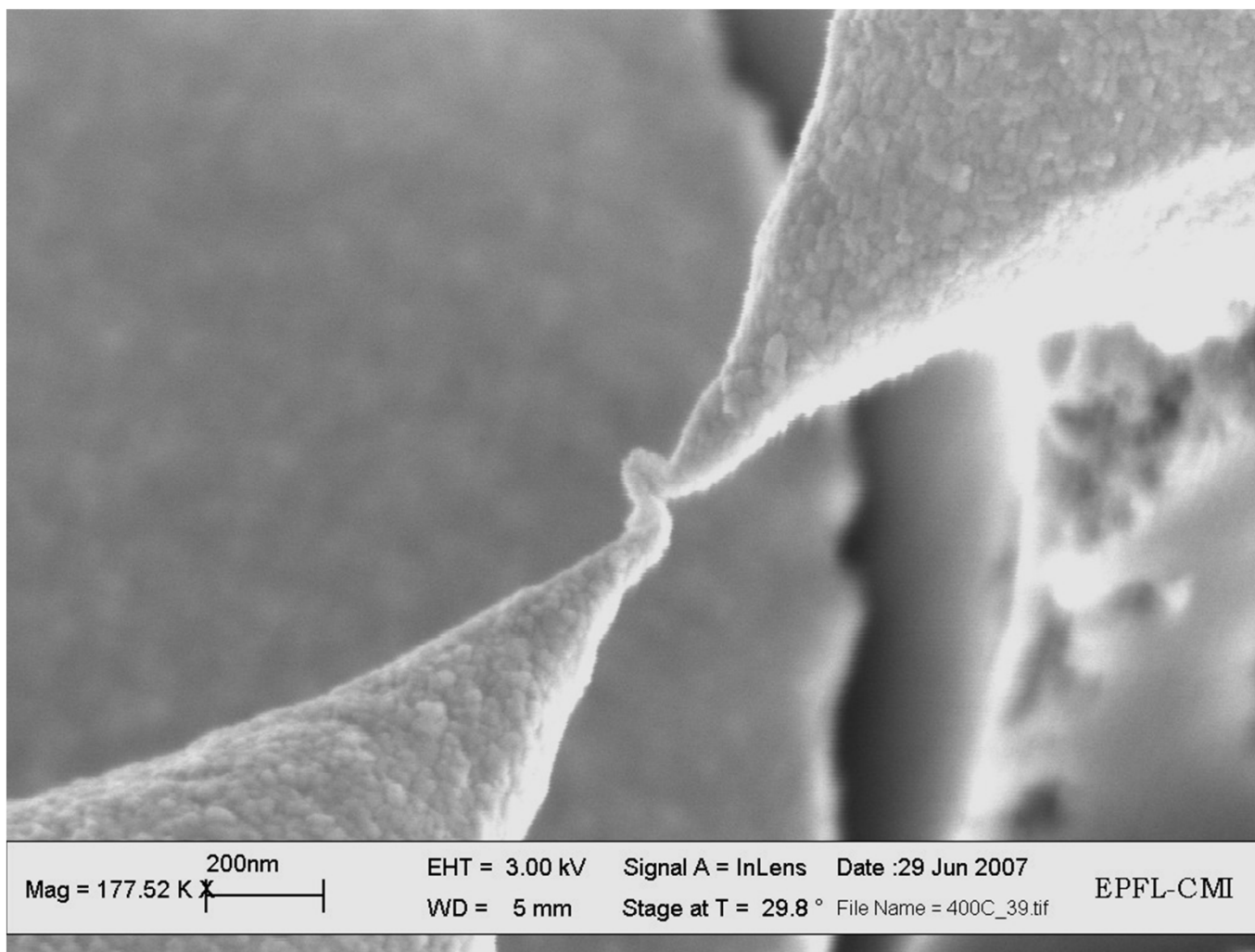
2007 micro & nano - graph Contest



micro & nano - graph
Title:

NanoKiss

Description:
Freestanding metal
bridge after
evaporation and wet
chemical release.



Magnification: **177.52 K X**

Submitted by: **Thomas Kiefer**

Instrument: **Zeiss LEO 1550**

Affiliation: **LMIS 1, EPF Lausanne, Switzerland**



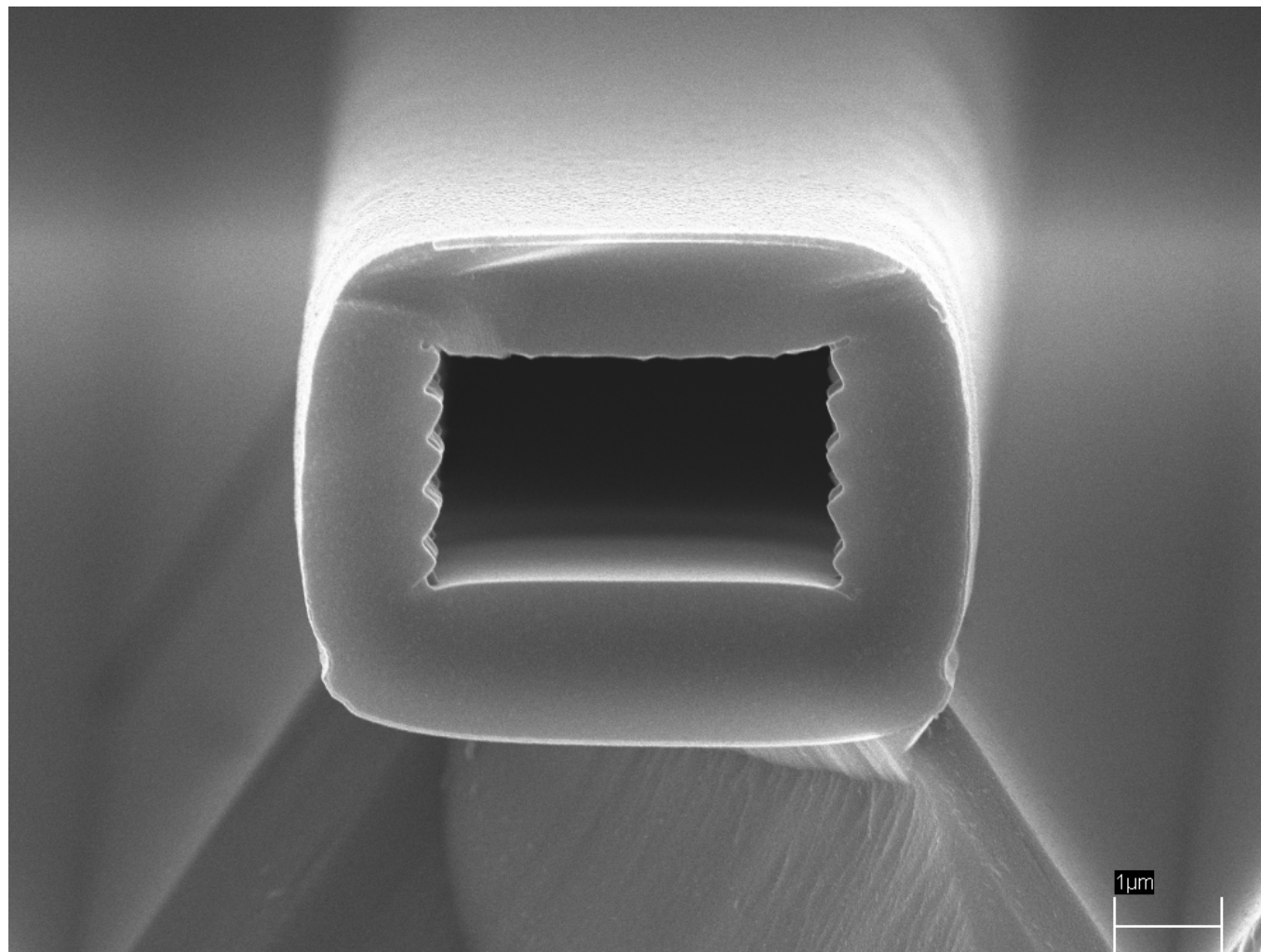
micro & nano - graph

Title:

Cleaved hollow Ionpipette

Description:

Capillary made of
silicon oxide by
DRIE, Oxidation and
selective Si/SiO₂
KOH etching



Magnification: **17 k X**

Submitted by: **Friedjof Heuck**

Instrument: **Ebeam Raith 144**

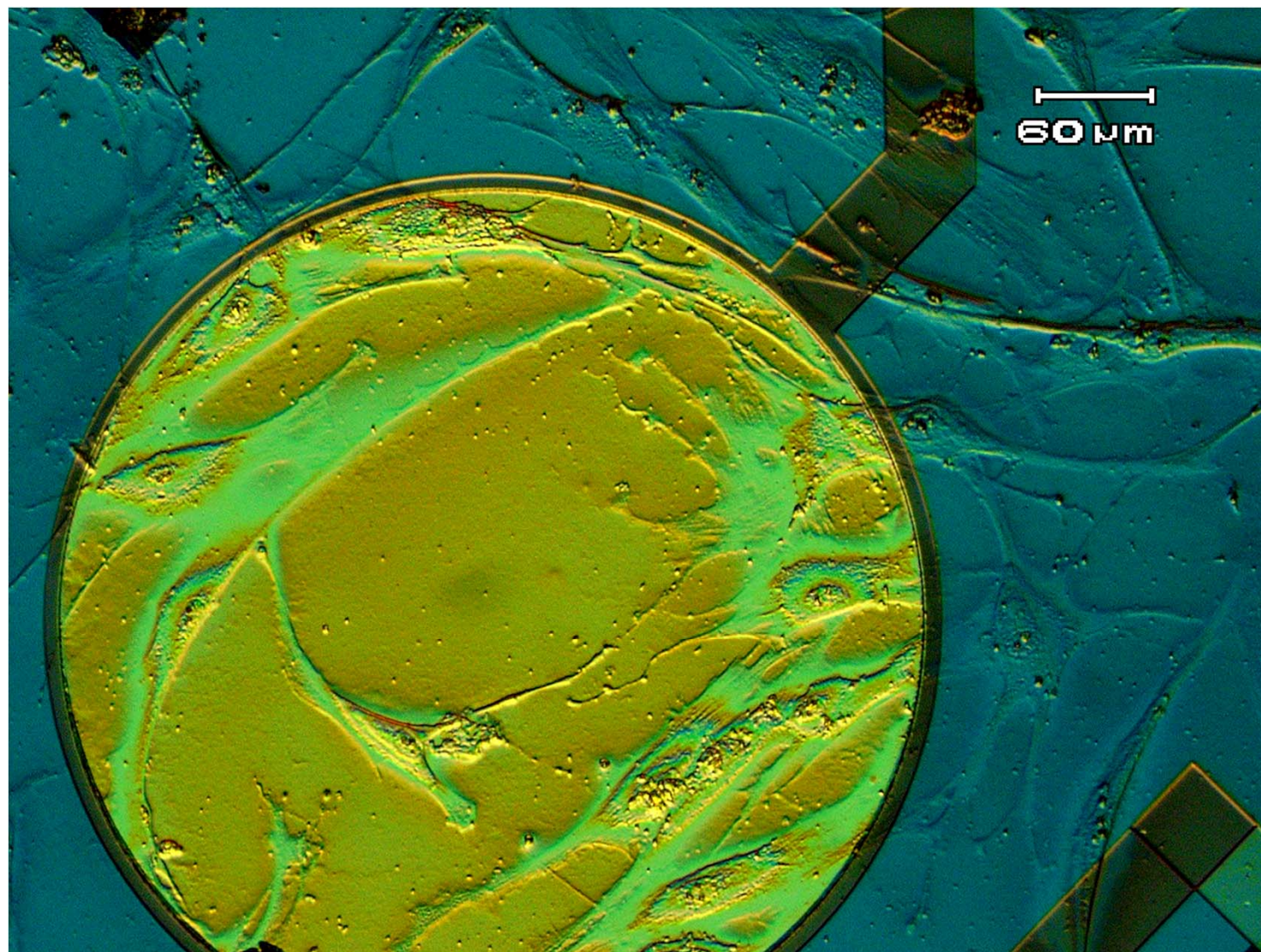
Affiliation: **Neuchatel Univ. - Samlab**



micro & nano - graph
Title:

Moon

Description:
Human mesenchymal
stem cells cultivated on
gold electrode with
silicon substrate



Magnification: Scale on the picture

Submitted by: Sungbo Cho

Instrument: OLYMPUS BX51

Affiliation: Fraunhofer IBMT, Germany



micro & nano - graph
Title:

Sloping coil

Description:

Sloped SEM micrograph of
the helical coil structure of
a micro-fluxgate



Magnification: 200 X

Submitted by: Maren Ramona Kirchhoff

Instrument: SEM Zeiss DSM 960 A

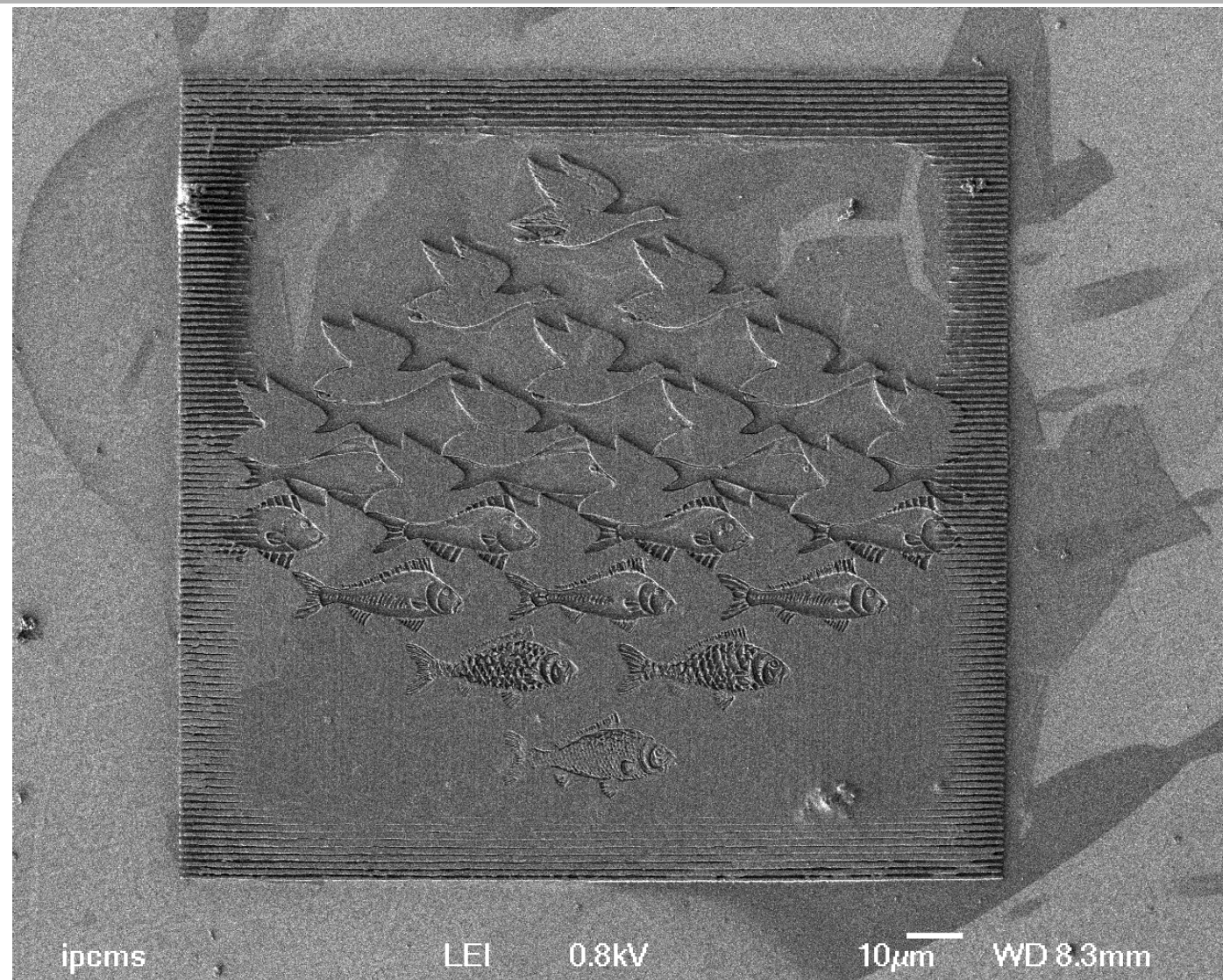
Affiliation: Institute for Microtechnology, TU Braunschweig



micro & nano - graph
Title:

Flying and swimming

Description:
From M.C. Escher's work (Sky and water 1, woodcut 1938), oxide on glass, obtained by direct e-beam lithography using RBnano precursor (resistless, no solvent used).



Magnification: 0.55 k X

Submitted by: Alain Carvalho

Instrument: Jeol JSM 6700F

Affiliation: CNRS - IPCMS



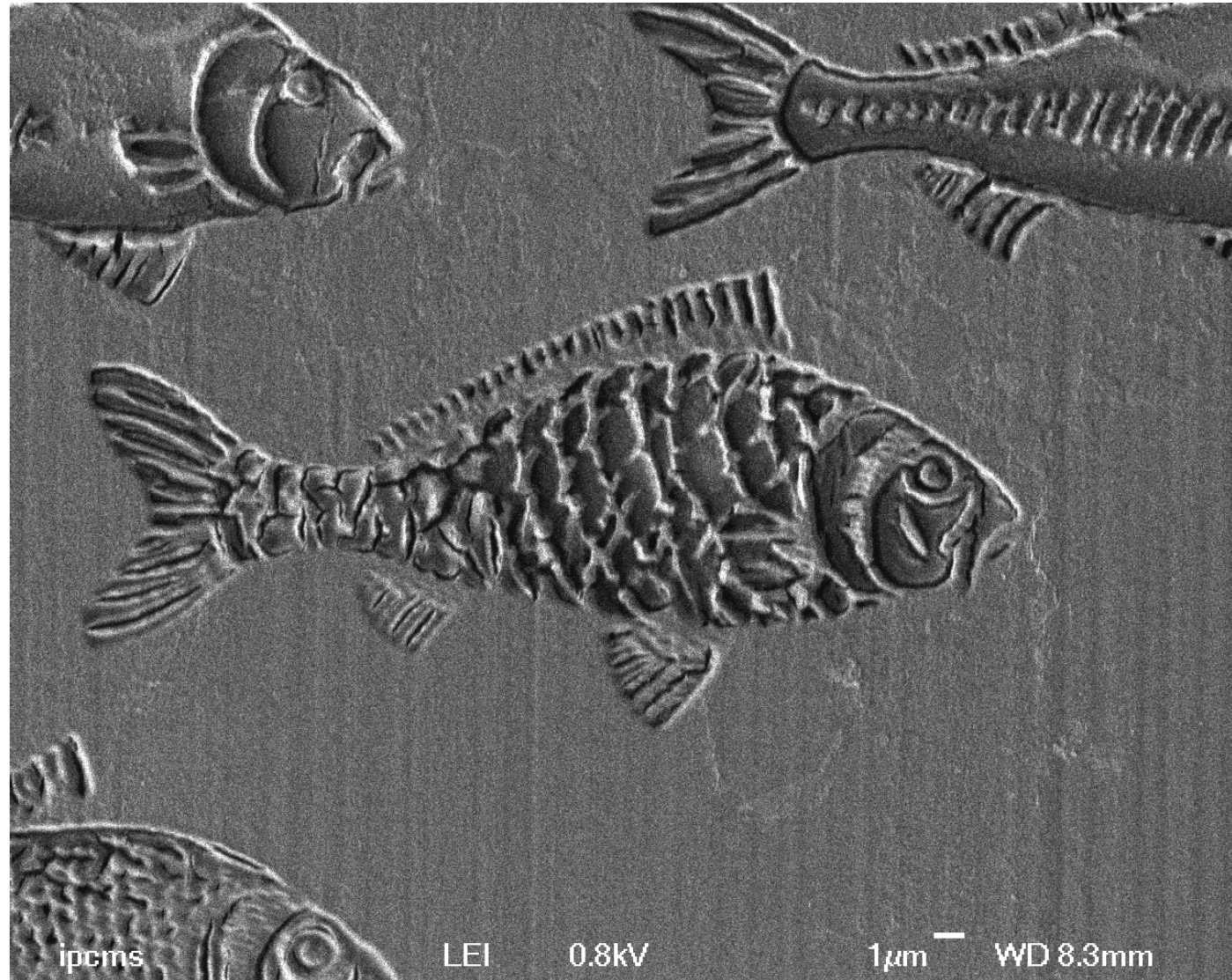
micro & nano - graph
Title:

Flying and swimming

Description:
From M.C. Escher's work (Sky and water 1, woodcut 1938), oxide on glass, obtained by direct e-beam lithography using RBnano precursor (resistless, no solvent used).

