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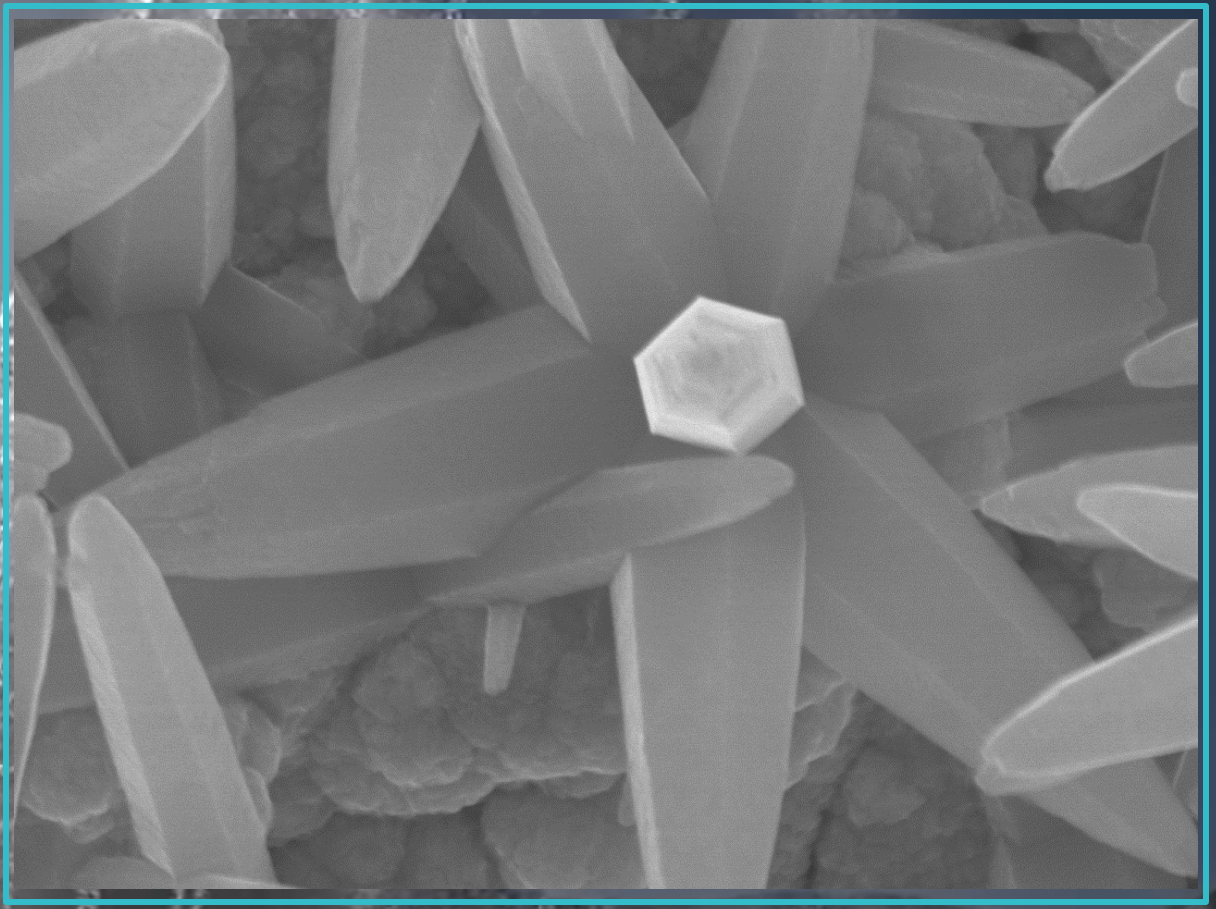
1

"Having a crush on him"

Description:
(Picking the flower petals) He doesn't like me, he likes me …… he doesn't like me, he likes me!!! I knew it!!!!!! We all like ZnO having many oxygen vacancy in our heart and is completed by the special one.



Submitted by: Wan-Ting Chiu
Affiliation: Tokyo Institute of Technology

Instrument: JEOL SEM 7500F
Magnification: 30 kX

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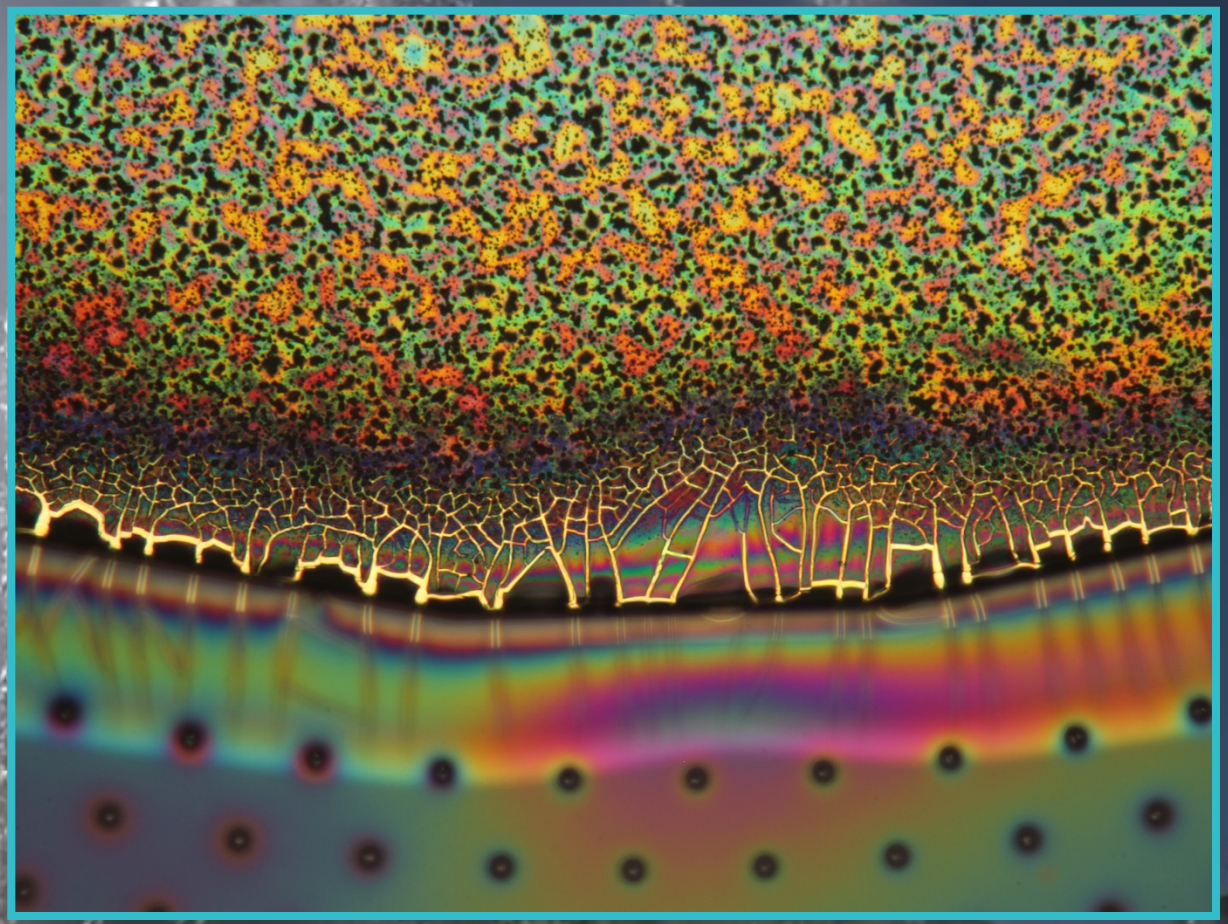
2017 Micro-Nano Graph ---------- Contest ----------

2

"Psychedelic microlandscape"



Description:

Electrochemical sensor produced by electrodeposition of a metal oxide and spin-coating of an ion-selective membrane. Optical interference in both inorganic and organic materials produced a landscape from another world.

Submitted by: Peter Jones
Affiliation: NMI, Reutlingen, Germany

Instrument: Olympus optical microscope
Magnification: 257x

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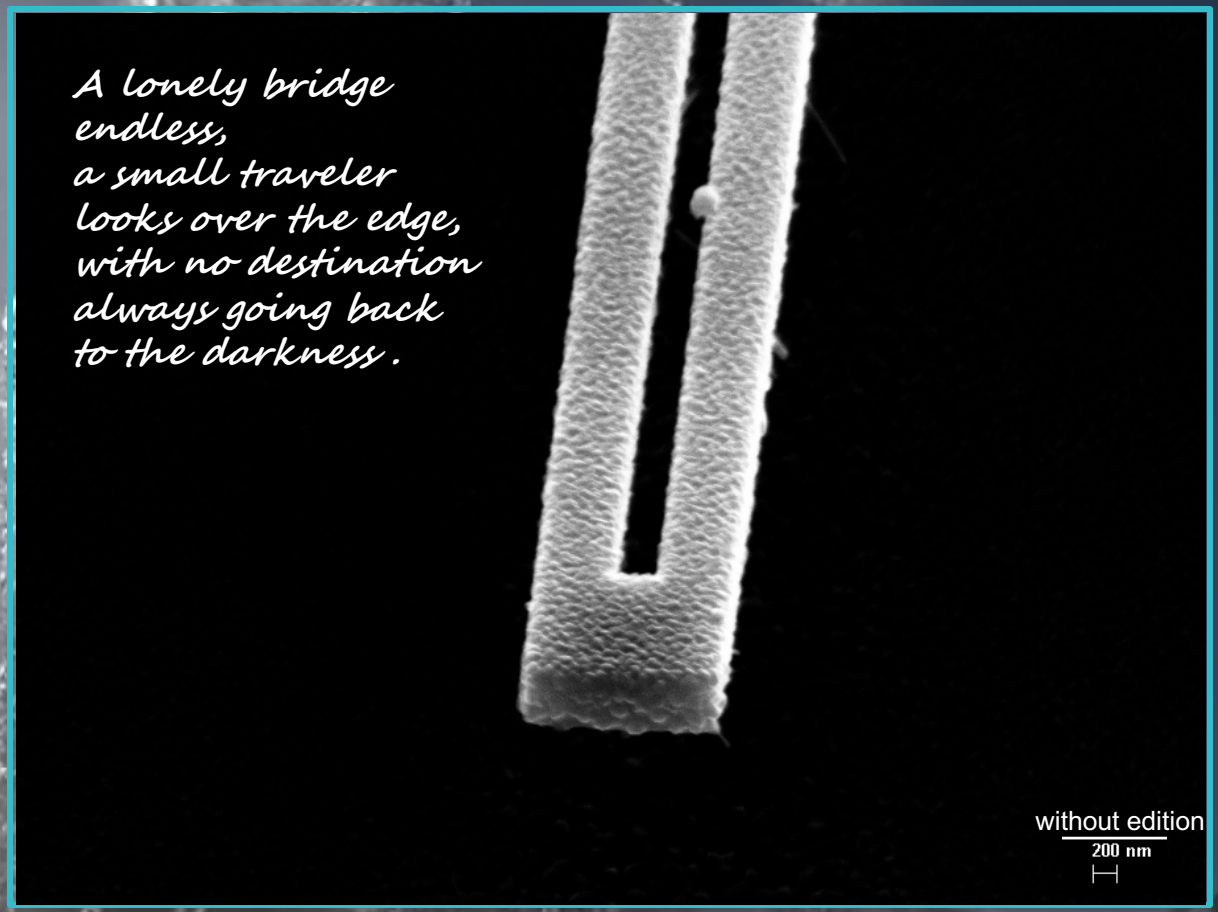
2017 Micro-Nano Graph ---------- Contest ----------

3

"traveler on a lonely bridge"

Description:

This is a fantastic SEM-micrograph of a micro double beam, since it is not edited at all.
The dark background comes from the high contrast in the tilted position of the stage.



Submitted by: Sanaz Rastjoo
Affiliation: IMT - KIT
Instrument: SEM – Zeiss SUPRA 60VP
Magnification: 27 kX

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2017 Micro-Nano Graph
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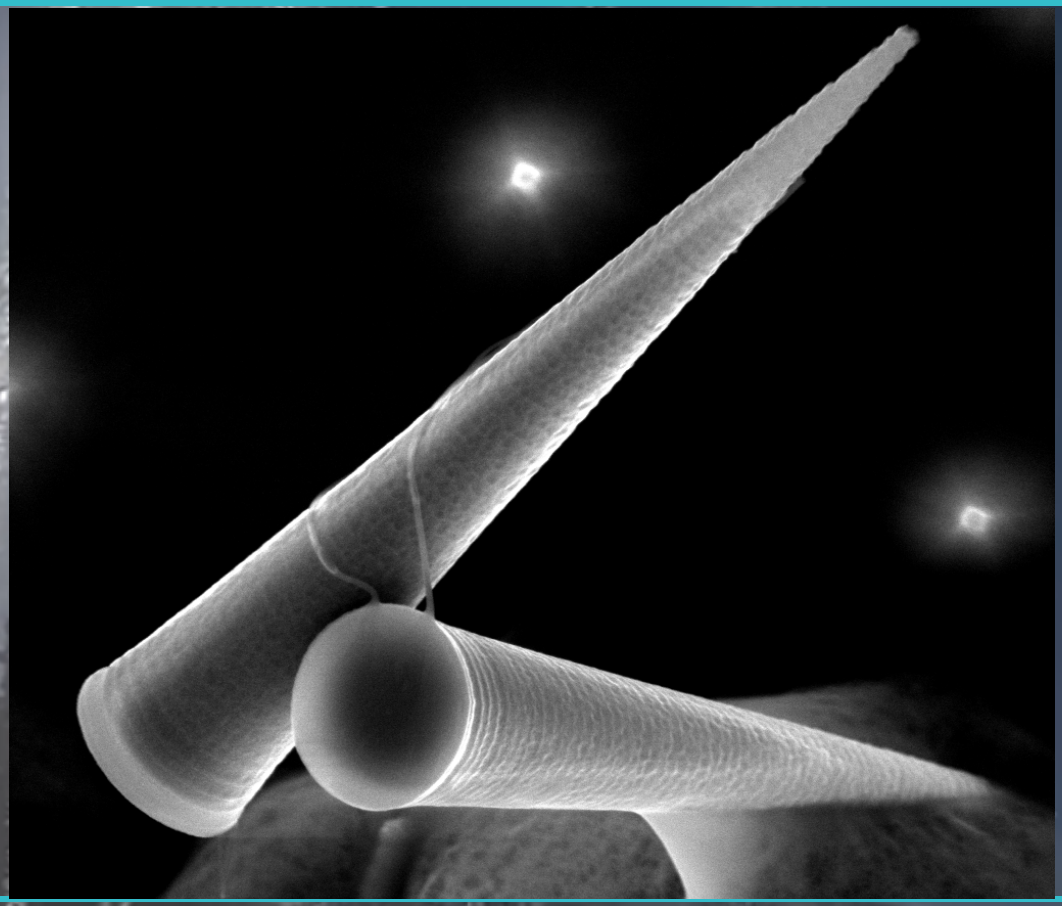
4

"Hats in the stars"

Description:
Conical micro-pillars detached from the silicon device and kept in position by a DNA fiber.