Magnification: 3 k X

Submitted by: Alain Carvalho



Instrument: Jeol JSM 6700F

Affiliation: CNRS - IPCMS



micro & nano - graph
Title:

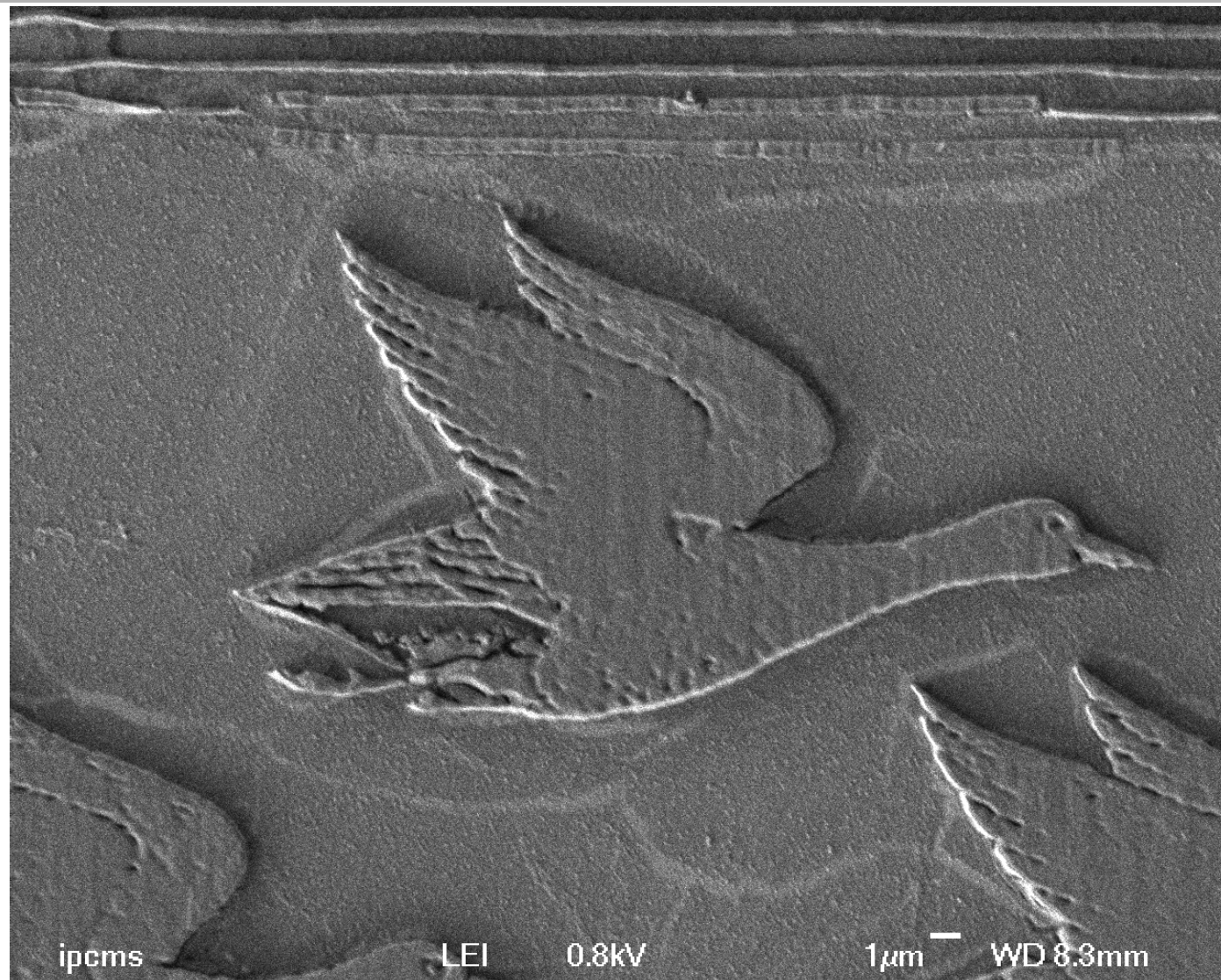
Flying and swimming

Description:

From M.C. Escher's work (Sky and water 1, woodcut 1938), oxide on glass, obtained by direct e-beam lithography using RBnano precursor (resistless, no solvent used).

Magnification: 3 k X

Submitted by: Alain Carvalho



Instrument: Jeol JSM 6700F

Affiliation: CNRS - IPCMS

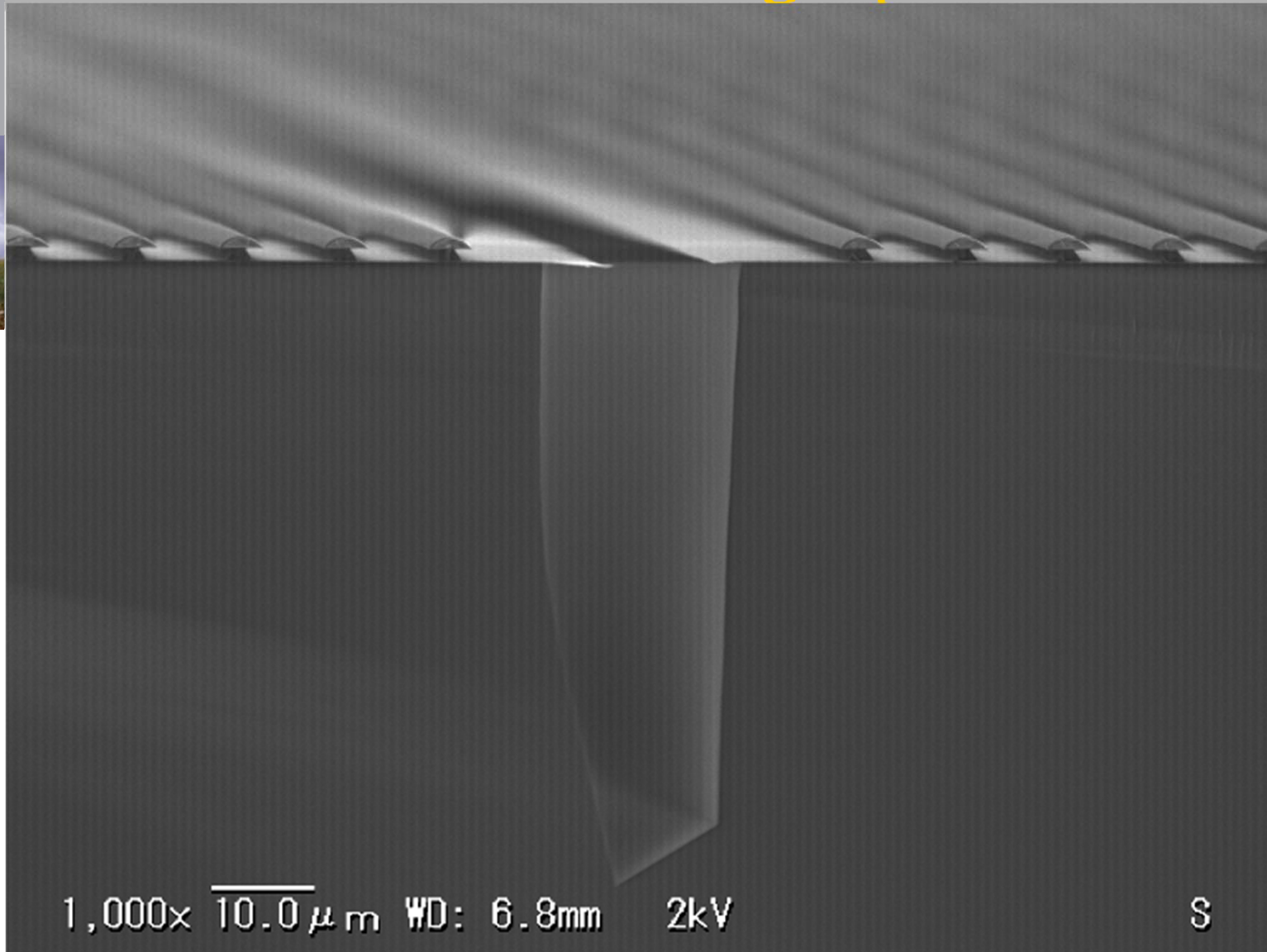


micro & nano - graph
Title:

Strong overhang

Description:

The bi-layer lift-off pattern was created before etching substrate. The overhang structure withstood the aggressive quartz etchant for one hour.



Magnification: 1k X

Submitted by: **Jinxing Liang**

Instrument: **KEYENCE VE-7800**

Affiliation: **Waseda University, Japan**



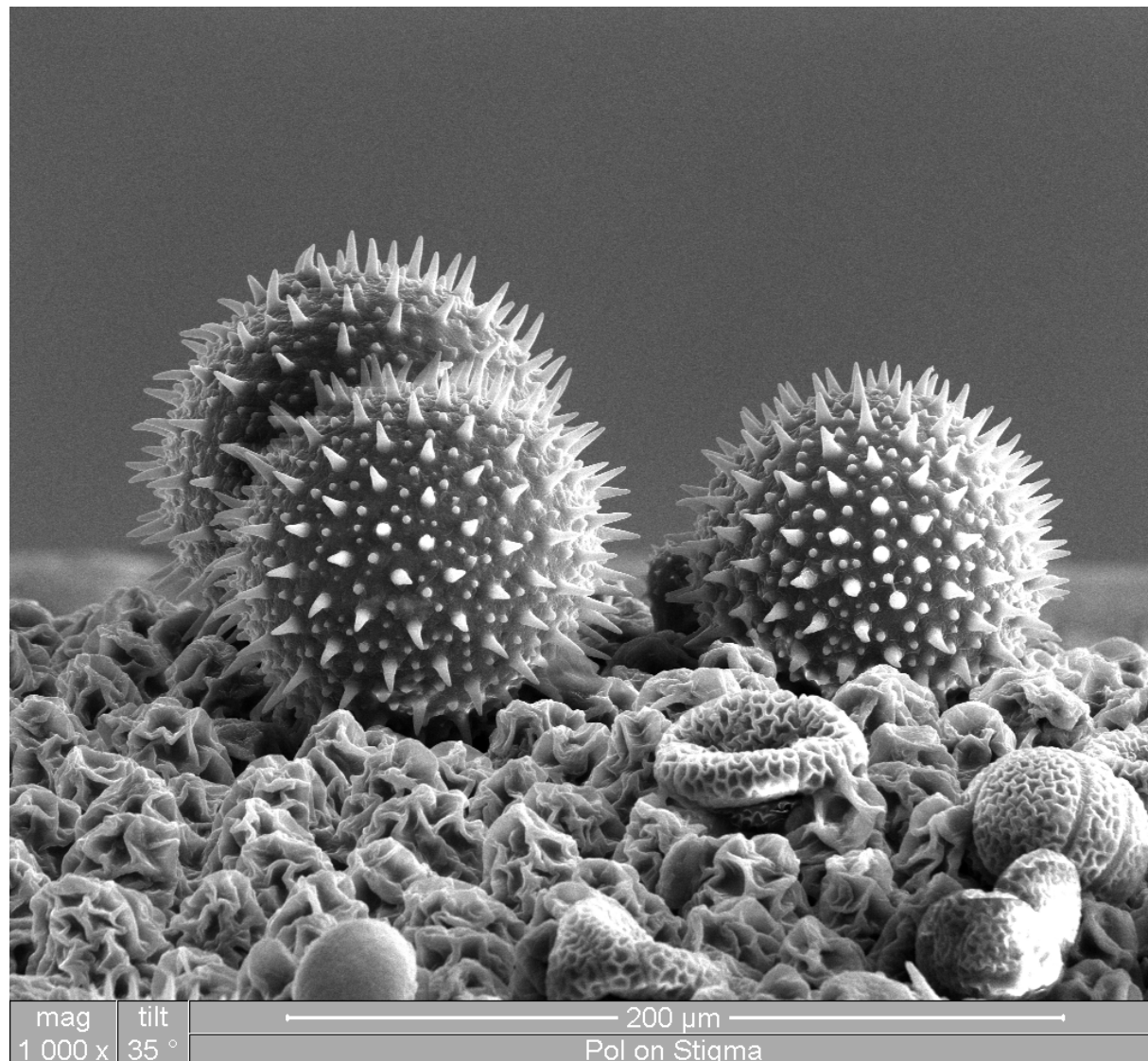
micro & nano - graph

Title: The Chestnuts



Foto: Jo Michael

Description:
Pollen of a Tree



mag	tilt
1 000 x	35 °

200 μm
Pol on Stigma

Magnification: 1000x

Submitted by: Frans Holthuysen

Instrument: NovaNanoSEM600

Affiliation: Philips Research labs Eindhoven The Netherlands

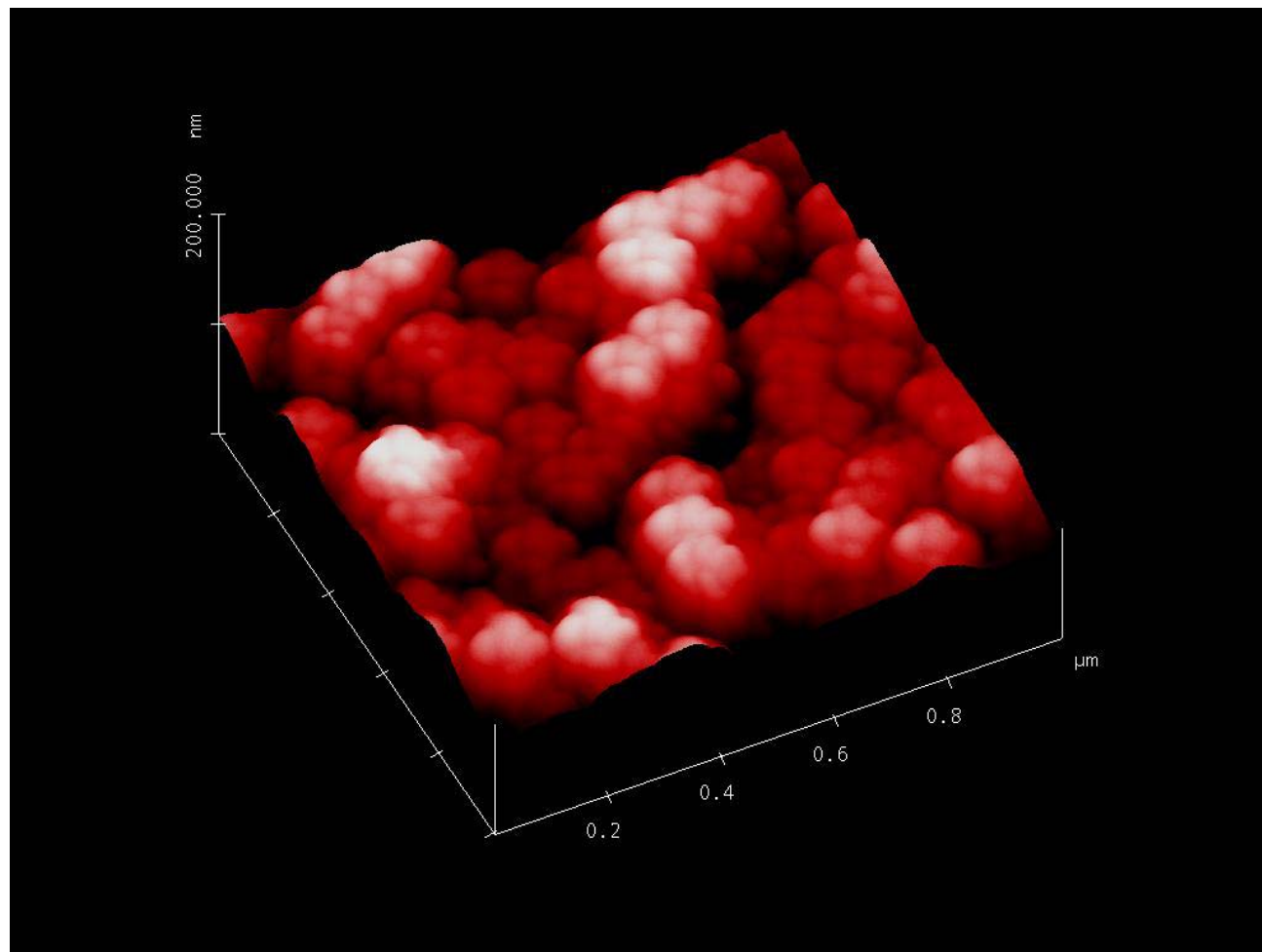


micro & nano - graph

Title: Have you ever eaten Nanoraspberry?

Description:

Self-assembling particles based on three-dimensional particle - aniline oligomer - particle repeated sequences, by a one-step process could further help in the realization of nanoscale electronics and molecular devices.



Magnification: x50,000

Submitted by: Hiroshi Shiigi

Instrument: Veeco Nanoscope IIIa

Affiliation: Osaka Prefecture University

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2007 micro & nano - graph Contest



micro & nano - graph
Title:

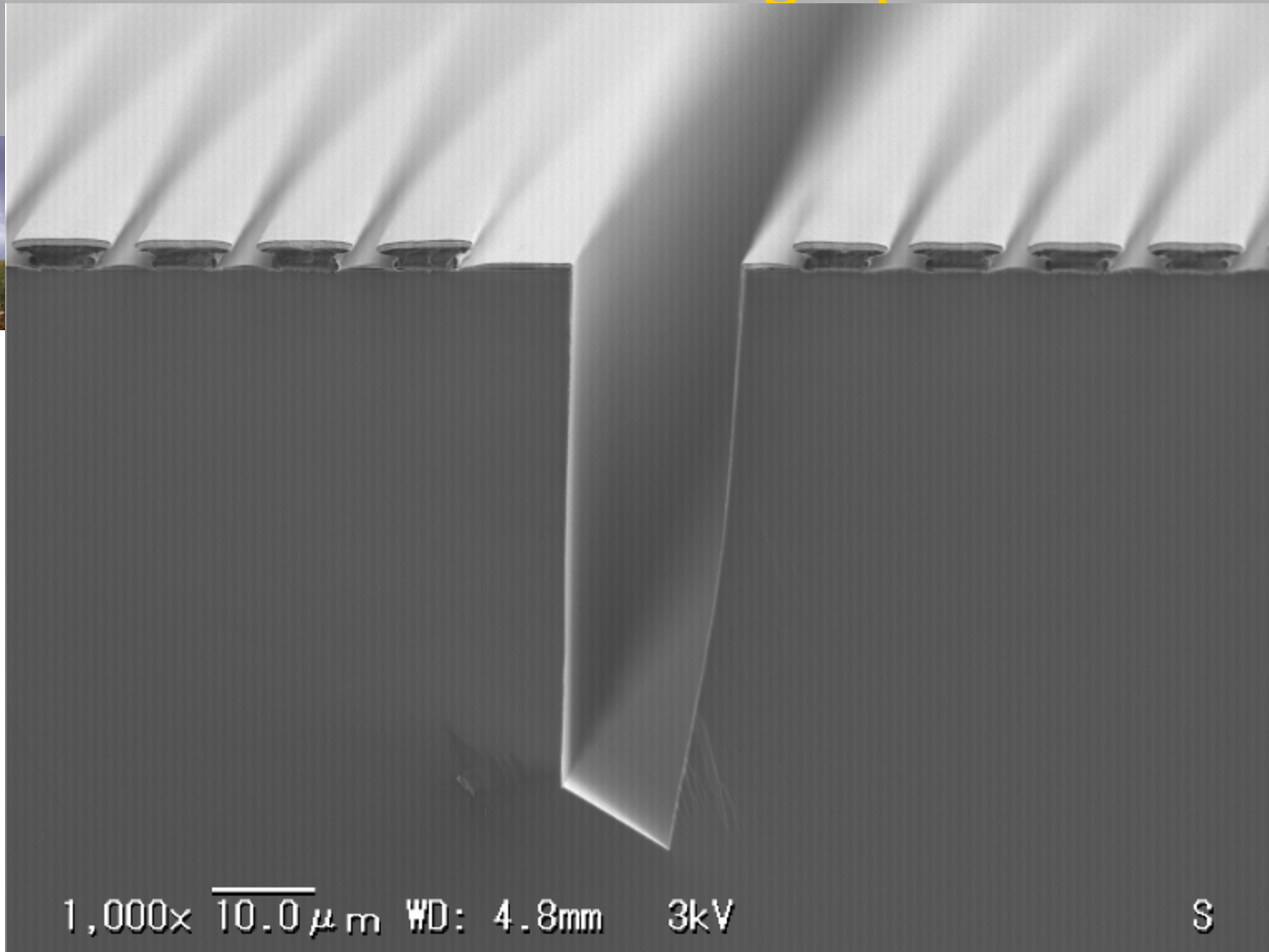
3-D pattern

Description:

The bi-layer lift-off pattern was created before etching quartz substrate. After wet etching quartz and sputtering metal films, the cross-section was observed.