Submitted by: Monica Marini
Affiliation: KAUST, Kingdom of Saudi Arabia

Instrument: FEI, Quanta 200
Magnification: 15806 X

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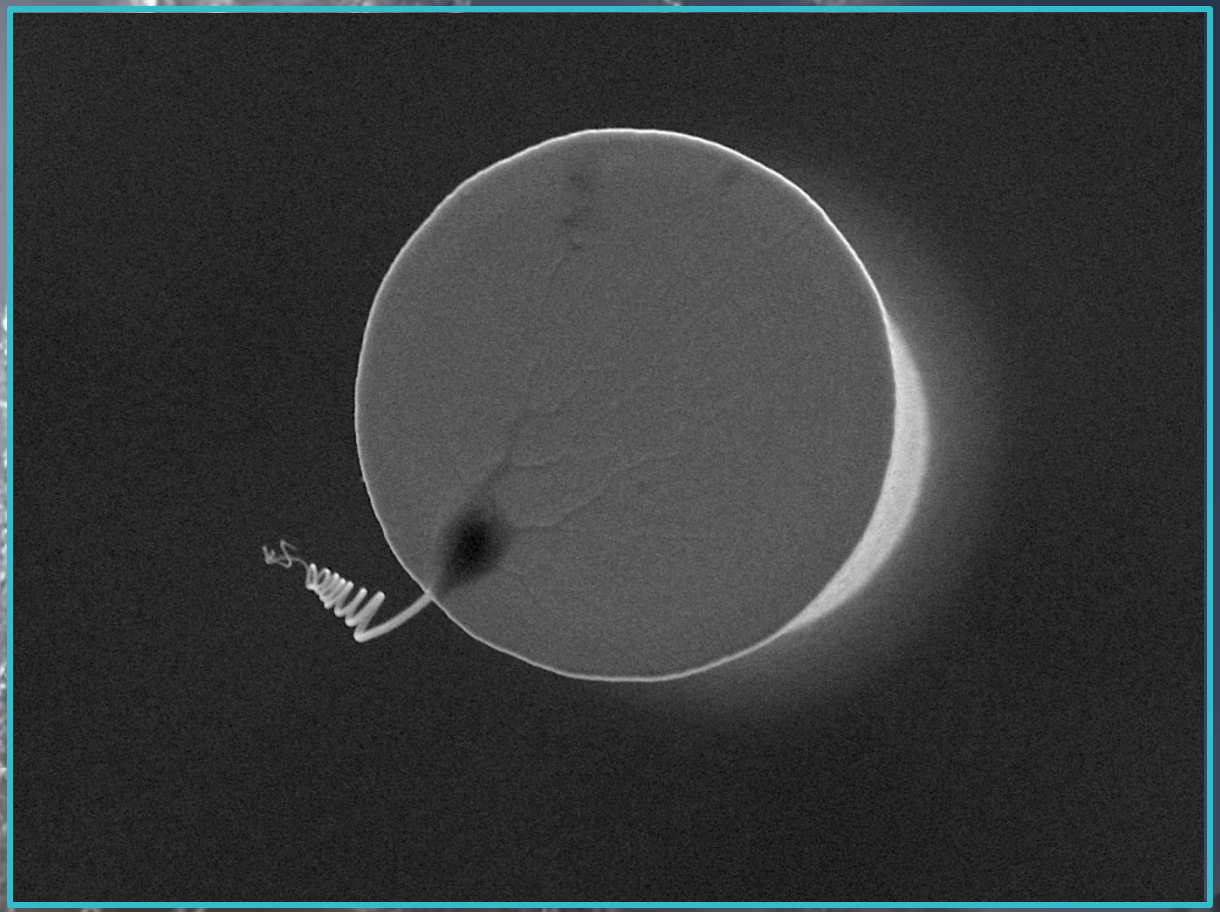
5

"DNA curls"

Description:
DNA fiber hanging from the edge of a cylindrical micro-pillar.



Submitted by: Monica Marini
Affiliation: KAUST, Kingdom of Saudi Arabia

Instrument: FEI, Quanta 200
Magnification: 16000 X

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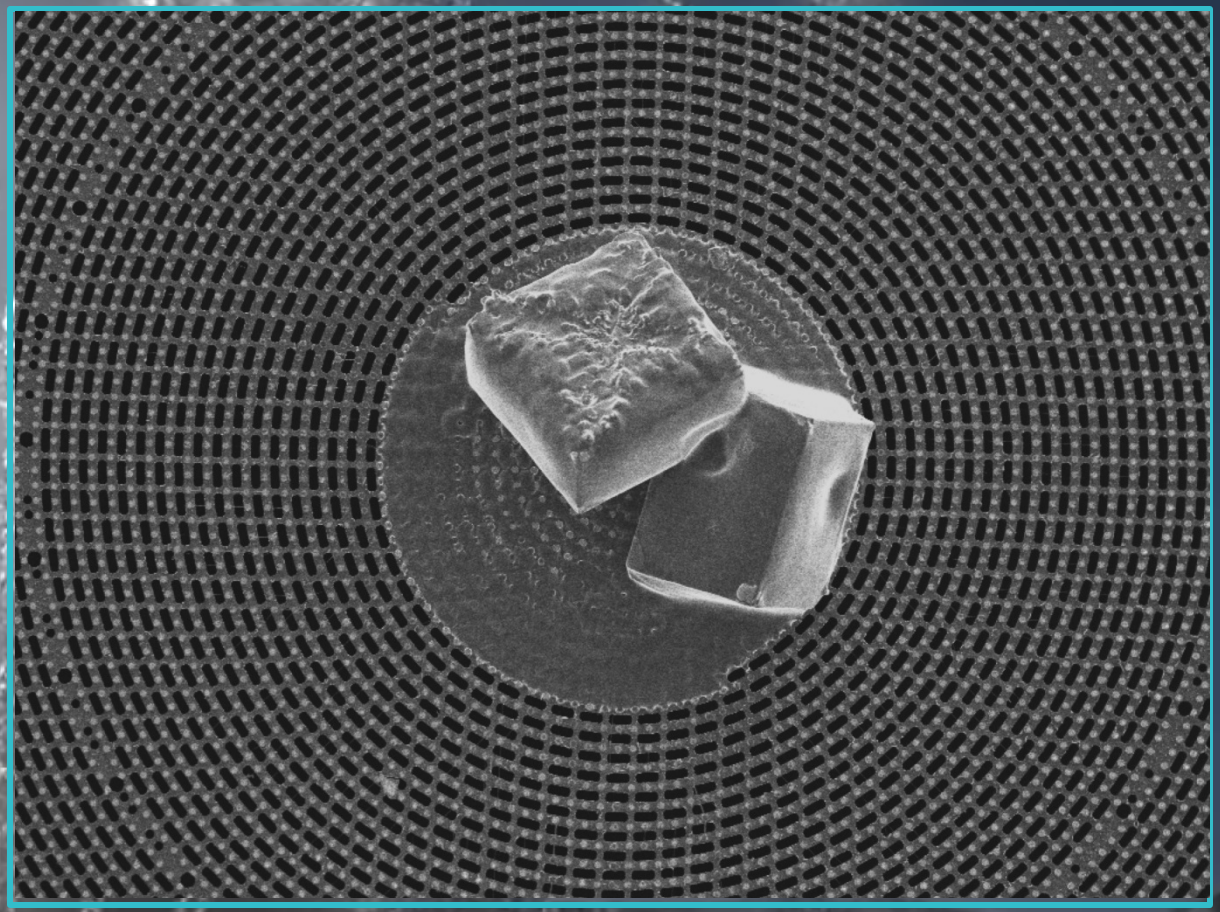
6

"Salt dices"

Description:
Salt and DNA residual over a super-hydrophobic surface, obtained by the dehydration of a saline solution droplet.



Submitted by: Monica Marini
Affiliation: KAUST, Kingdom of Saudi Arabia
Instrument: FEI, Quanta 200
Magnification: 229 X

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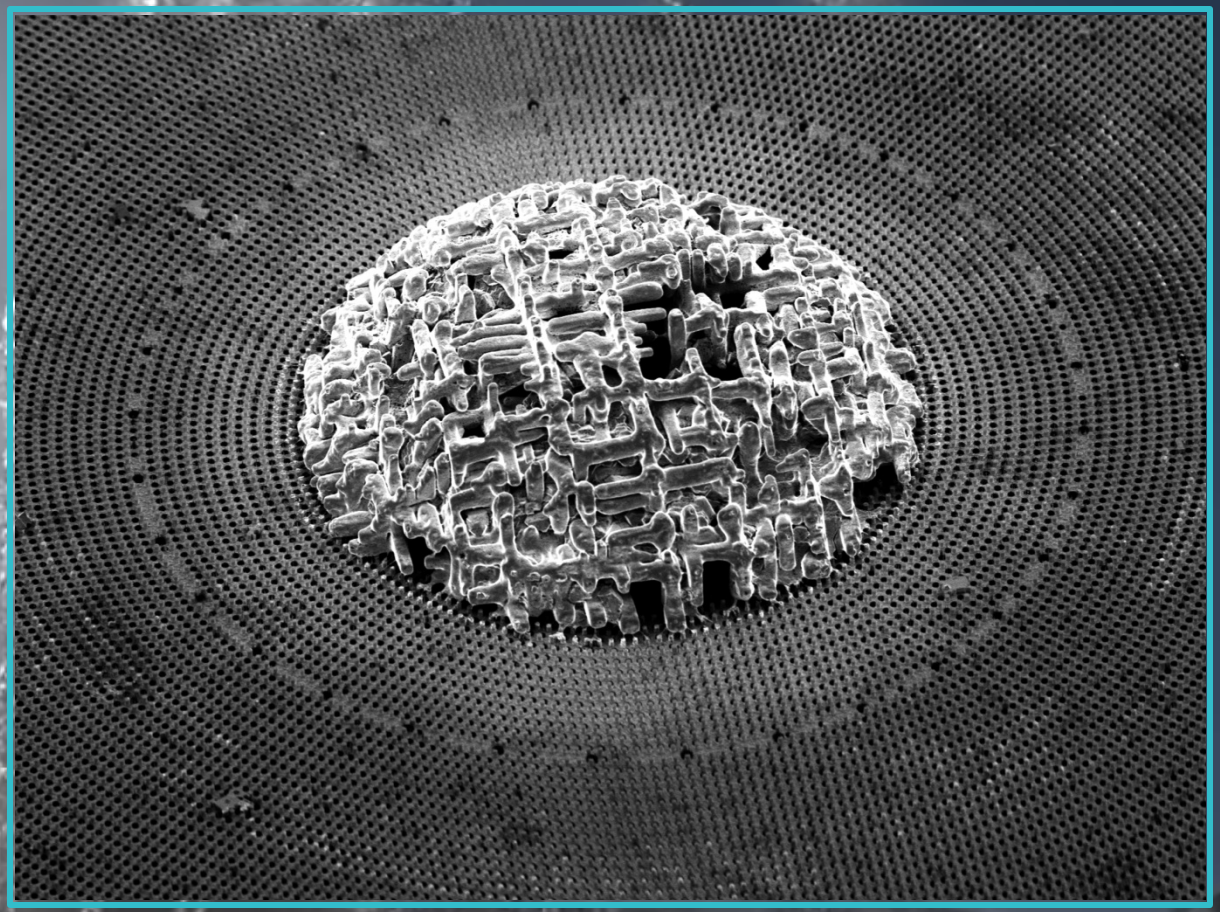
7

"Suspended cave"

Description:
Salt residual obtained after saline solution droplet dehydration over a super-hydrophobic device.



Submitted by: Monica Marini
Affiliation: KAUST, Kingdom of Saudi Arabia

Instrument: FEI, Quanta 200
Magnification: 181 X

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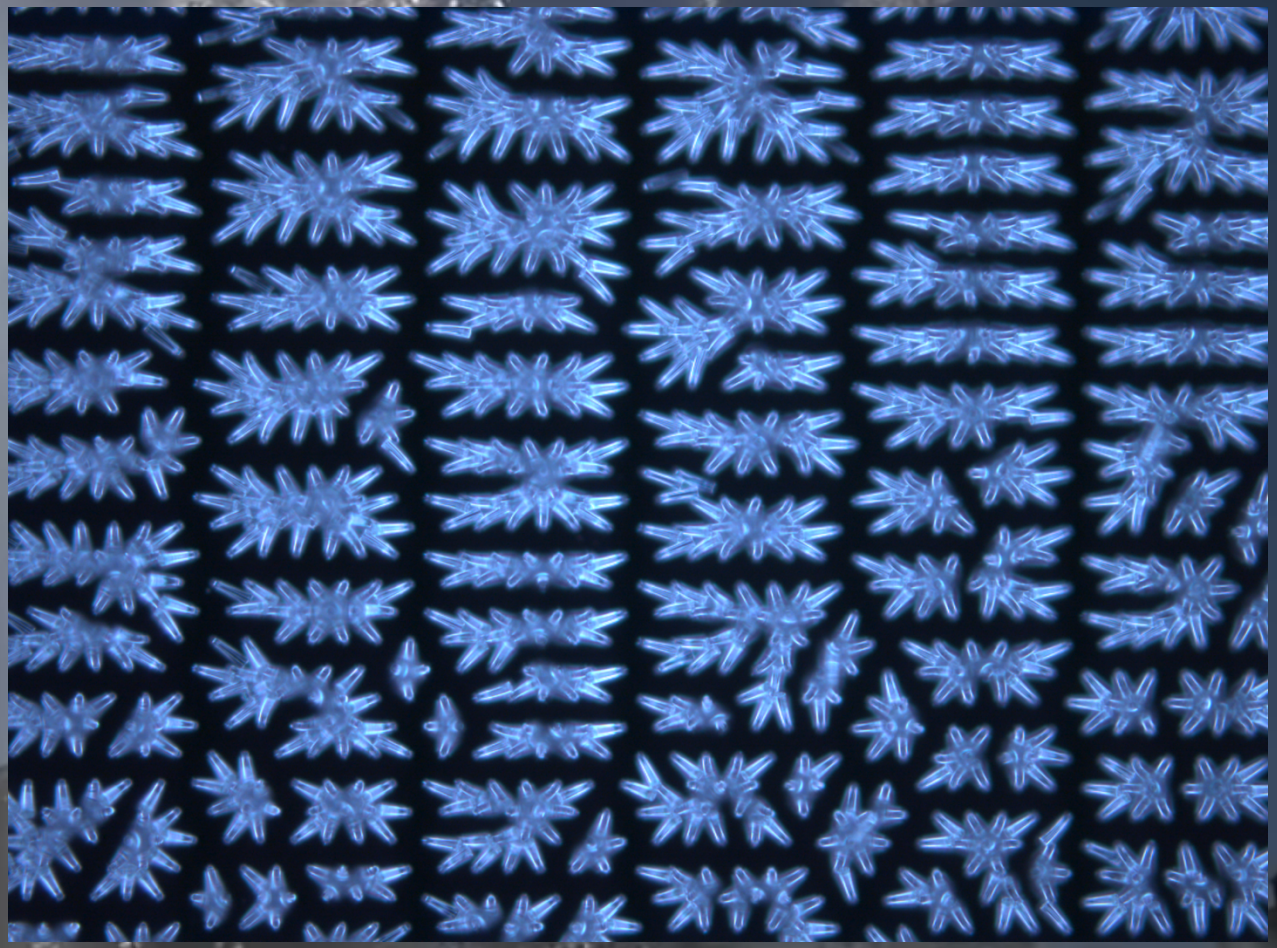
8

"Ghost Pillars Army"

Description:

The soul of passed away SU8 micro-pillars after collapsing due to heating on a hot plate before IPA rinsing solvent completely dried.