Magnification: 1 k X

Submitted by: **Jinxing Liang**



Instrument: **KEYENCE VE-7800**

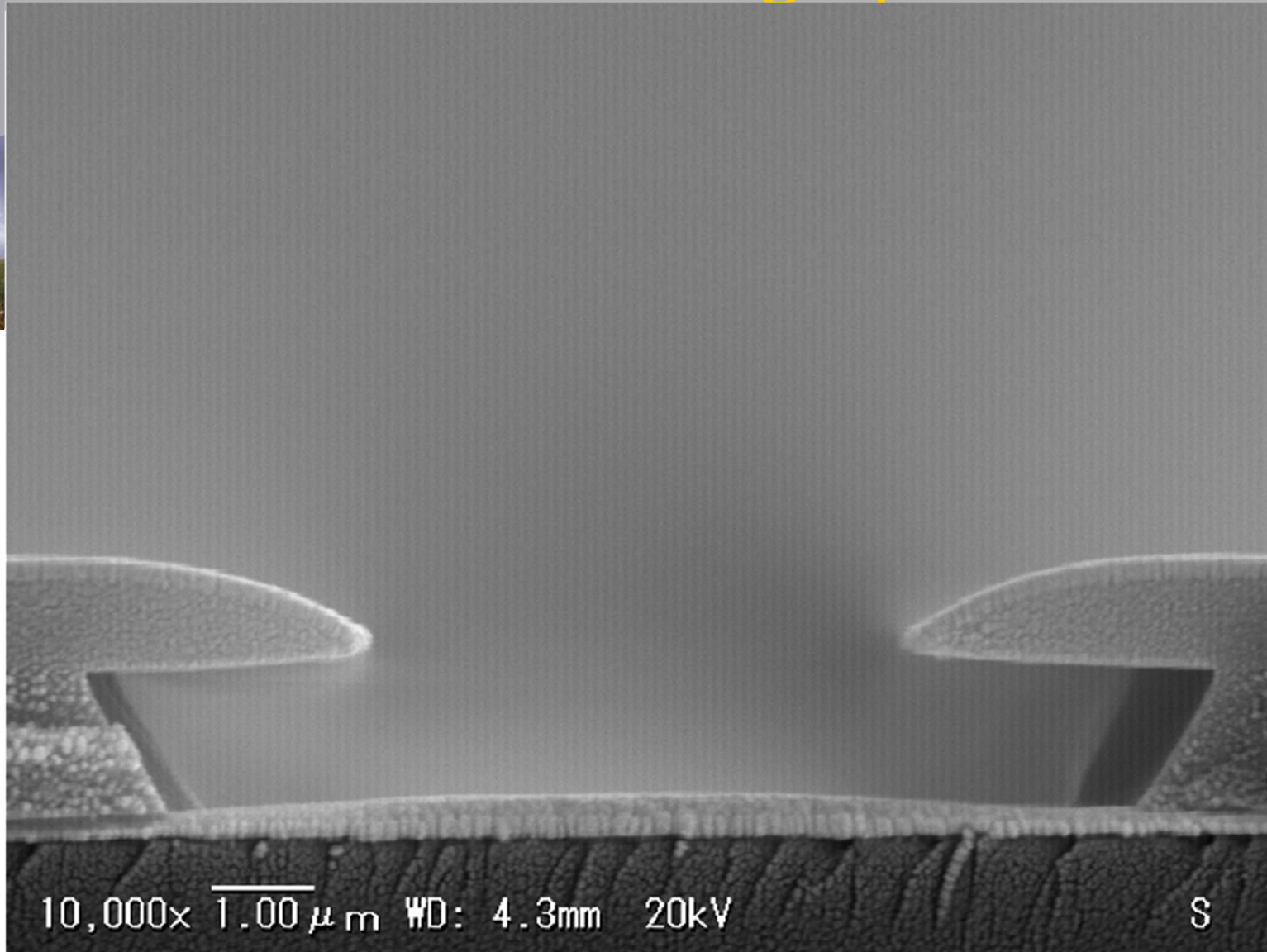
Affiliation: **Waseda university, Japan**



micro & nano - graph
Title:

Overhang

Description:
High aspect ratio undercut was created for reducing step coverage which is required in 3-D microdevice.



Magnification: 10 k X

Submitted by: Jinxing Liang

Instrument: KEYENCE VE-7800

Affiliation: Waseda University, Japan



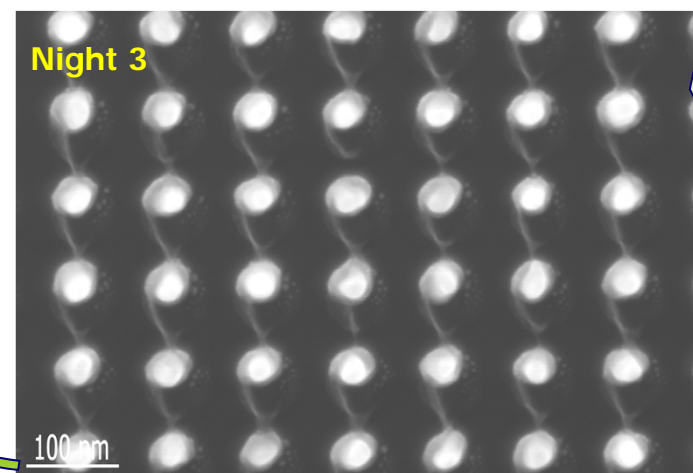
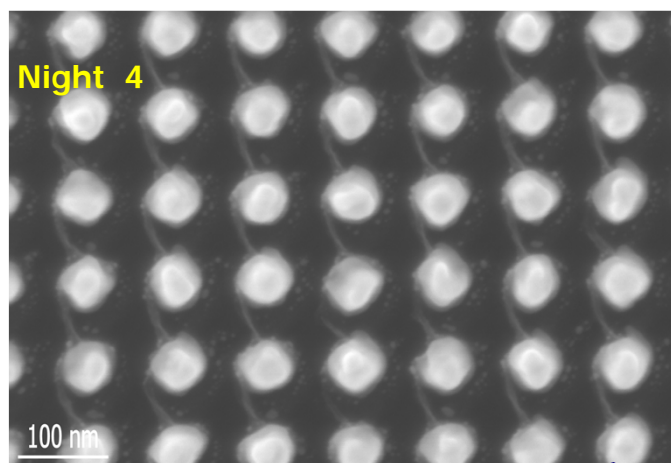
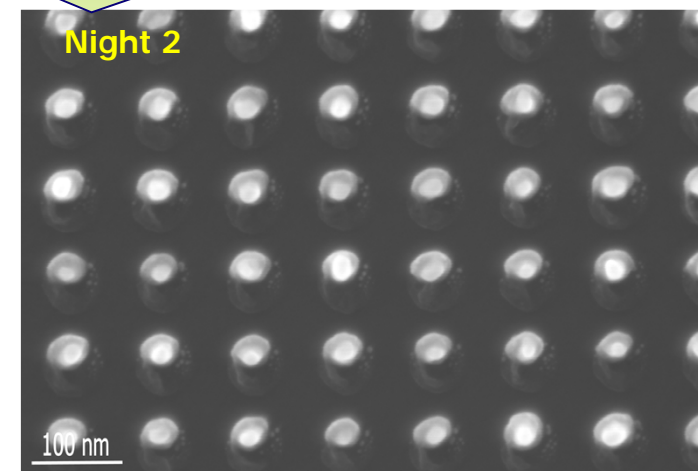
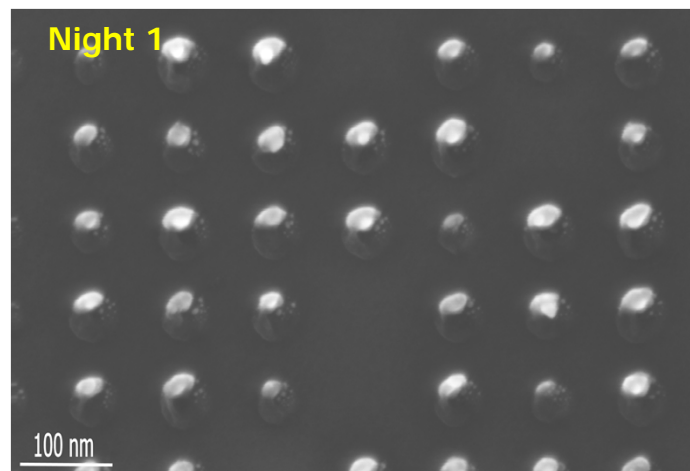
micro & nano - graph

Title:

**Formation of
Highly Ordered
Correlated
Hurricane Array**

Description:

**Gold dots on silicon
made with EUV-IL
and lift-off**



clear sky  hurricane

Magnification: **500 k X**

Submitted by: **P.Sahoo, V.Auzelyte**

Instrument: **Supra 55VP**

Affiliation: **Paul Scherrer Institute, LMN group**

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2007 micro & nano - graph Contest



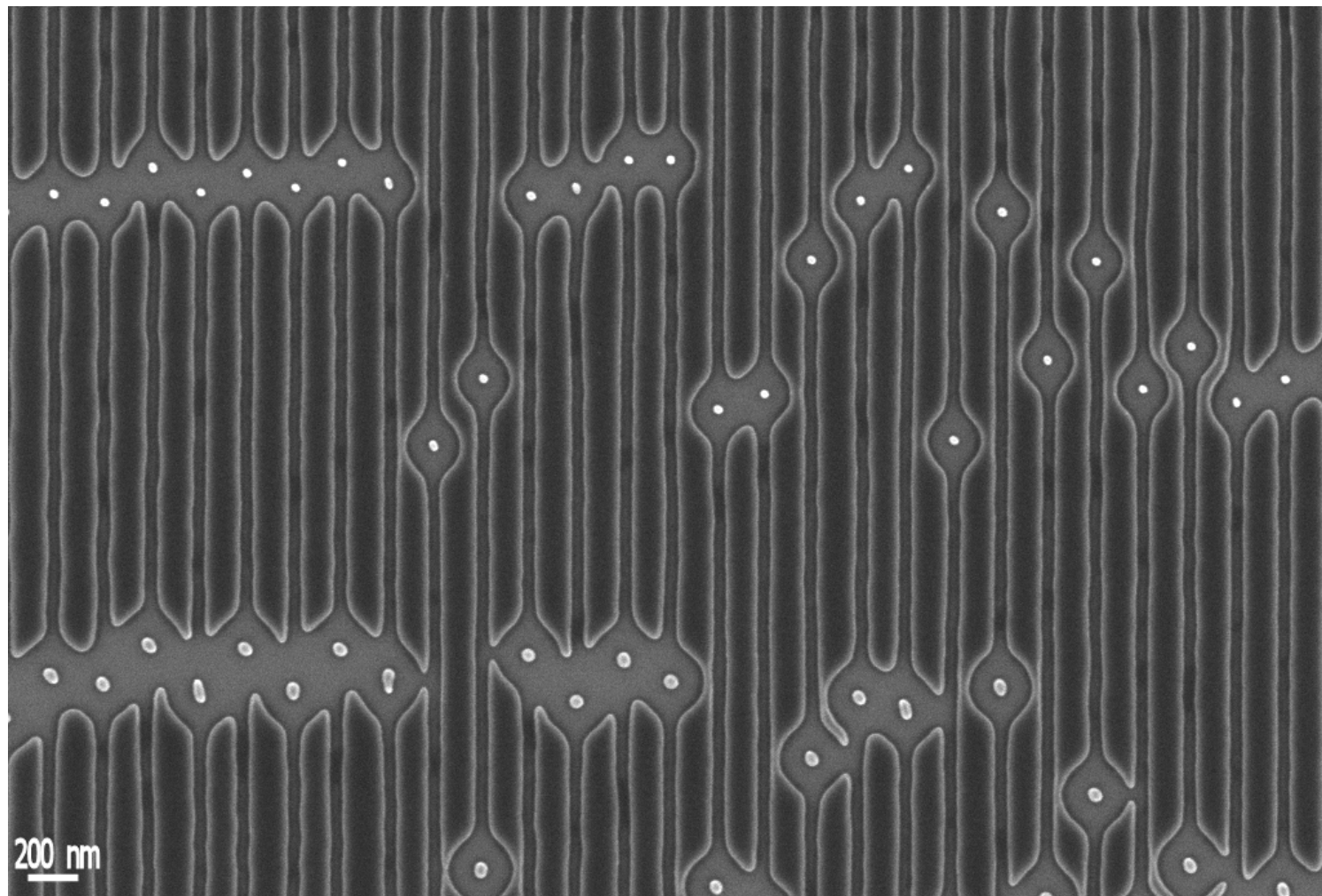
micro & nano - graph

Title:

**They eat cherries
with pips!**

Description:

Electron beam pattern
in PMMA



Magnification: **67 k X**

Submitted by: **Vaida Auzelyte**

Instrument: **Supra 55VP**

Affiliation: **Paul Scherrer Institute, LMN group**



micro & nano - graph
Title:

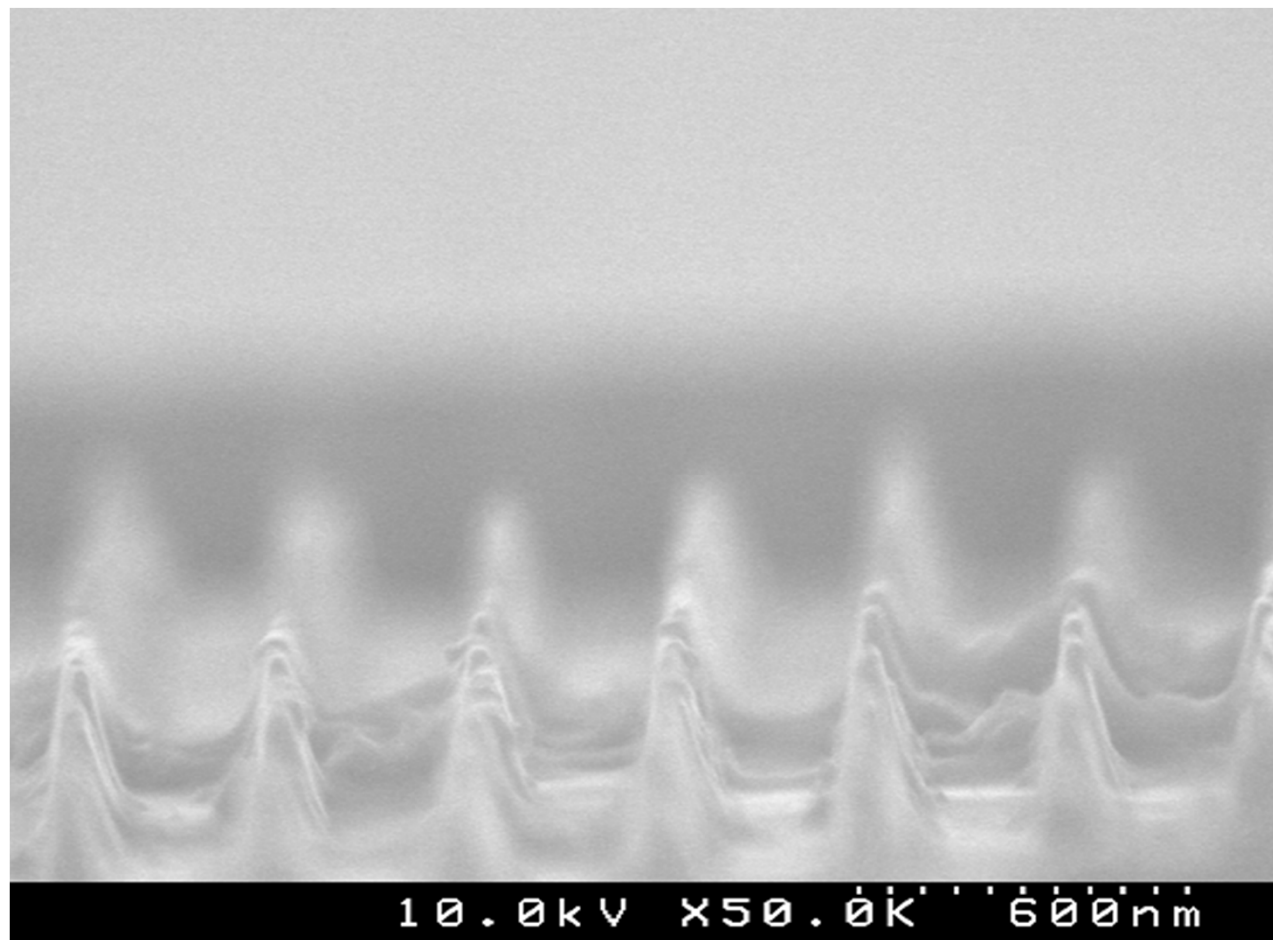
Guilin Valley Scene in China

Description:

The whole and tilted
SEM image of damaged
LiNbO₃ Bragg gratings.
The gratings are overly
etched, until the mask
vanished.

Magnification: 50 k X

Submitted by: Asamira Suzuki



Instrument: Hitach S5000

Affiliation: Advanced Technology Research Laboratories,
Matsushita Electric Industrial Co., Ltd.