Submitted by: Angelo Accardo
Affiliation: LAAS-CNRS
Instrument: Leica DM4000 M
Magnification: 20X

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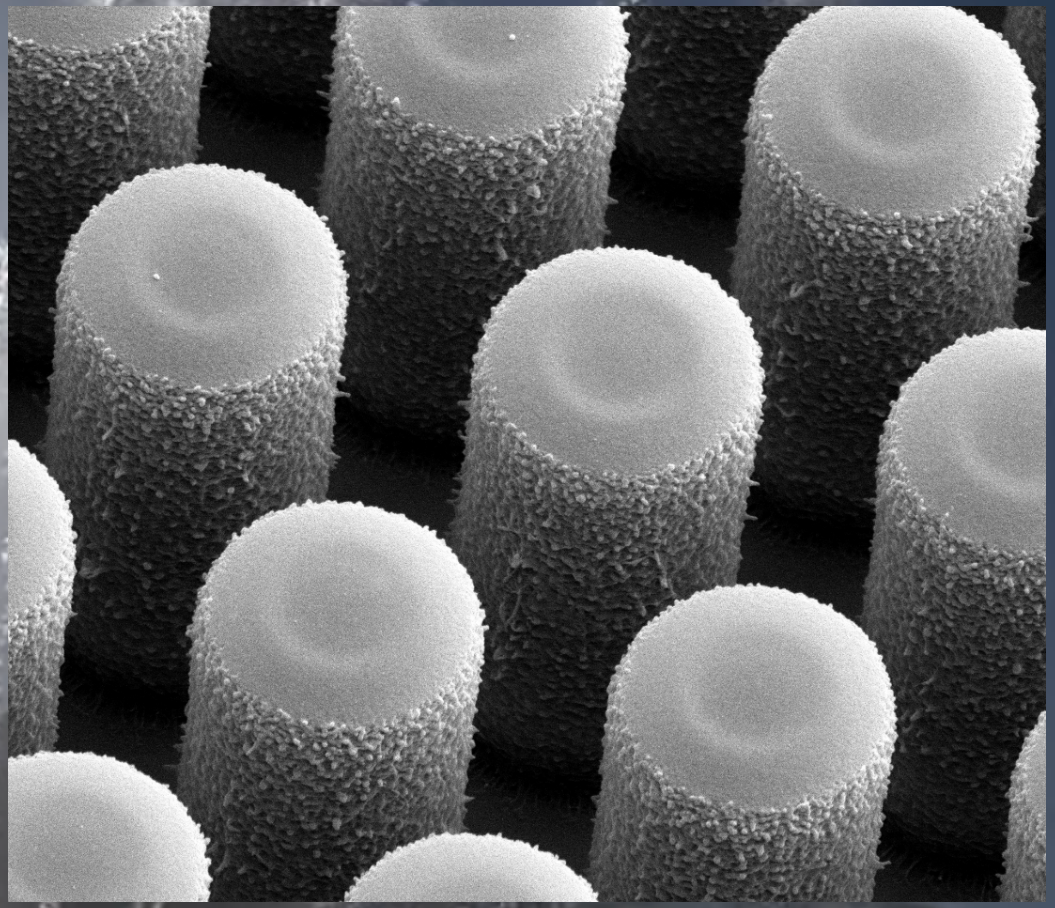
9

"Where's the razor blade?"

Description:

These SU8 beardy pillars, coming out from an abnormal chemical development, definitely need a shave…



Submitted by: Angelo Accardo
Affiliation: LAAS-CNRS

Instrument: FEI Helios Nanolab 600
Magnification: 10000X

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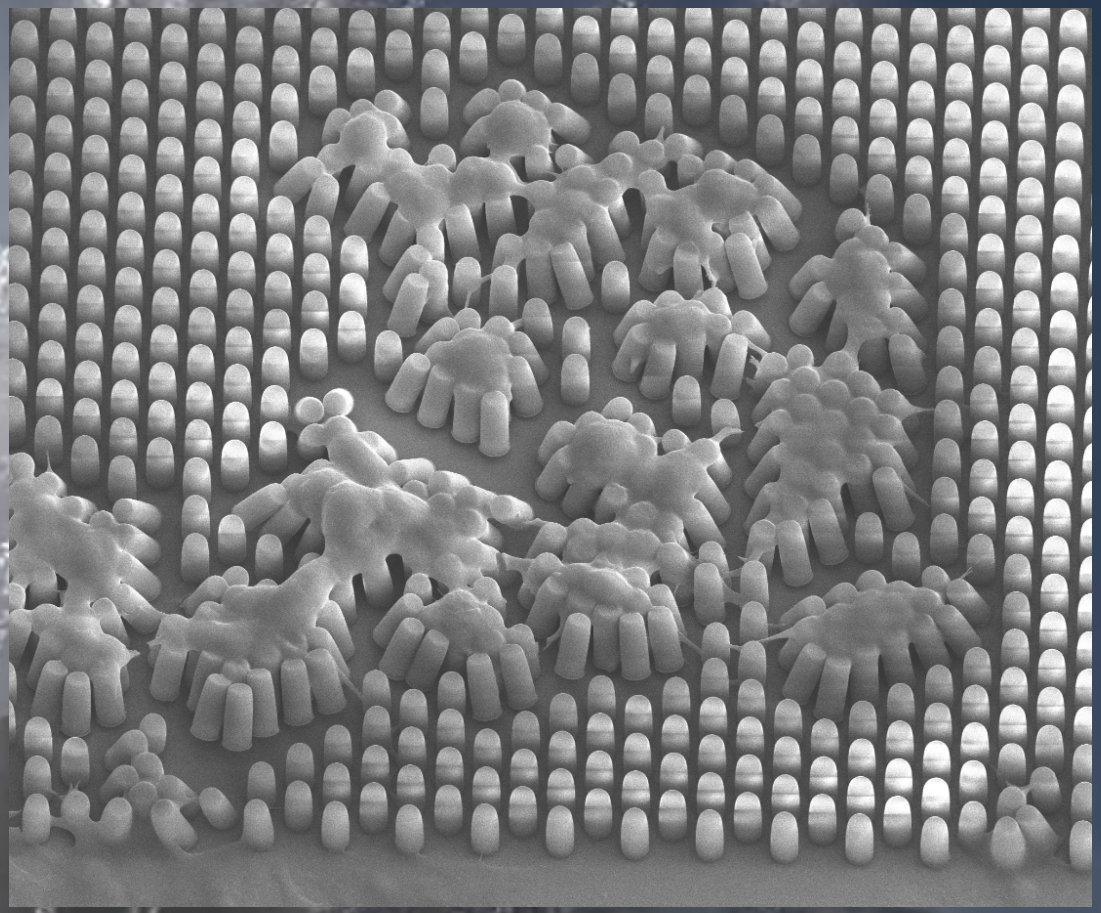
10

"The Force of Life"

Description:
The strength of colorectal cancer cells (HCT116) detaching polymeric micro-pillars fabricated on a silicon substrate.