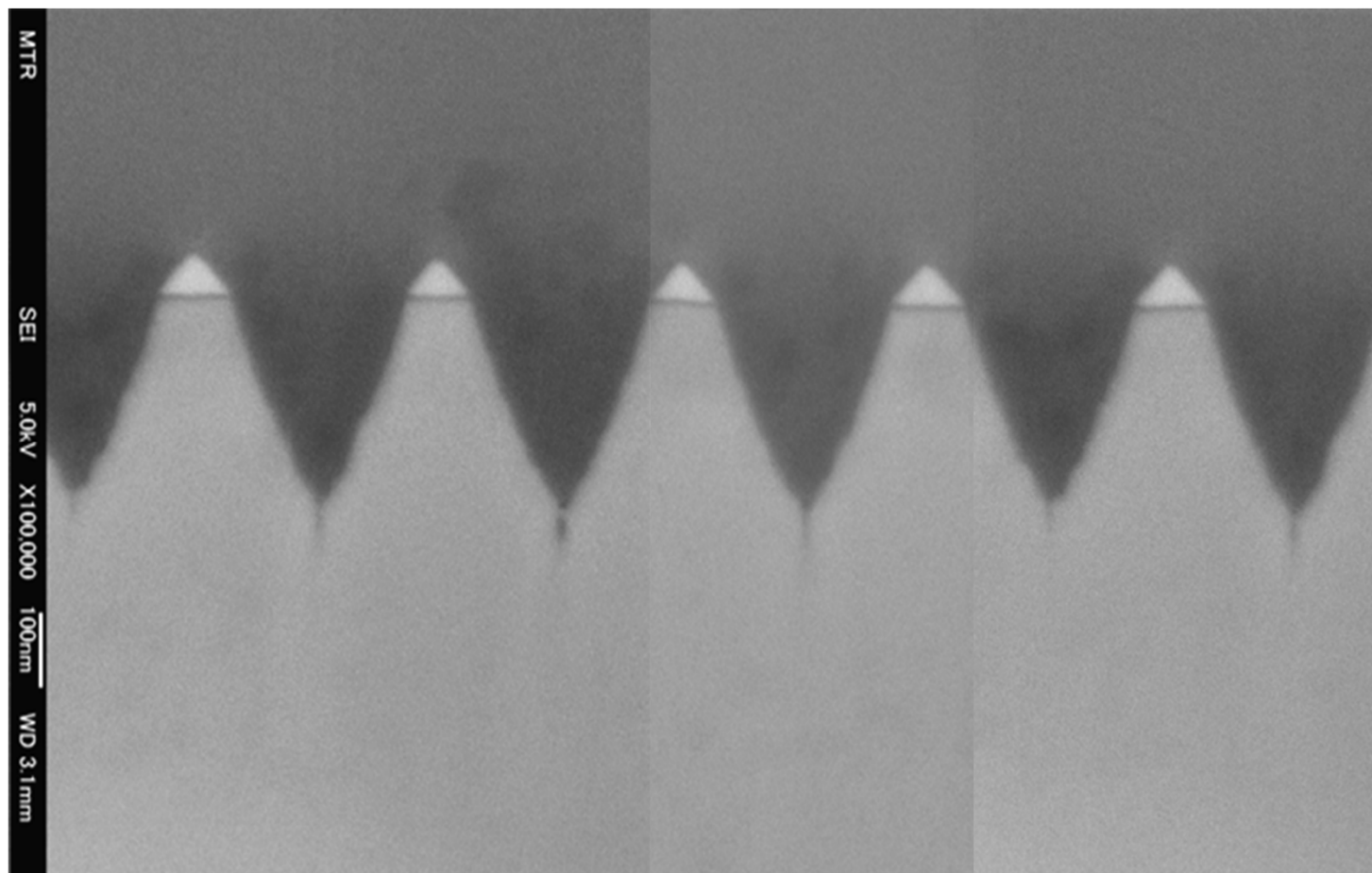


micro & nano - graph
Title:

Mountain chain covered with snow

Description:

The cross-sectional
SEM image of LiNbO₃
substrate etched with
Cr metal mask.



Magnification: 100 k X

Submitted by: Asamira Suzuki

Instrument: JEOL JSM-6700F

Affiliation: Advanced Technology Research Laboratories,
Matsushita Electric Industrial Co., Ltd.

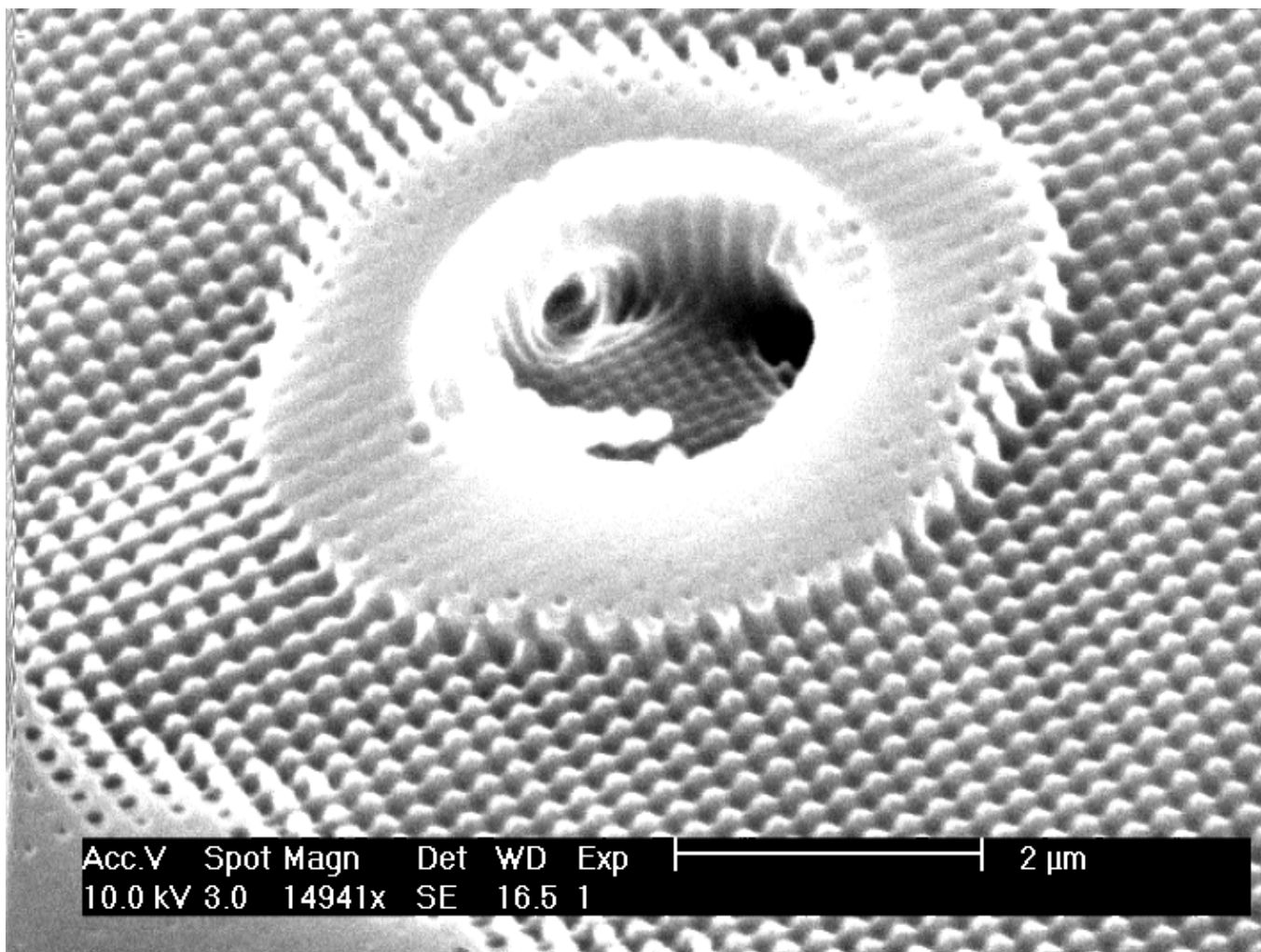


micro & nano - graph
Title:

SubWorm Hole

Description:

Originated during etching of spray coated resist on a glass sample. Nanopattern has been interferometrically exposed.



Magnification: 14,9 k X

Submitted by: Birgit Päivänranta

Instrument: JOEL JSM 6300

Affiliation: JOE - Joensuu

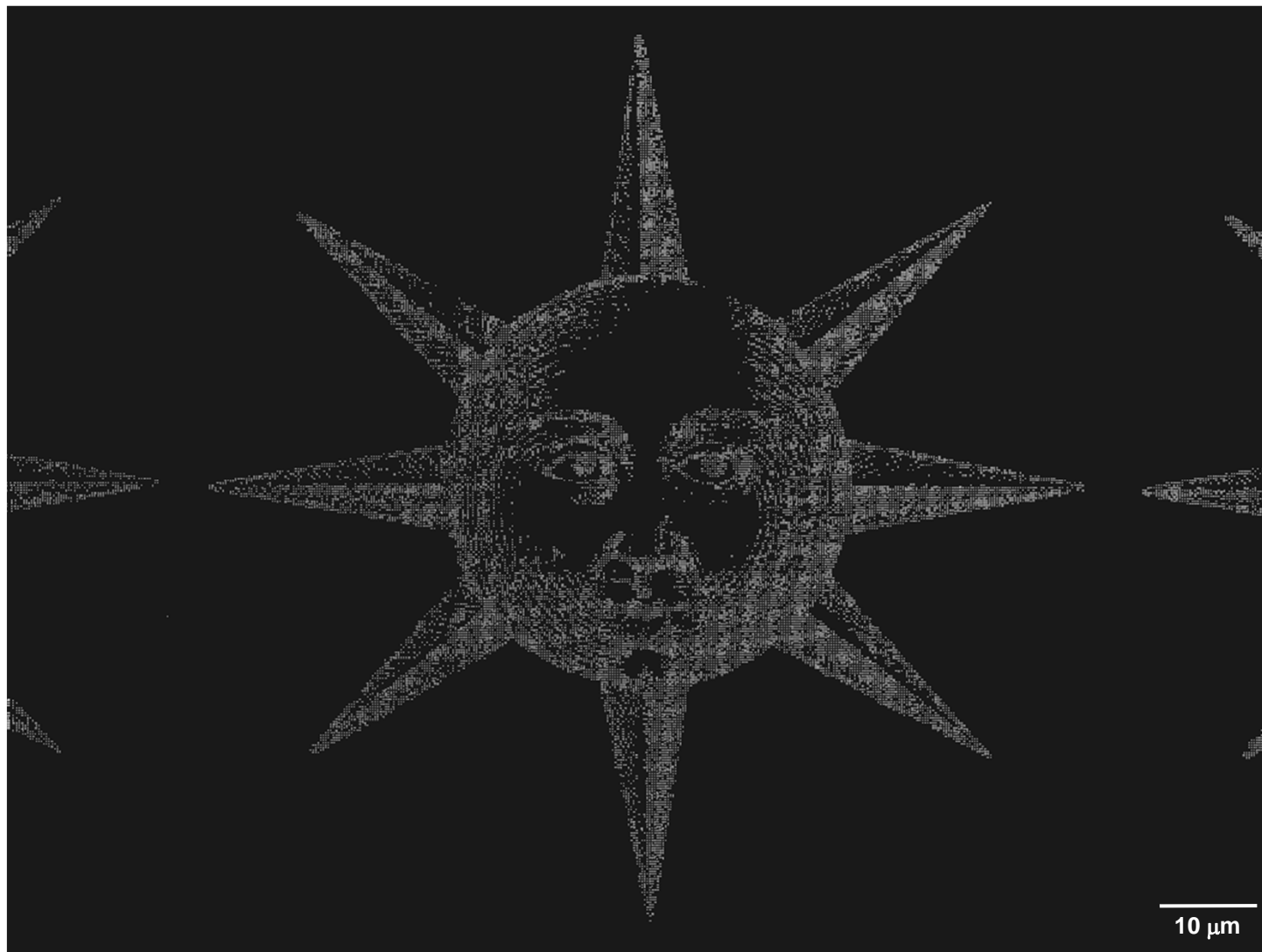


micro & nano - graph
Title:

Nano-Sun

Description:

Robert Fludd's sun (*anno* 1617) assembled of ~ 20,000 individual 60-nm gold crystals and printed onto a silicon surface.



Magnification: 0.78 k X (3"x4" image)

Submitted by: Andrea Decker

Instrument: SEM LEO 1550

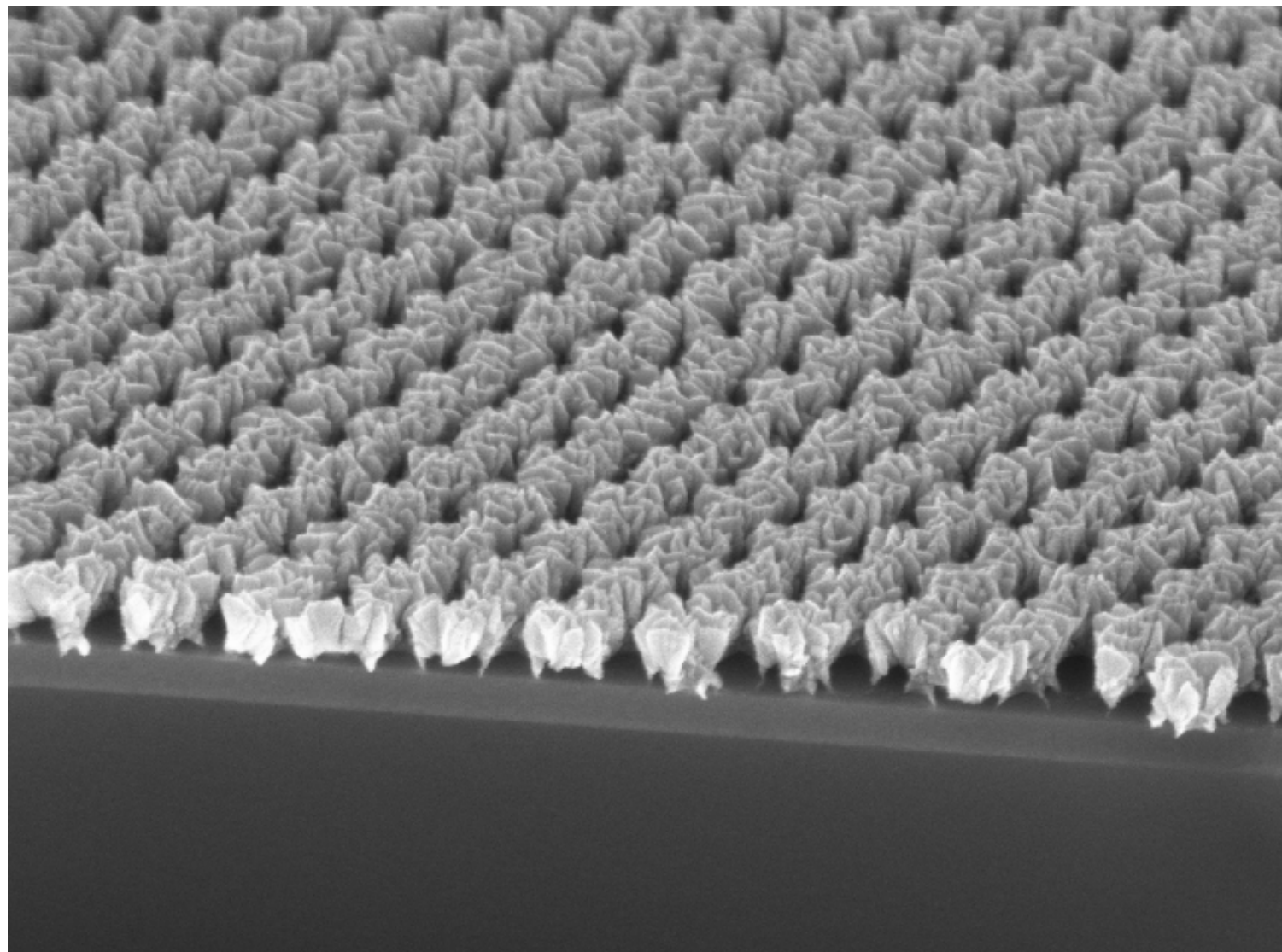
Affiliation: IBM Zurich Research Laboratory, Switzerland



micro & nano - graph
Title:

Salad Plantation

Description: Glancing
angle deposition of Cr
onto a nanostructure
produced with EUV-IL



Magnification: 100 k X

Submitted by: C. Padeste / F. Zoller

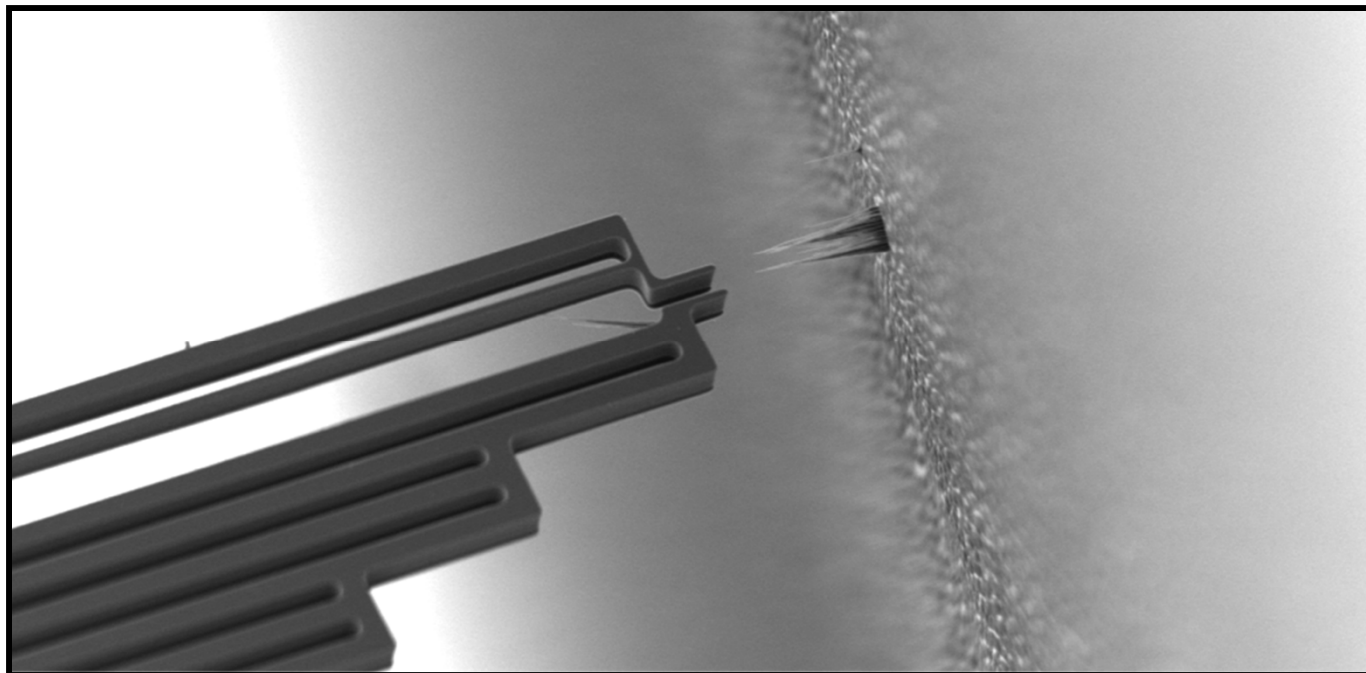
Instrument: Zeiss SUPRA 55VP

Affiliation: Paul Scherrer Institut, Villigen PSI, Switzerland



micro & nano - graph
Title:

Nano-epilage



Description:

A silicon microgripper (left) is ready to pluck a bunch of carbon nanofibres (right) resembling hair, only 1000 times smaller. Another fiber is sticking to the microgripper due to the ever-present surface forces. The microgripper developed at the MIC, Technical University of Denmark uses thermal expansion to deliver a force of up to 25 micro Newton. The experiment was performed using an advanced nanorobotic workstation inside a 3D scanning electron microscope at AMiR, University of Oldenburg, as a part of a European collaboration.

Magnification: 0.71 k X

Submitted by: Karin N. Andersen

Instrument: Leo SEM with prototype nanomanipulation tool

Affiliation: Technical University of Denmark, Denmark



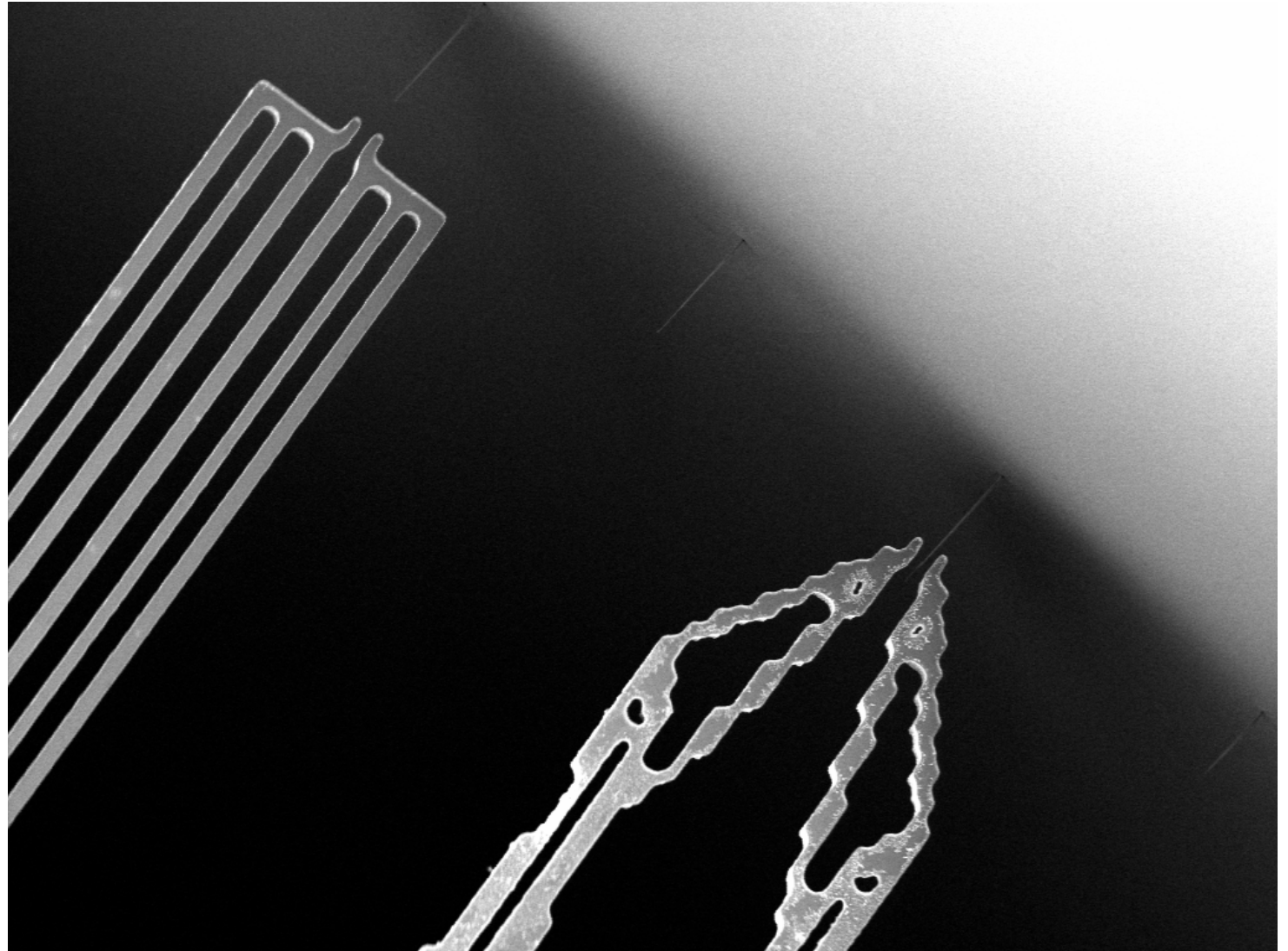
micro & nano - graph
Title:

Photo Finish

Description:
2 polysilicon
microgrippers-with a
conventional design
(left) and a topology
optimized design
(right)—are approaching
to 2 CNTs
simultaneously.
Optimized design is
one step ahead, being
closer to the target...

Magnification: **1.5 k X**

Submitted by: **Özlem Sardan**



Instrument: **SEM LEO 1450**

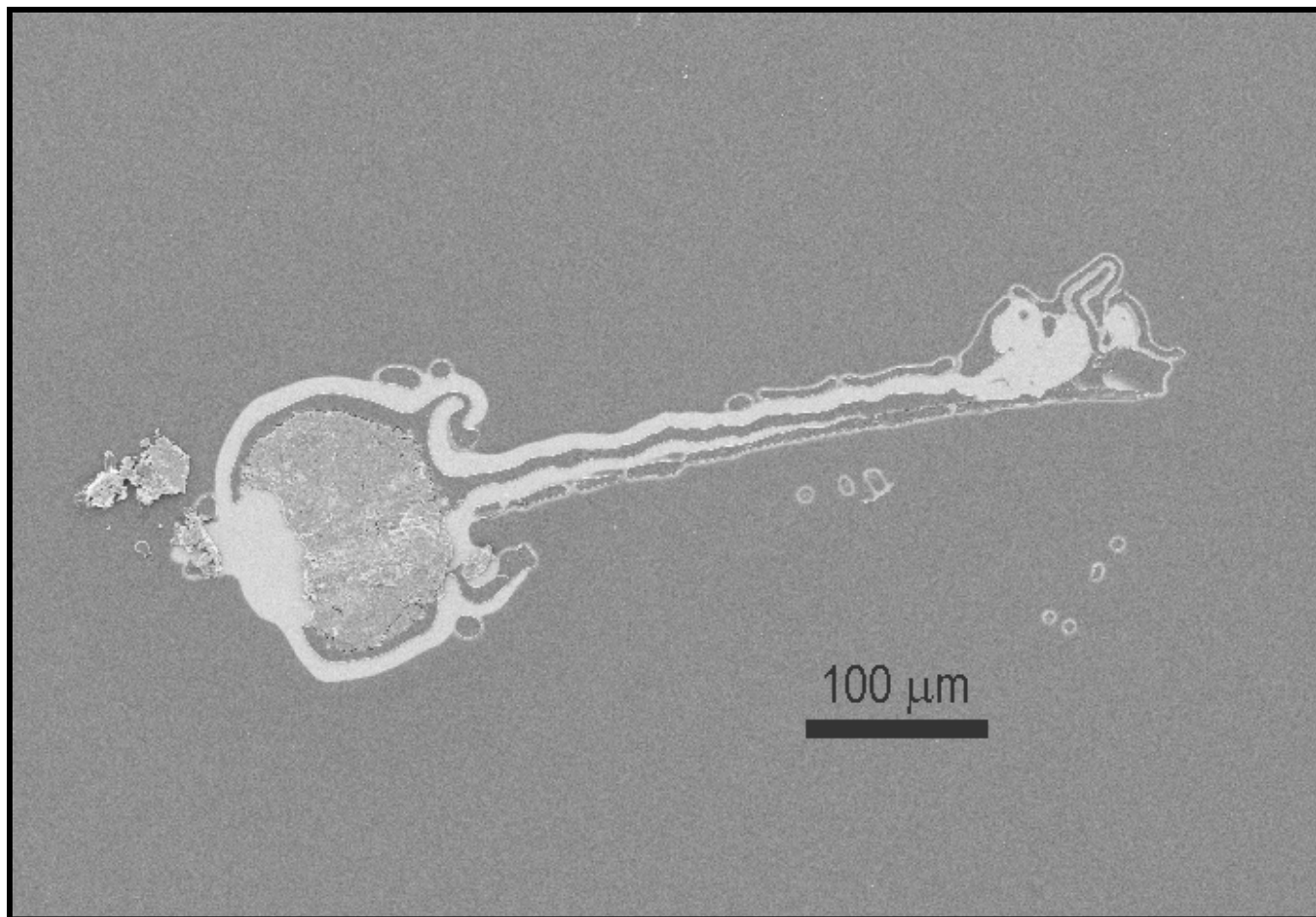
Affiliation: **MIC-DTU, Denmark & AMIR-OU, Germany**



micro & nano - graph
Title:

Heavy Metal

Description:
Self assembled
structures of polymer
formed during
nanoimprint, metalized
with aluminium.



Magnification: 314 X

Instrument: SEM LEO 1530

Submitted by: Irene Fernandez Cuesta

Affiliation: CNM - Barcelona

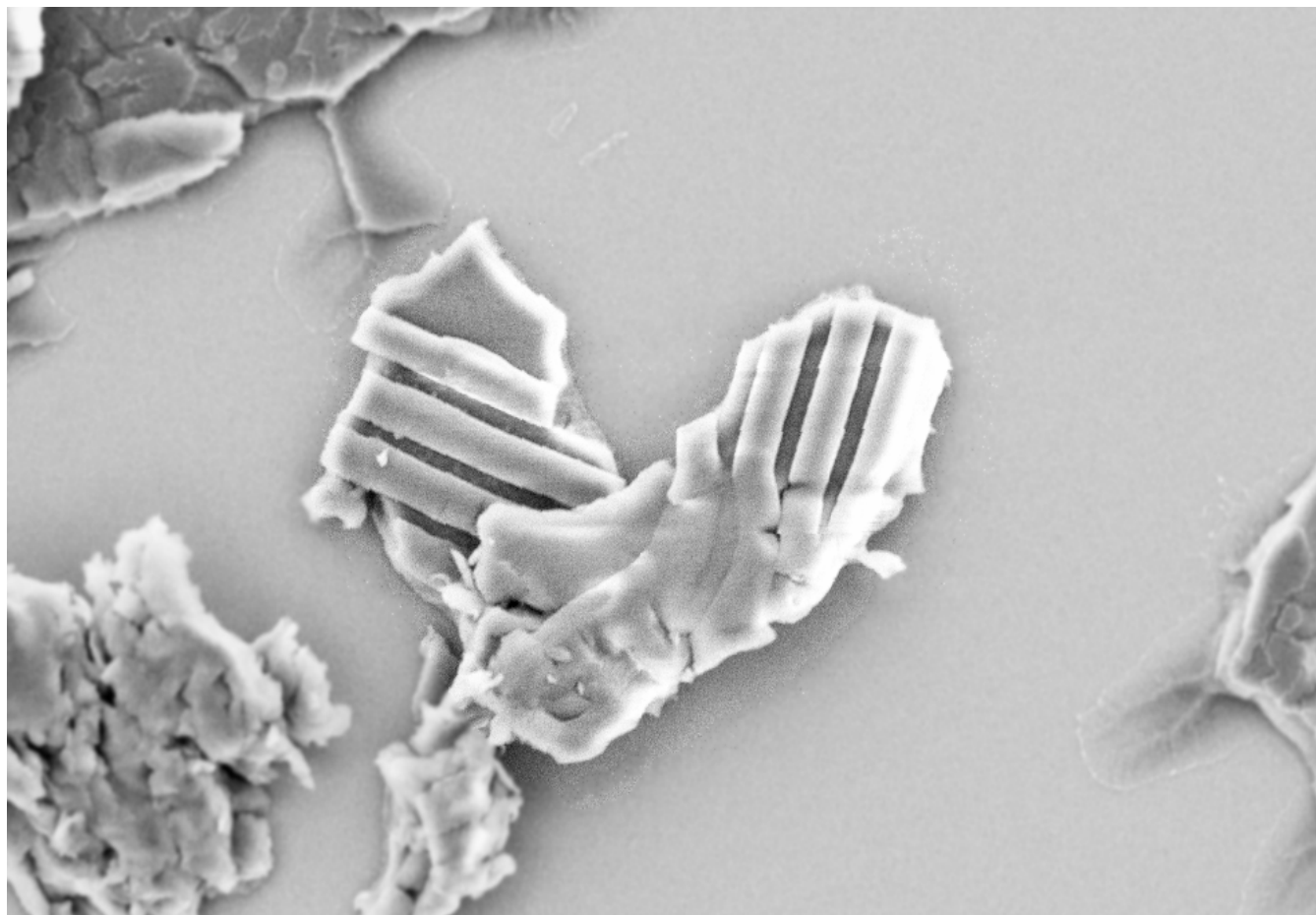


micro & nano - graph
Title:

Broken Heart

Description:

Imprinted lines in
PMMA, cracked and
detached from the
substrate.



Magnification: 9.94 k X

Instrument: SEM LEO 1530

Submitted by: Irene Fernandez Cuesta

Affiliation: CNM - Barcelona



micro & nano - graph
Title:

Witch's rock

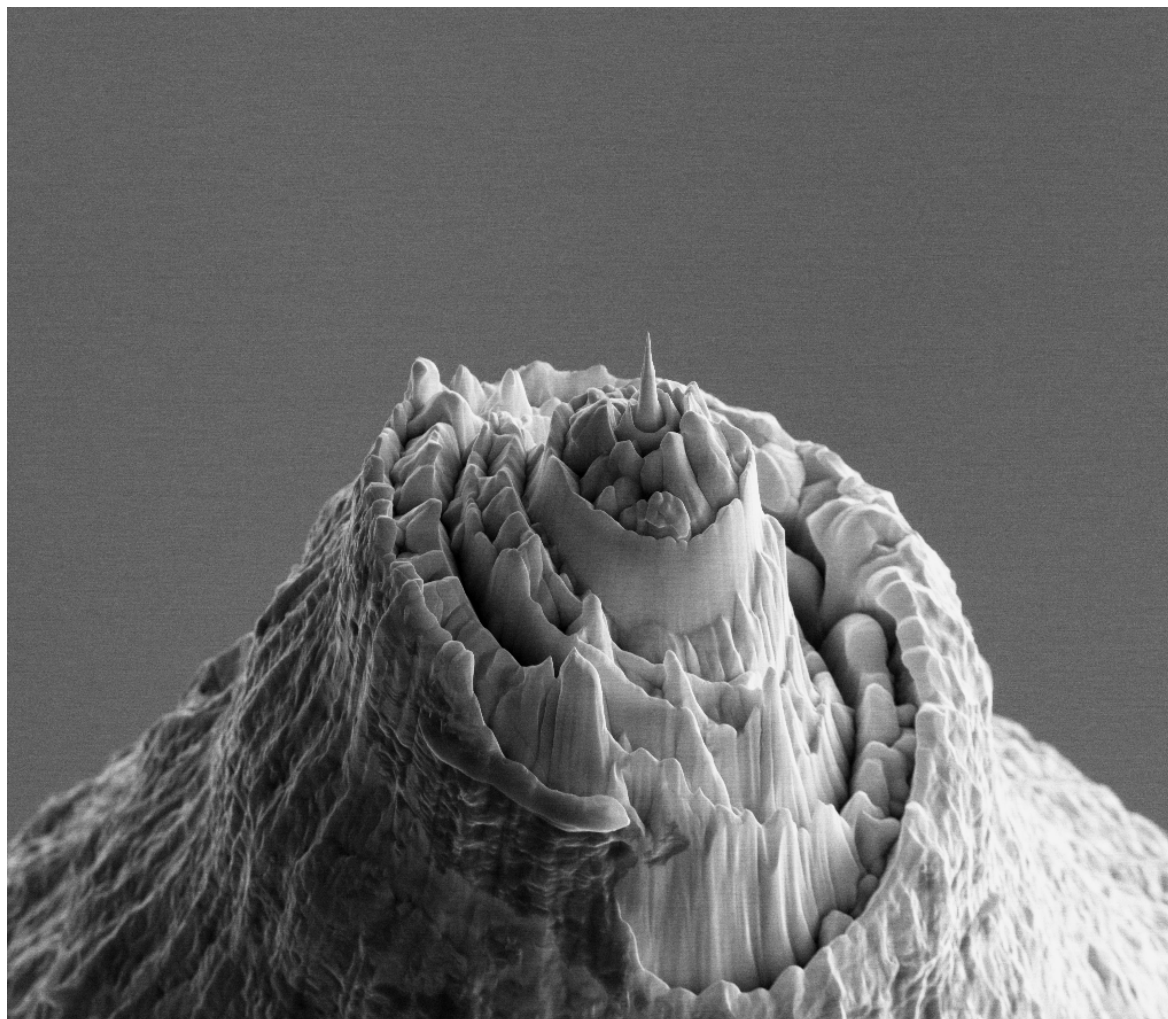
Description:

Explain what we are looking at and how it came to be:

Gold tip for apertureless SNOM, sharpened by FIB milling

Magnification: 10 k X

Submitted by: Gian Carlo Gazzadi



E-Beam	Spot	Mag	Det	FWD	Tilt	HFW	5 μ m
30.0 kV	3	10.0 kX	SED	4.953	20.0°	30.4 μ m	1nA, 50pA

Instrument: SEM (FEI Dual Beam 235M)

Affiliation: CNR – INFM S3, Modena, Italy

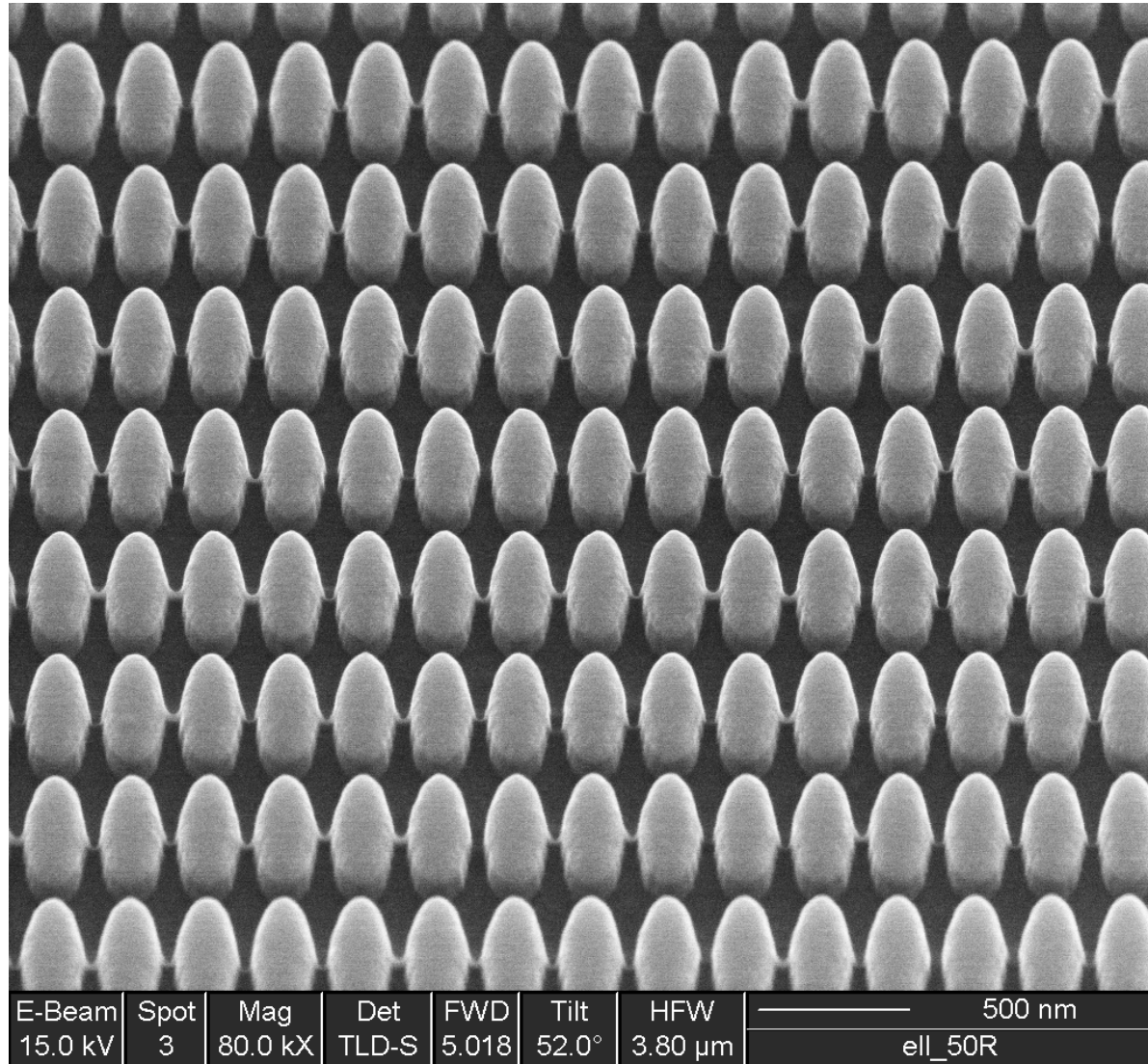


micro & nano - graph
Title:

Pill blisters

Description:
Explain what we are
looking at and how it
came to be:

Ellipsoids patterned on
a NiFe/SmCo film by
FIB milling



Magnification: 80 k X

Submitted by: Gian Carlo Gazzadi

Instrument: SEM (FEI Dual Beam 235M)

Affiliation: CNR – INFM S3, Modena, Italy



micro & nano - graph
Title:

**Nano-windmill
(drying-rack for
rough people)**

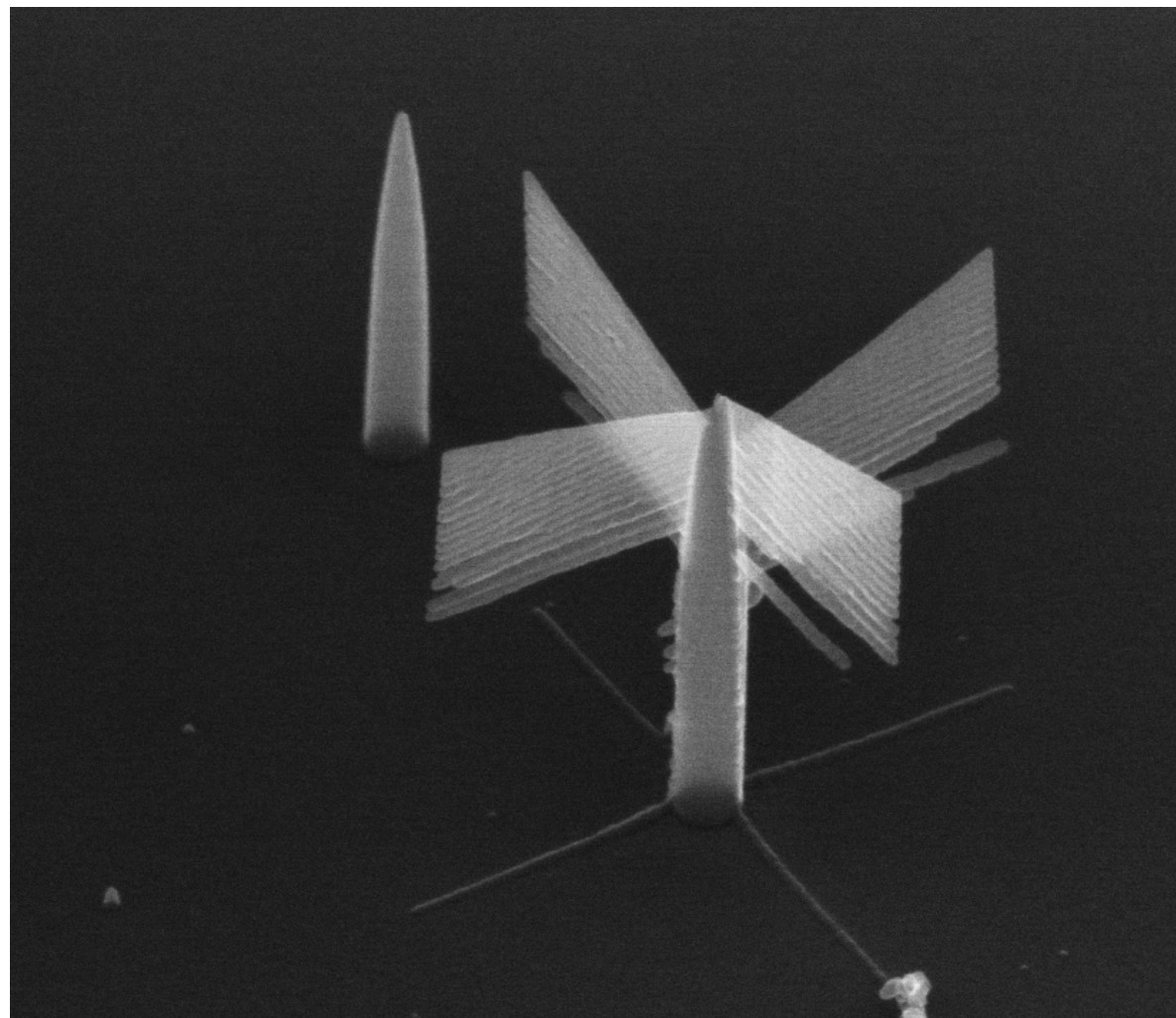
Description:

Explain what we are
looking at and how it
came to be:

**Suspended TEOS
nanostructures
deposited with electron
beam.**

Magnification: 120 k X

Submitted by: Gian Carlo Gazzadi



E-Beam	Spot	Mag	Det	FWD	500 nm
15.0 kV	3	120 kX	TLD-S	5.018	dt=.125", dx=2.5nm

Instrument: SEM (FEI Dual Beam 235M)

Affiliation: CNR – INFM S3, Modena, Italy

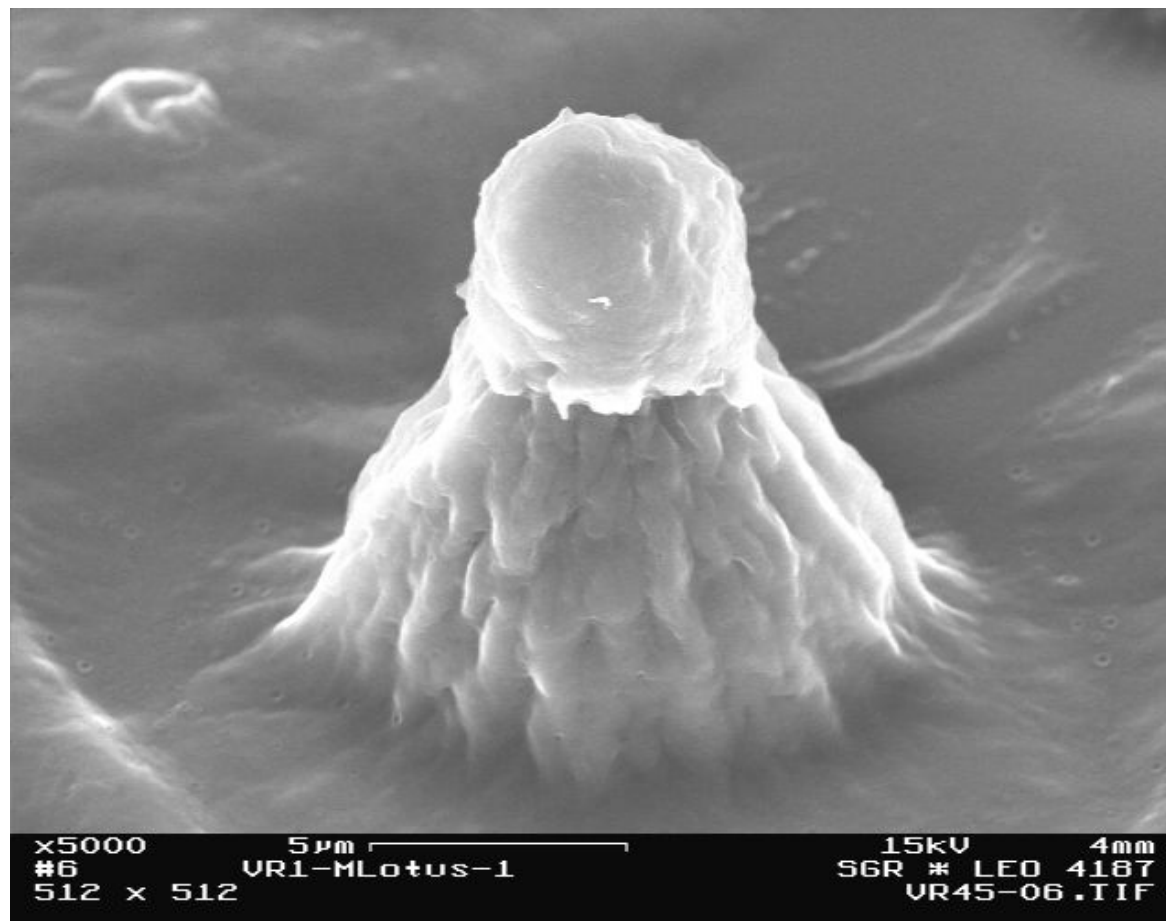


micro & nano - graph
Title:

Erupting volcano

Description:

Replication in a sol gel material of the lotus leaf. The imprinted bump corresponding to a bump on lotus leaf



Magnification: **x5000**

Submitted by: **C. Peroz**

Instrument: **Zeiss DSM 982 Gemini FEG**

Affiliation: **CNRS/Saint-Gobain Recherche**



micro & nano - graph
Title:

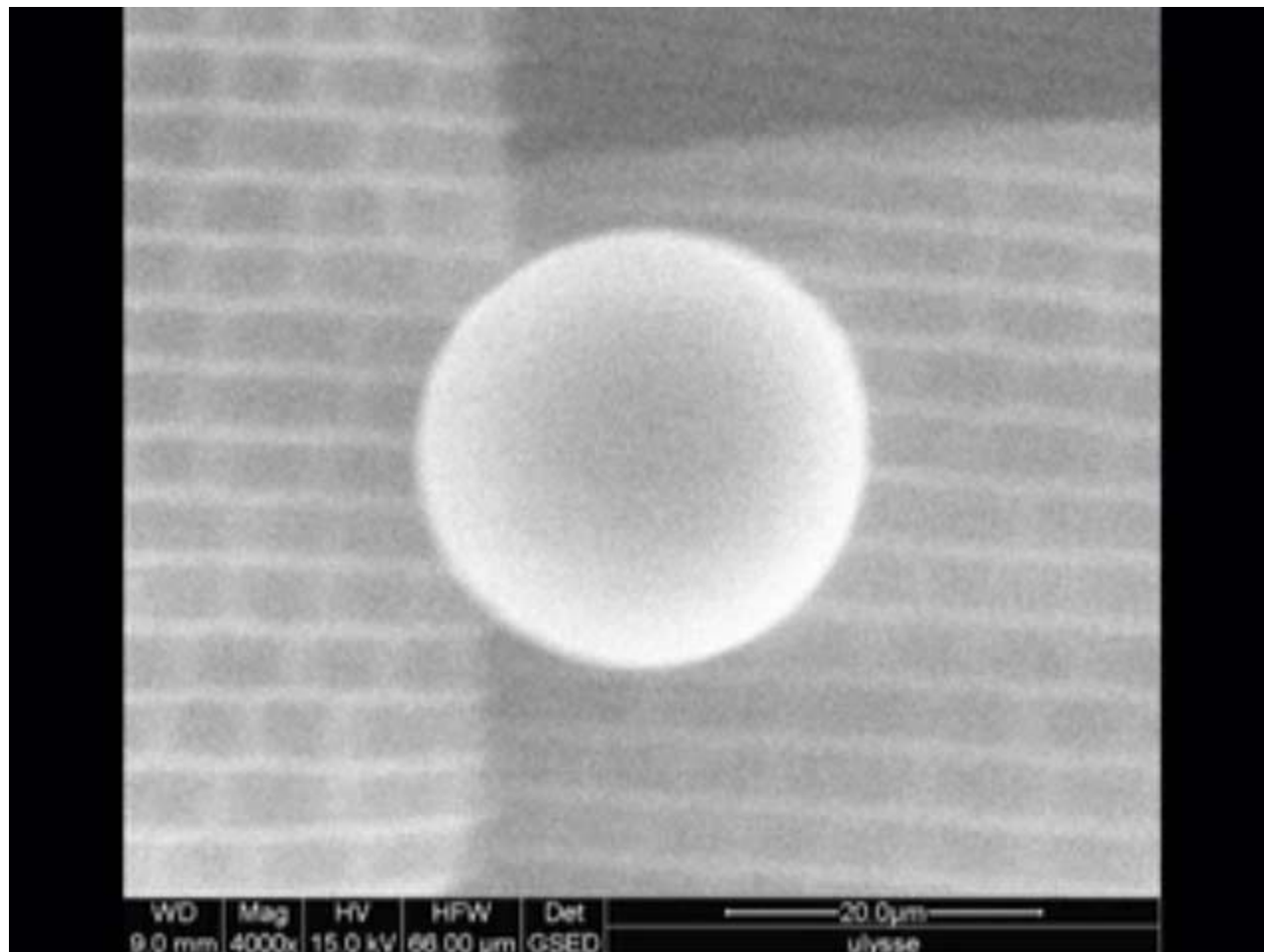
And the butterfly dries...

Description:

Water droplet on butterfly
scale : boiling off on
controlled pressure. The
experiment is performed by
decreasing the pressure in the
SEM Environmental
configuration.

Magnification: **x400**

Submitted by: **C. Peroz**



Instrument: **Fei Quanta 400 ESEM**

Affiliation: **CNRS/Saint-Gobain Recherche**

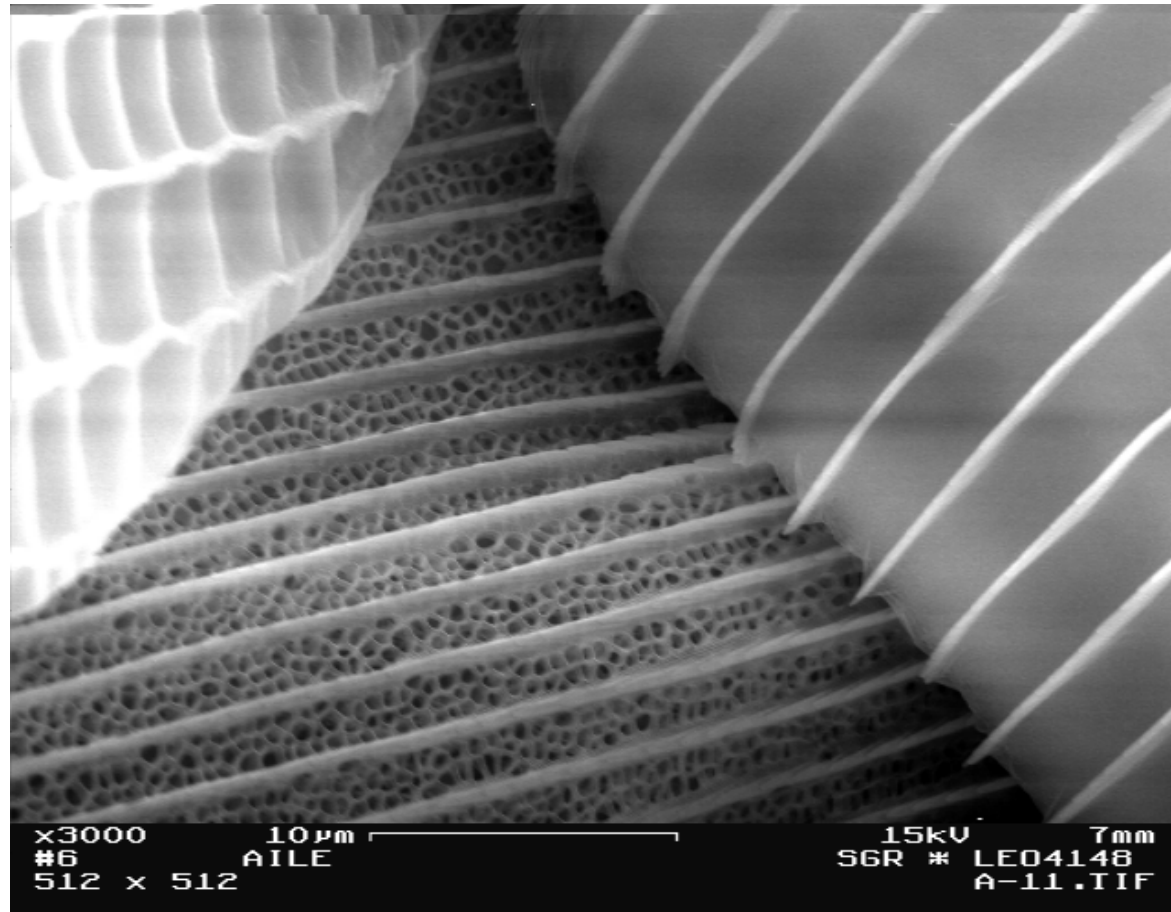


micro & nano - graph
Title:

From the darkness to the light

Description:

Butterfly structures:
pigment scales
(bottom) and structural
layer (side) to generate
physical color



Magnification: **x3000**

Submitted by: **C. Peroz**

Instrument: **Zeiss DSM 982 Gemini FEG**

Affiliation: **CNRS/Saint-Gobain Recherche**

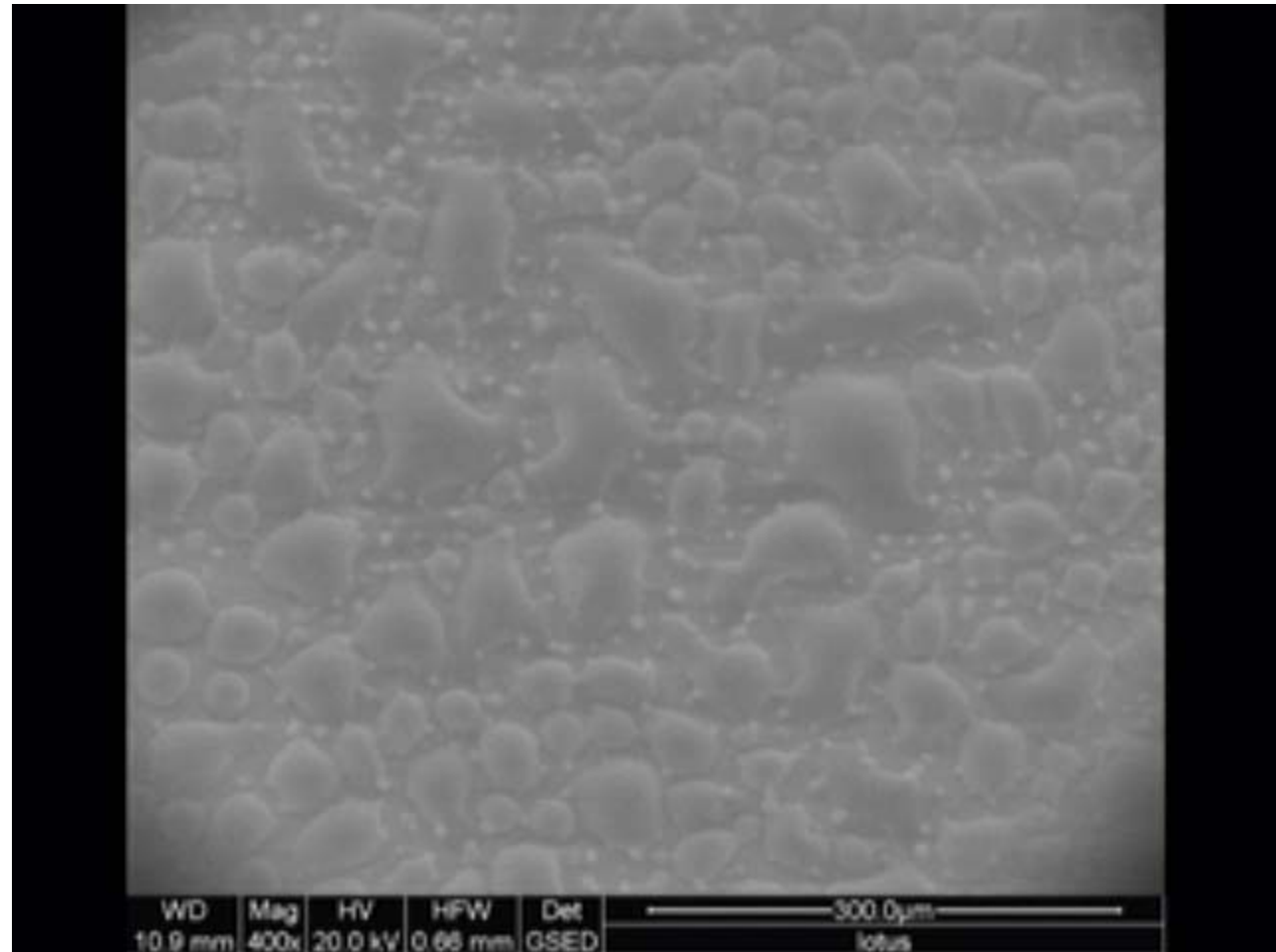


micro & nano - graph
Title:

Getting together

Description:
Condensation of water
on replicated surface
(sol gel materials) of
lotus leaf.
SEM Environmental
configuration