Submitted by: Angelo Accardo
Affiliation: LAAS-CNRS

Instrument: FEI Helios Nanolab 600
Magnification: 1000X

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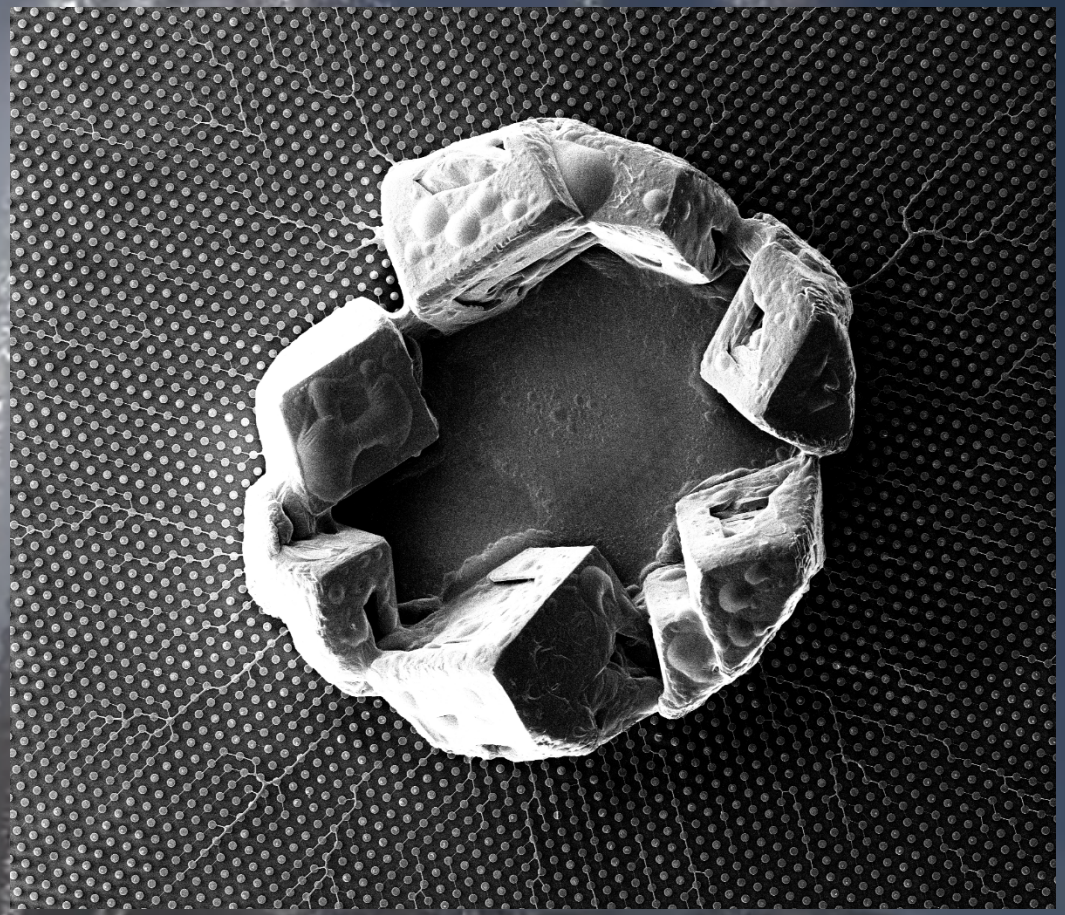
11

"The Arena"

Description:

People travel along DNA (fiber) highways to see the show taking place at the Arena formed by crystals of salt present in the buffer solution droplet dried on superhydrophobic pillars.



Submitted by: Angelo Accardo
Affiliation: LAAS-CNRS

Instrument: FEI Helios Nanolab 600
Magnification: 80X

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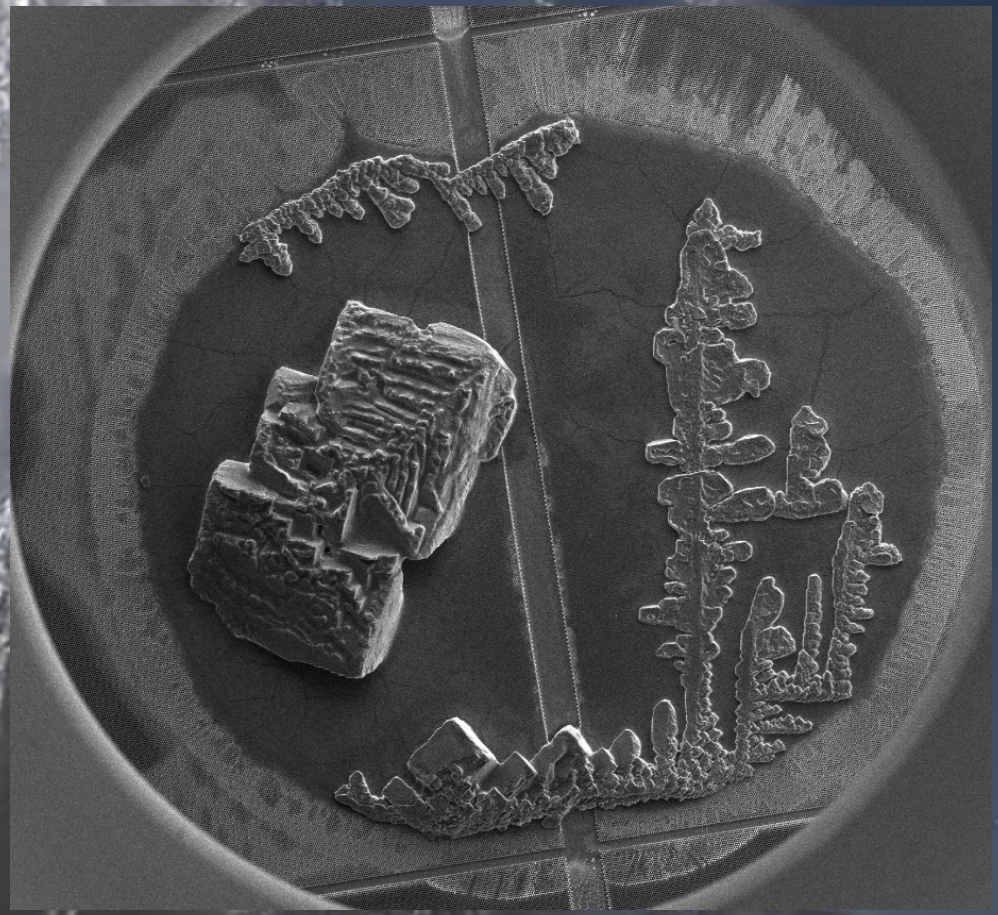
12

"Deep Impact"

Description:

A meteorite going to impact the calm landscape made of salt crystals formed upon evaporation of a buffer solution onto a superhydrophobic surface.