Magnification: **x400**
Submitted by: **C. Peroz**

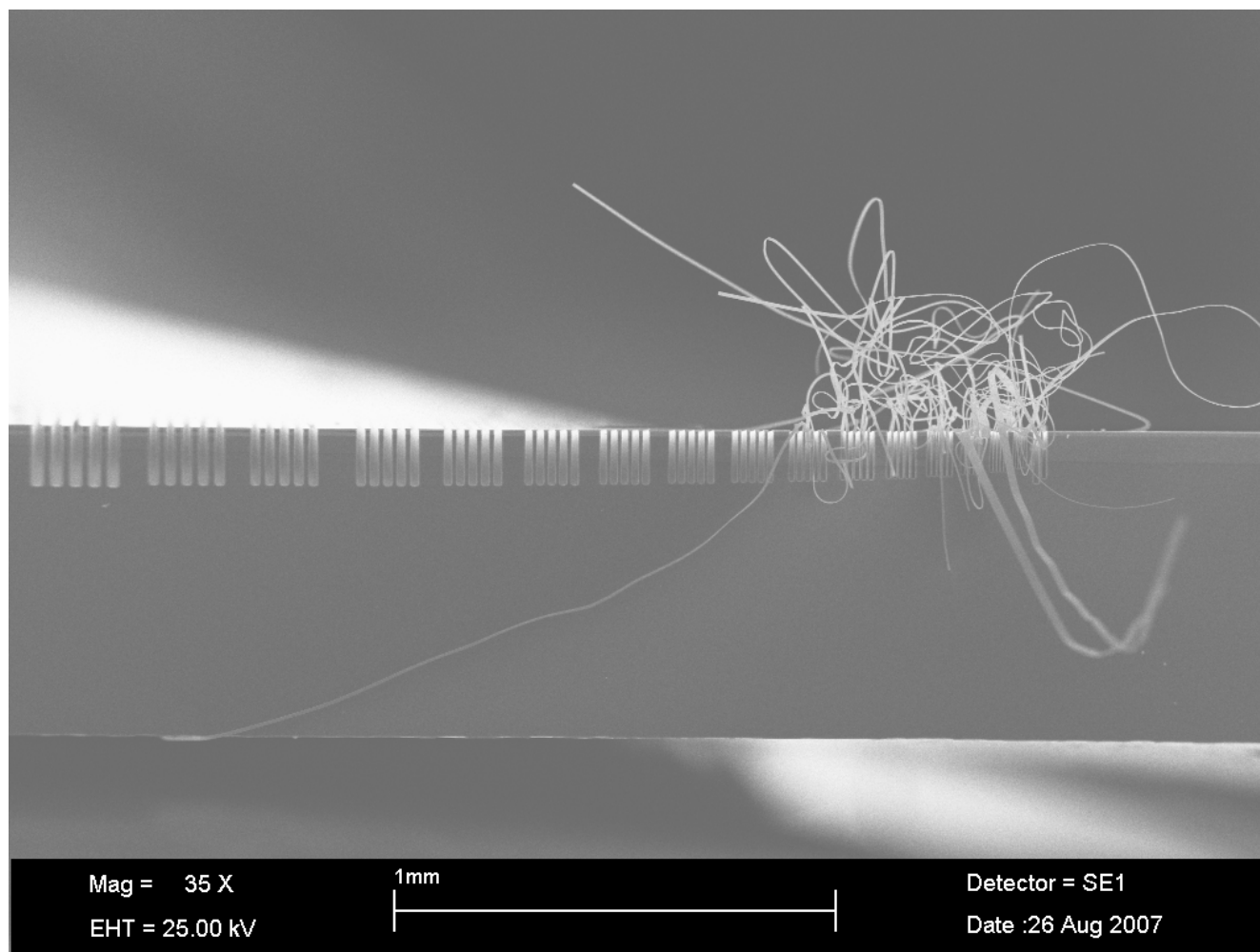


Instrument: **Fei Quanta 400 ESEM**
Affiliation: **CNRS/Saint-Gobain**



micro & nano - graph Title:
**Fireworks in the
small part of town**

Description: Silicon
DRIE etched linewidths
but due to material
stress and adhesion
issues the small areas
peeled easily during
cleave step.



Magnification: **35 X**

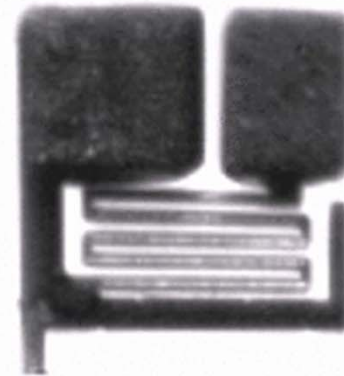
Submitted by: **Darren Hughes**

Instrument: **Leo 440 SEM**

Affiliation: **Surface Technology Systems PLC, Newport, UK**



300x300 microns, 2428 Hz @ 2418 fps



micro & nano - graph Title:

Movin'

Description:

The image shows the resonating action induced by an oscillating magnetic field of a wireless mobile microrobot.



ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Magnification: On image

Submitted by: Dominic Frutiger &
Bradley J. Nelson

Instrument: Photon Focus MV-D1024 TrackCam

Affiliation: Institute of Robotics and Intelligent Systems (IRIS)
ETH, Zurich



micro & nano - graph

Title:

The Power of Nature

Description:

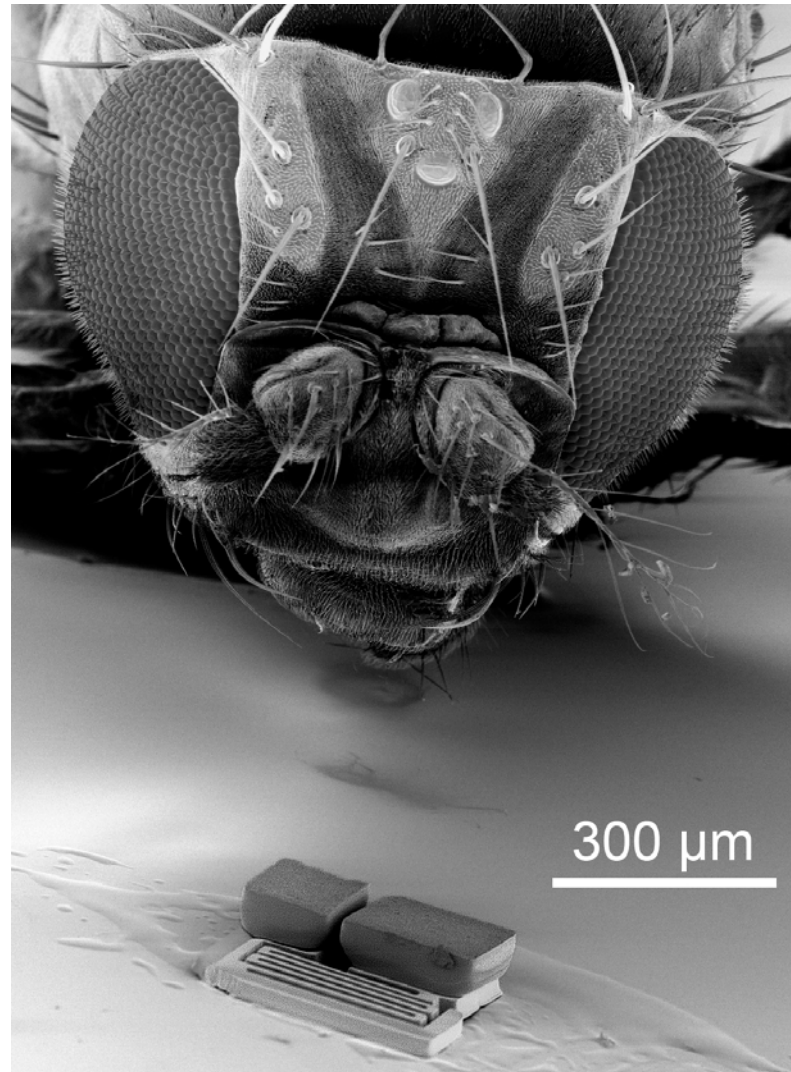
The image shows a wireless mobile microrobot alongside a *drosophila melanogaster*, which provides a dramatic contrast between the complexity of microfabricated agents and those found in nature.

Magnification: On image

Submitted by: Bradley E. Kratochvil &
Bradley J. Nelson

Instrument: Zeiss DSM 962

Affiliation: Institute of Robotics and Intelligent Systems (IRIS)
ETH, Zurich





micro & nano - graph

Title:

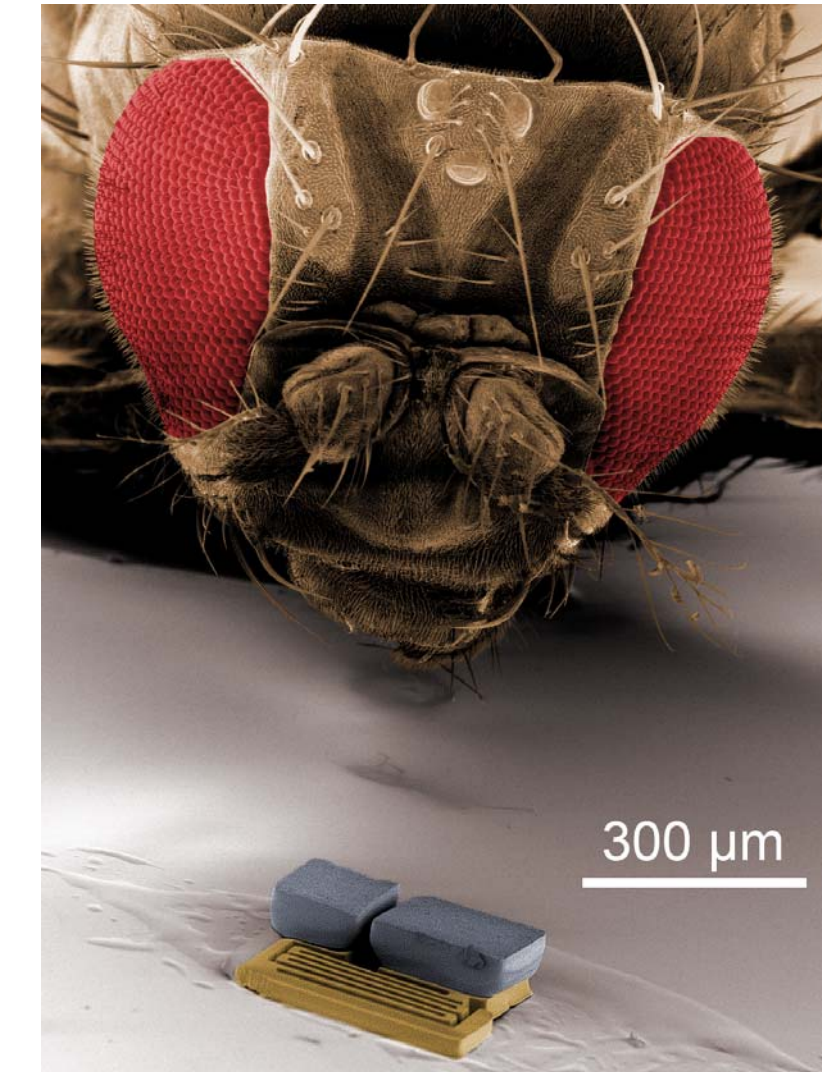
The Power of Nature

Description:

The image shows a wireless mobile microrobot alongside a *drosophila melanogaster*, which provides a dramatic contrast between the complexity of microfabricated agents and those found in nature.

Magnification: On image

Submitted by: Bradley E. Kratochvil &
Bradley J. Nelson



Instrument: Zeiss DSM 962

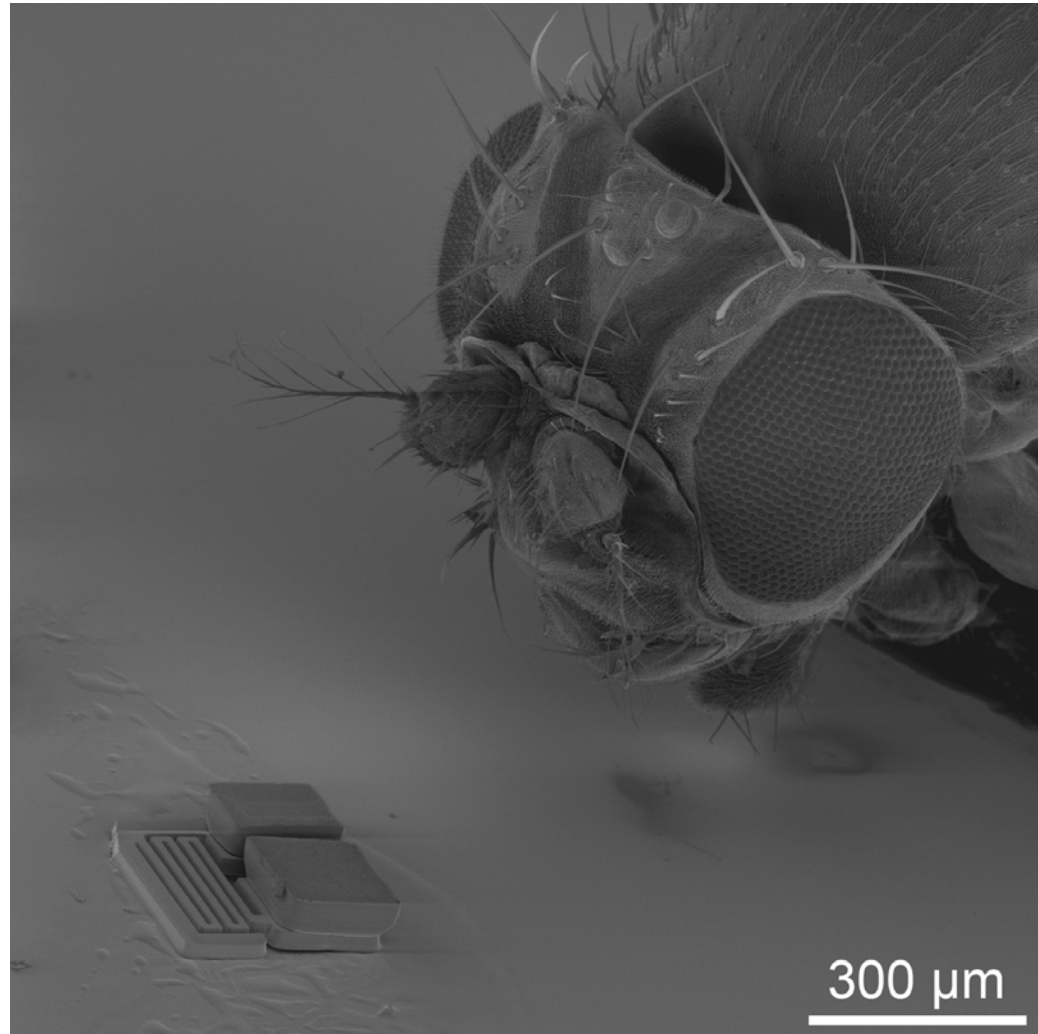
Affiliation: Institute of Robotics and Intelligent Systems (IRIS)
ETH, Zurich



micro & nano - graph Title:
Complexity

Description:

The image shows a wireless mobile microrobot alongside a *drosophila melanogaster*, which provides a dramatic contrast between the complexity of microfabricated agents and those found in nature.



Magnification: On image

Submitted by: Bradley E. Kratochvil &
Bradley J. Nelson

Instrument: Zeiss DSM 962

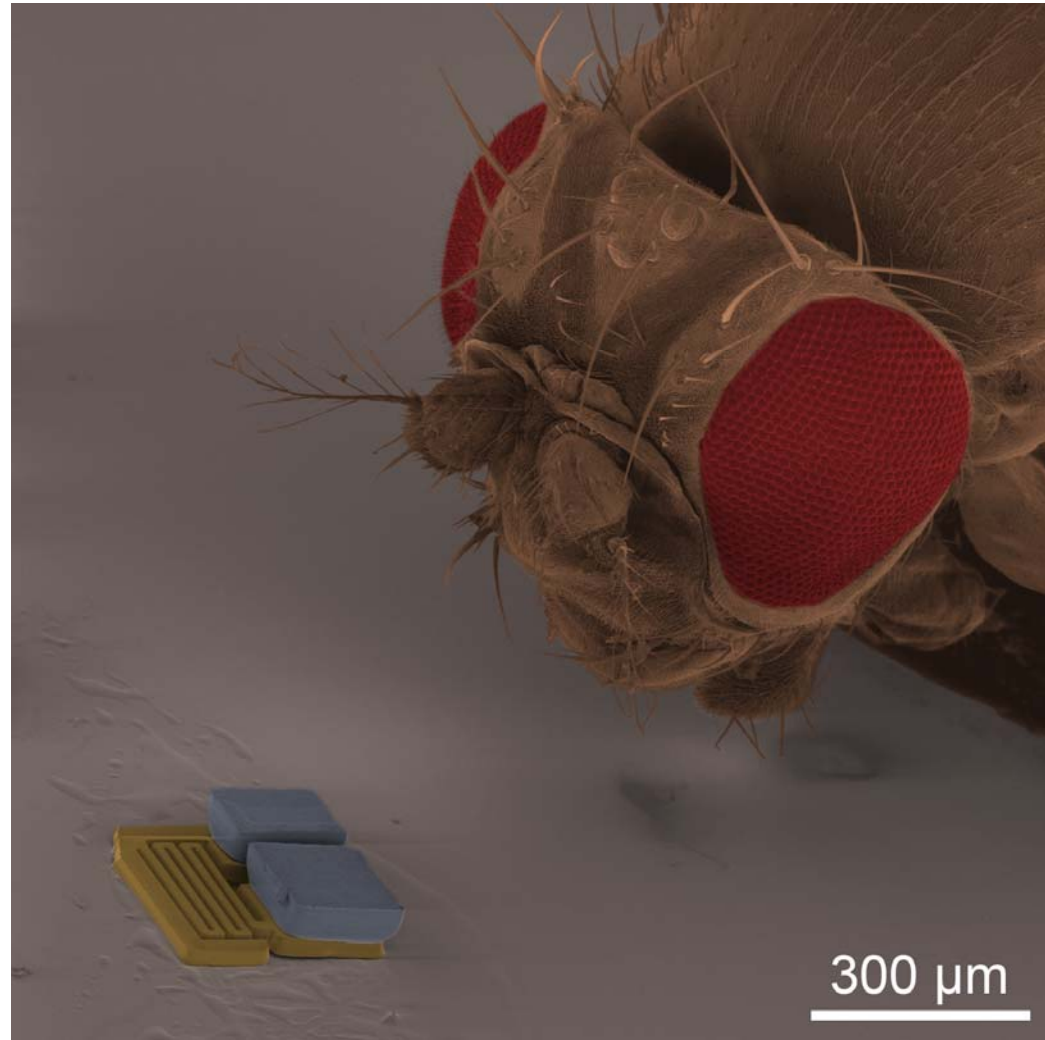
Affiliation: Institute of Robotics and Intelligent Systems (IRIS)
ETH, Zurich



micro & nano - graph Title:
Complexity

Description:

The image shows a wireless mobile microrobot alongside a *drosophila melanogaster*, which provides a dramatic contrast between the complexity of microfabricated agents and those found in nature.



Magnification: On image

Submitted by: Bradley E. Kratochvil &
Bradley J. Nelson

Instrument: Zeiss DSM 962

Affiliation: Institute of Robotics and Intelligent Systems (IRIS)
ETH, Zurich

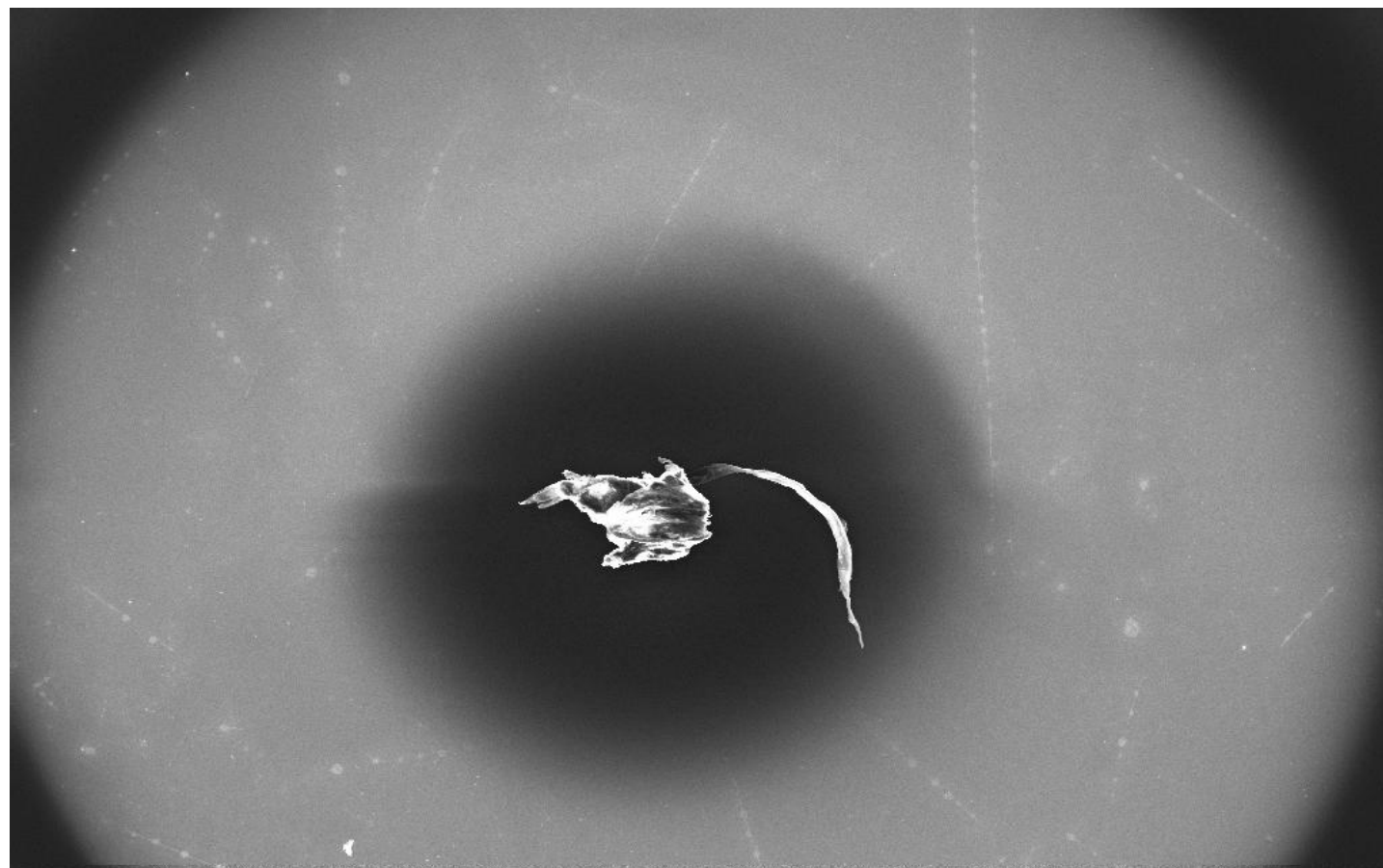


micro & nano - graph
Title:

Minimouse

Description:

Impurity on NEB35 resist
after coating



Mag = 66 X

100µm



EHT = 20.00 kV

WD = 4 mm

Signal A = InLens

Photo No. = 2793

Date :10 Jan 2007

Time :15:22:26

Magnification: 66 X

Submitted by: Maria Chiara Ubaldi

Instrument: Raith Elphy Plus - SEM Zeiss 1525

Affiliation: CoreCom - Milano, IT

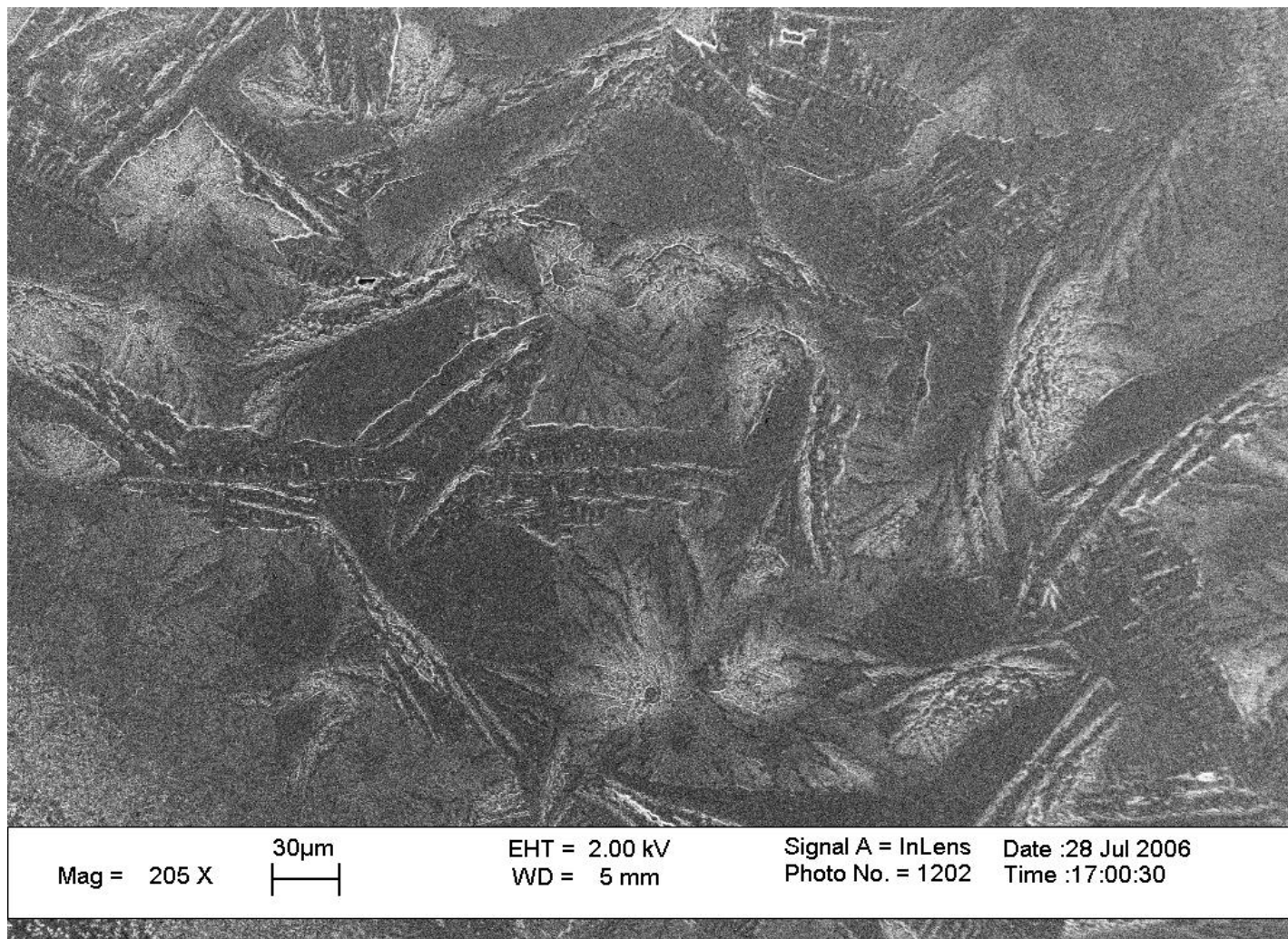


micro & nano - graph
Title:

Alpine chain air view

Description:

Impurity on NEB35 resist
after coating



Magnification: 205 X

Submitted by: Maria Chiara Ubaldi

Instrument: Raith Elphy Plus - SEM Zeiss 1525

Affiliation: CoreCom - Milano, IT

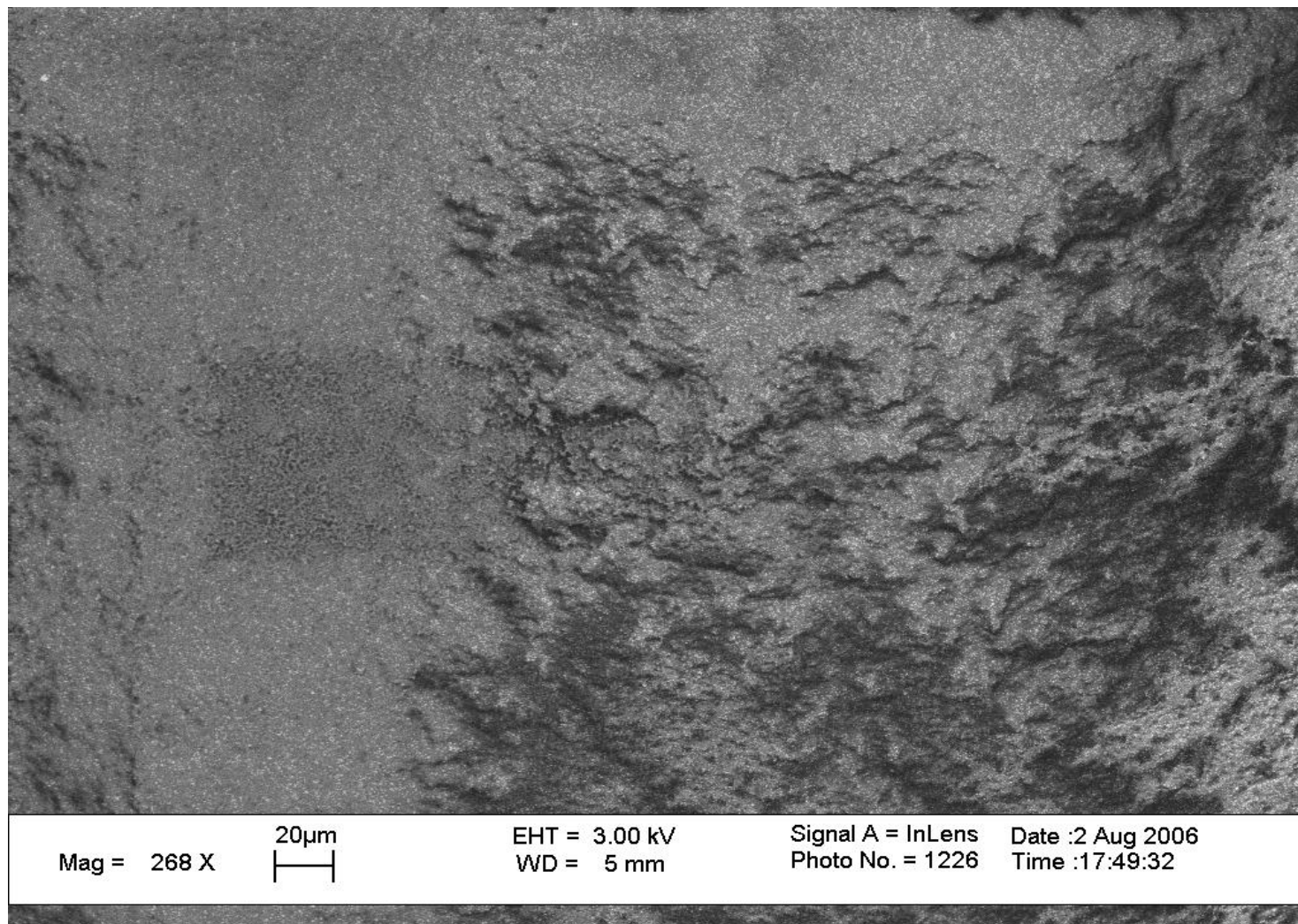


micro & nano - graph
Title:

Casting of lava

Description:

Scratched aluminium
surface



Magnification: 268 X

Submitted by: Maria Chiara Ubaldi

Instrument: Raith Elphy Plus - SEM Zeiss 1525

Affiliation: CoreCom - Milano, IT



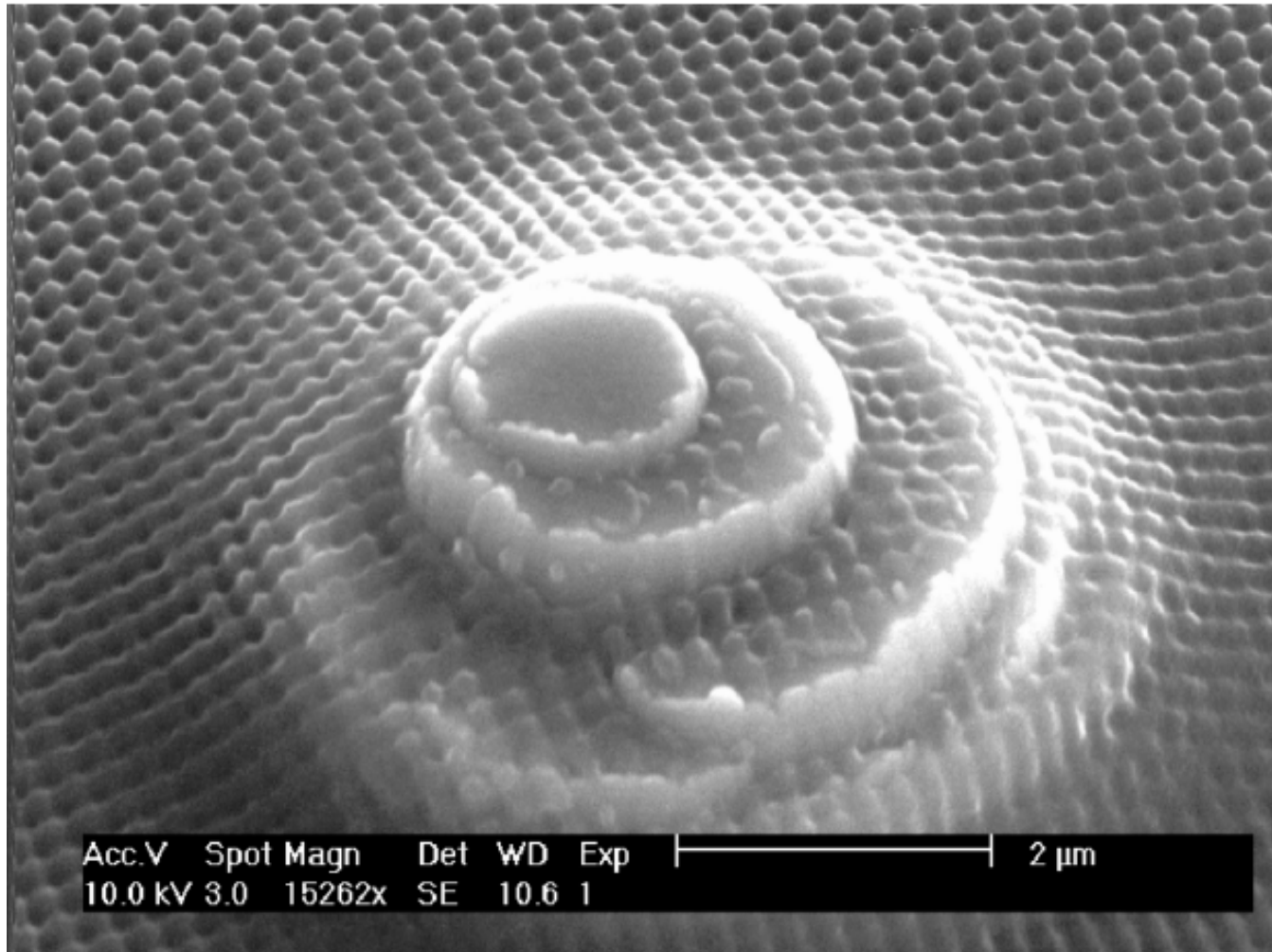
micro & nano - graph
Title:

Maya-tower

Description:
Originated during
etching of spray
coated resist on a
glass sample.
Nanopattern has been
interferometrically
exposed.

Magnification: 15,3 k X

Submitted by: Birgit Päivänranta



Instrument: JOEL JSM 6300

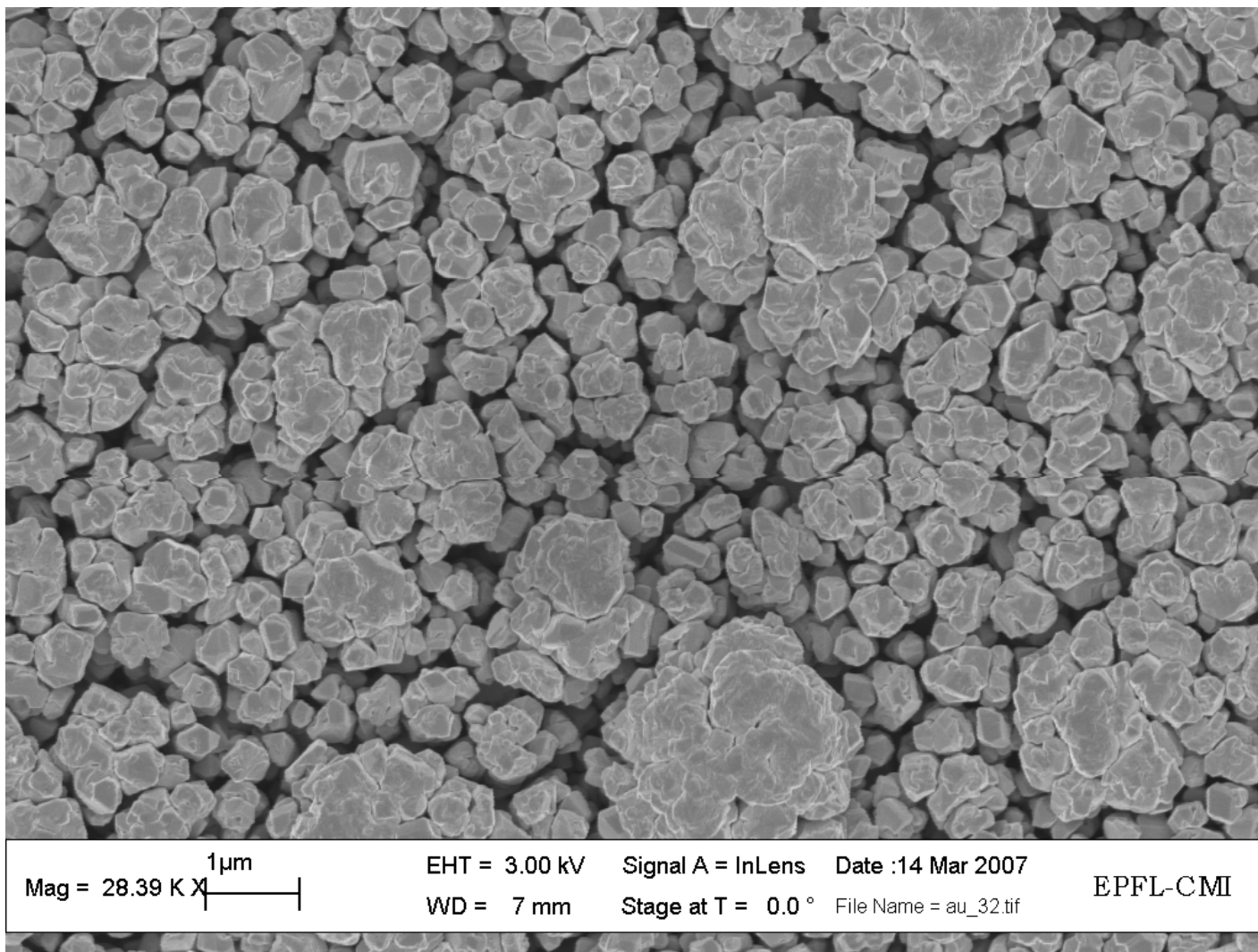
Affiliation: JOE - Joensuu



micro & nano - graph
Title:

Sweet Gold Cauliflower

Description:
Gold electroplating
applying too high
current density.



Magnification: 28.39 k X

Submitted by: Montserrat F.-Bolaños

Instrument: Zeiss LEO 1550, SEM

Affiliation: École Polytechnique Fédérale de Lausanne (EPFL)