Submitted by: Angelo Accardo
Affiliation: LAAS-CNRS

Instrument: FEI Helios Nanolab 600
Magnification: 50X

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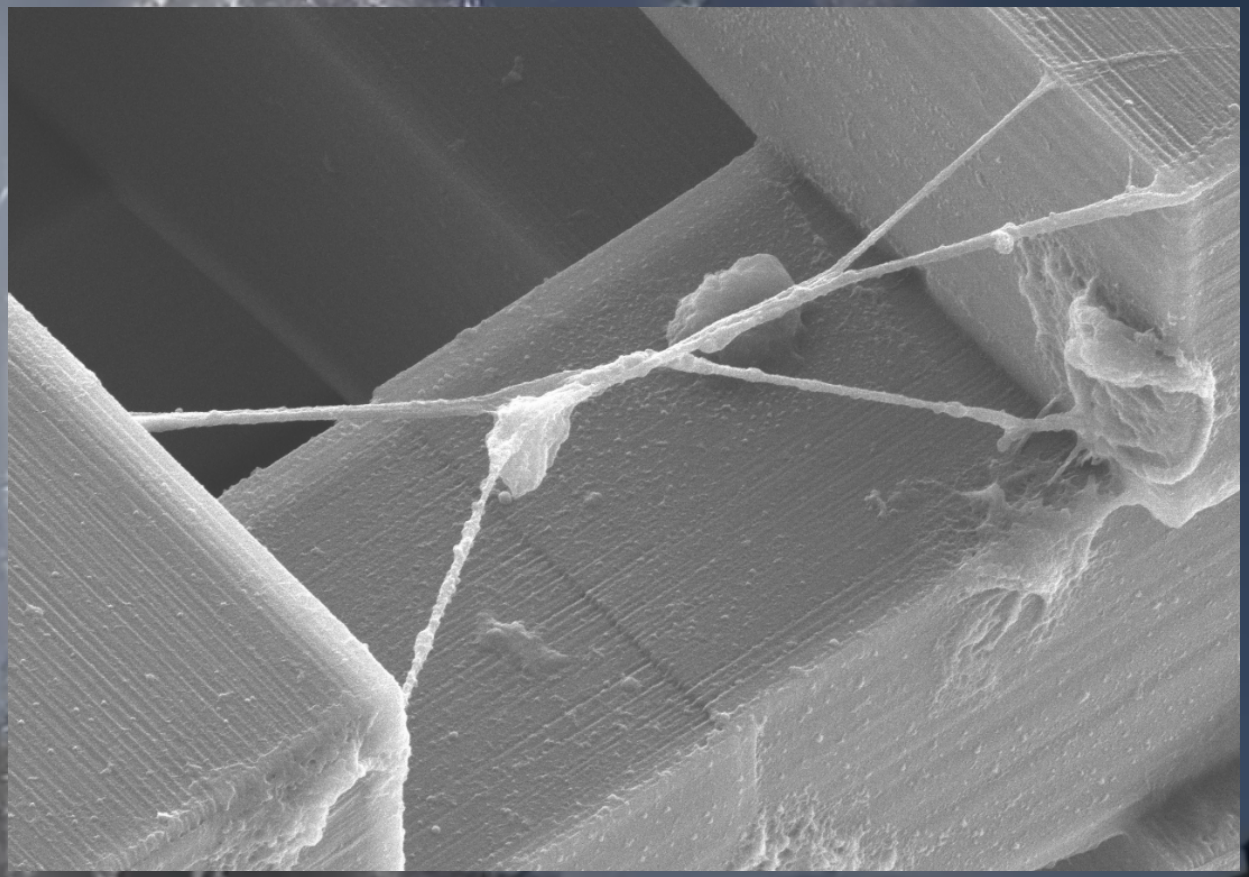
13

"When Parkour goes wrong"

Description:

That's what happens when amateurs try parkour…stuck between two sidewalls. Body, head and limbs (including the extra-leg) of the poor guy are coming from the filamentous contamination of a cell culture on 3D scaffolds.



Submitted by: Angelo Accardo
Affiliation: LAAS-CNRS
Instrument: Hitachi S-4800
Magnification: 2000X

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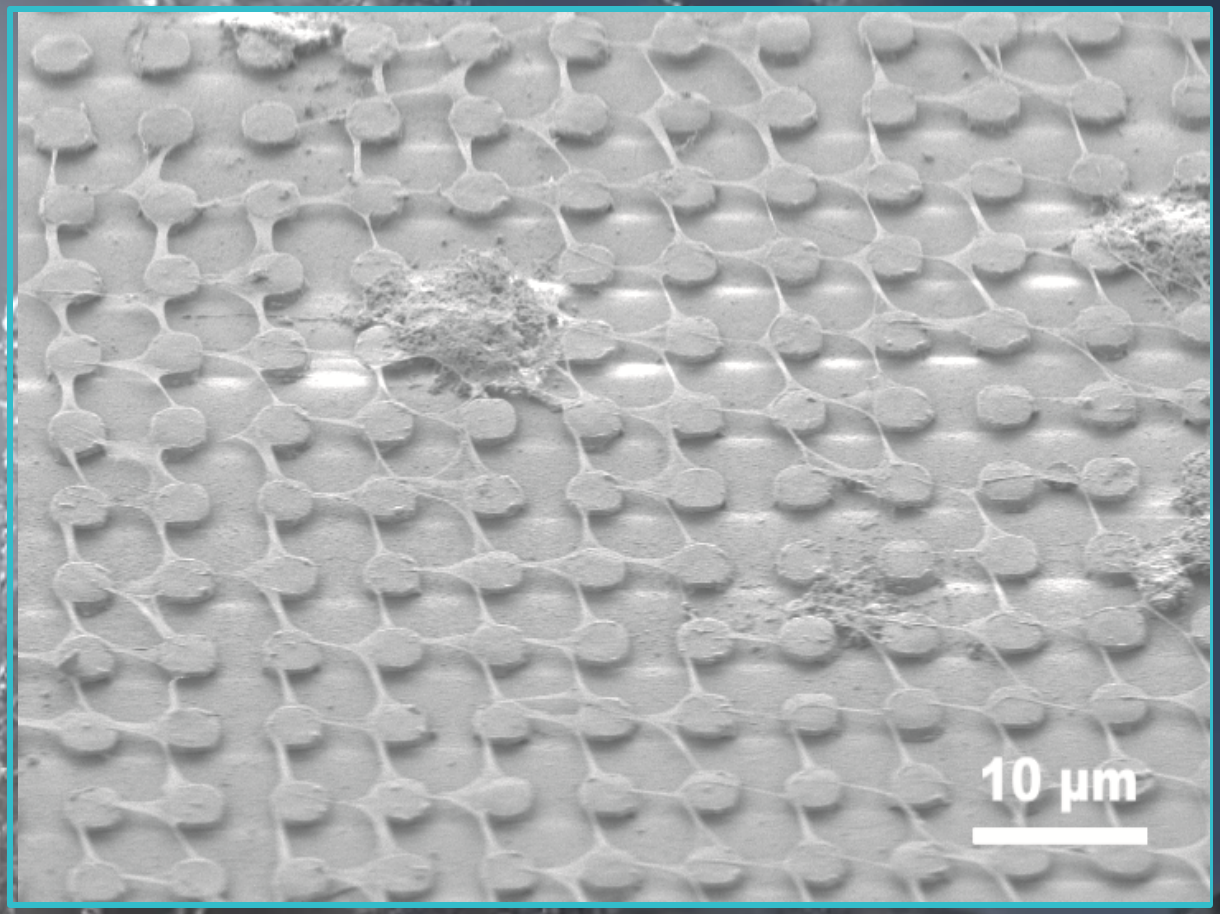
14

"Spider micro-network"

Description:

Spider micro-network created by mouse neurons over a platform of AlN-microparticles. How amazing is to observe the delicate floating pattern created that interconnects almost all the microparticles



Submitted by: Carolina Vargas Estevez
Affiliation: Institut de Microelectrònica de Barcelona
IMB-CNM(CSIC)
Instrument: SEM Carl Zeiss, Auriga Series
Magnification: 3 kX

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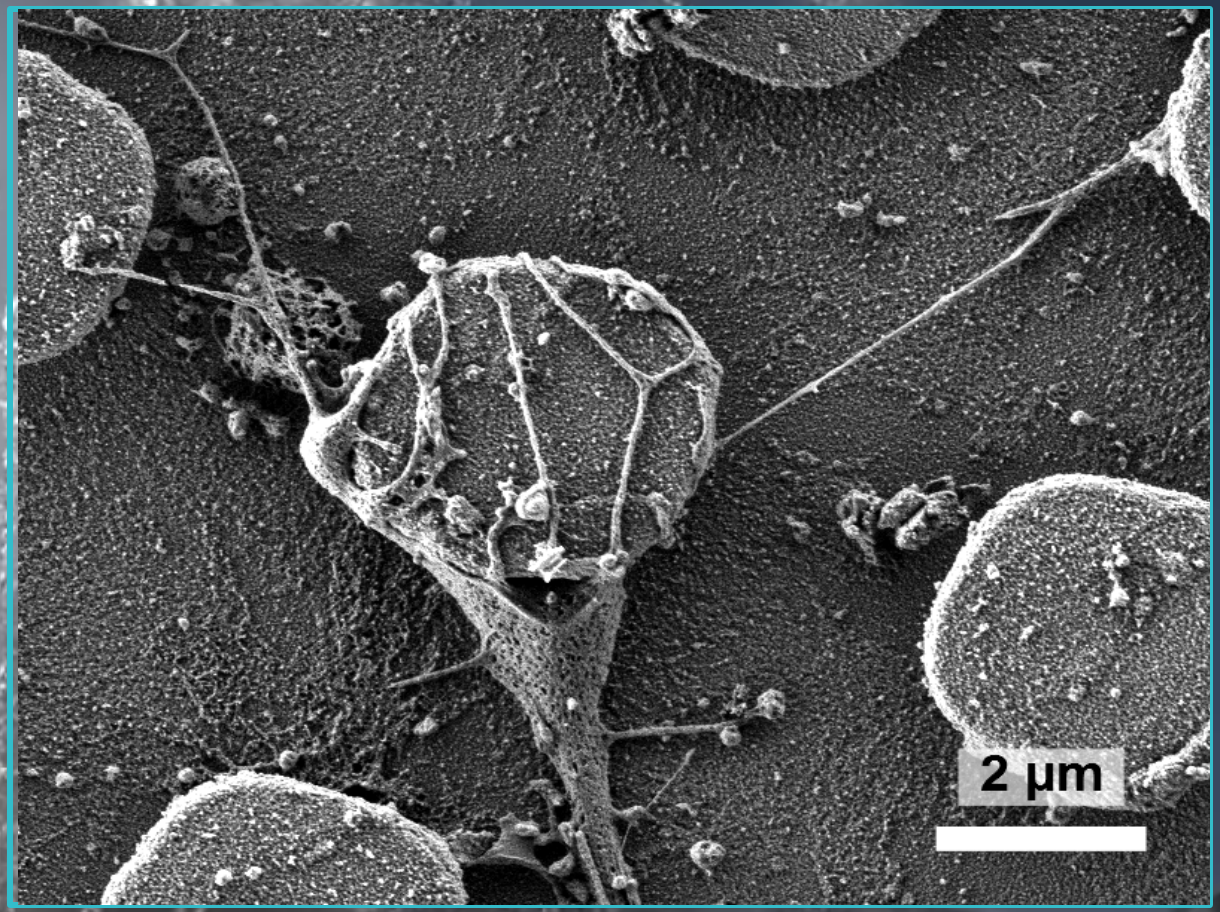
15

"Branched cage"

Description:

These AlN microparticles platforms were the growth field of some mouse neurons, whose intricated branches decided to encage some of these microparticles. The reason of this attraction was the electric stimulus created by the microstructure once they were touched.



Submitted by: Carolina Vargas Estevez
Affiliation: Institut de Microelectrònica de Barcelona
IMB-CNM(CSIC)
Instrument: SEM Carl Zeiss, Merlin Series
Magnification: 8 kX

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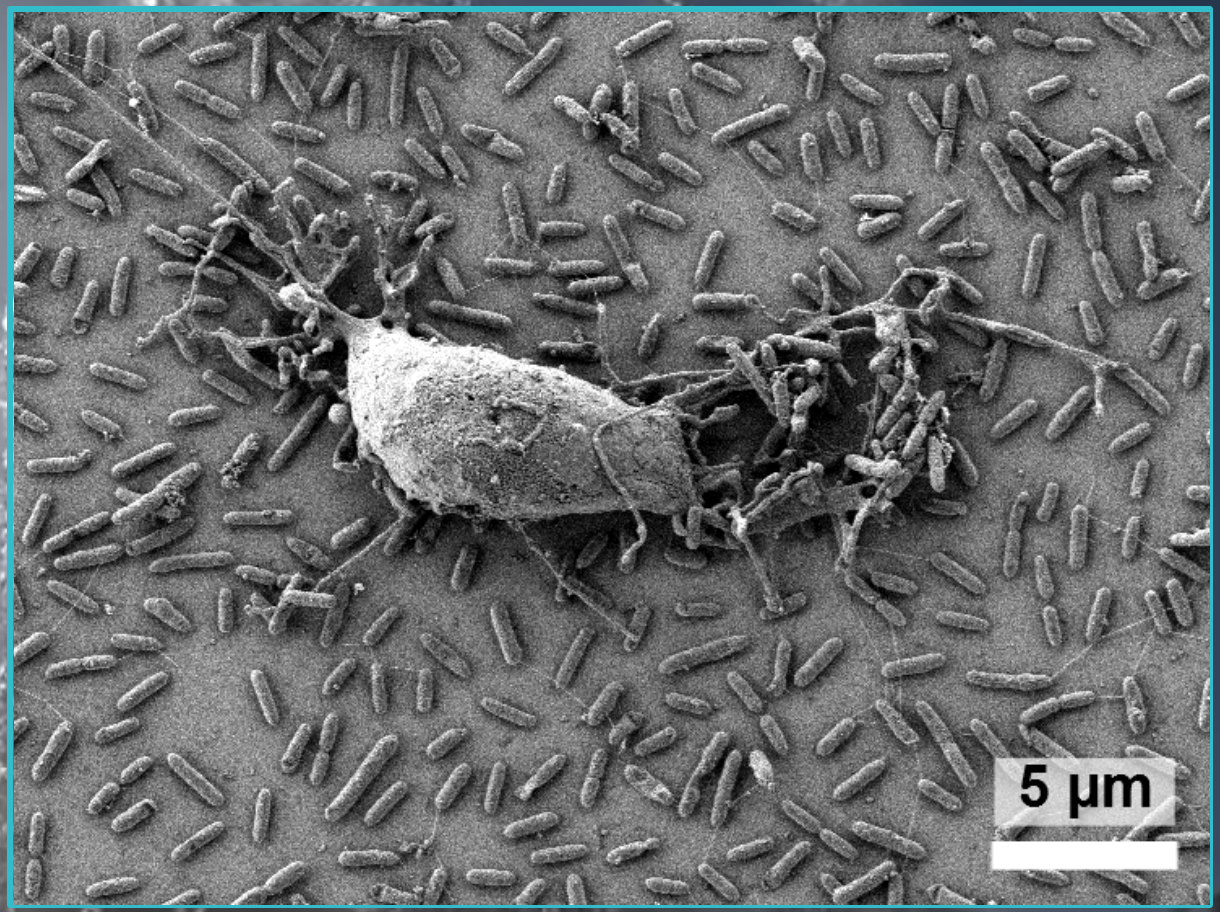
16

"Relentless assassins"

Description:

This is the evidence how these little assassins can relentlessly consume all. What we see here is what is left of some neurons that were devoured by these bacteria.



Submitted by: Carolina Vargas Estevez
Affiliation: Institut de Microelectrònica de Barcelona
IMB-CNM(CSIC)
Instrument: SEM Carl Zeiss, Auriga Series
Magnification: 3,3 kX

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17

"Micro-Supernova"

Description:

Breakdown leading to explosive evaporation of gold-PDMS nanoparticles to self-clear defects in nanometer-thin dielectric elastomer transducers

Submitted by: Tino Töpper and Bert Müller
Affiliation: University of Basel, Switzerland
Instrument: Carl Zeiss Microscope Stemi DV4 Spot
Magnification: 20x

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18

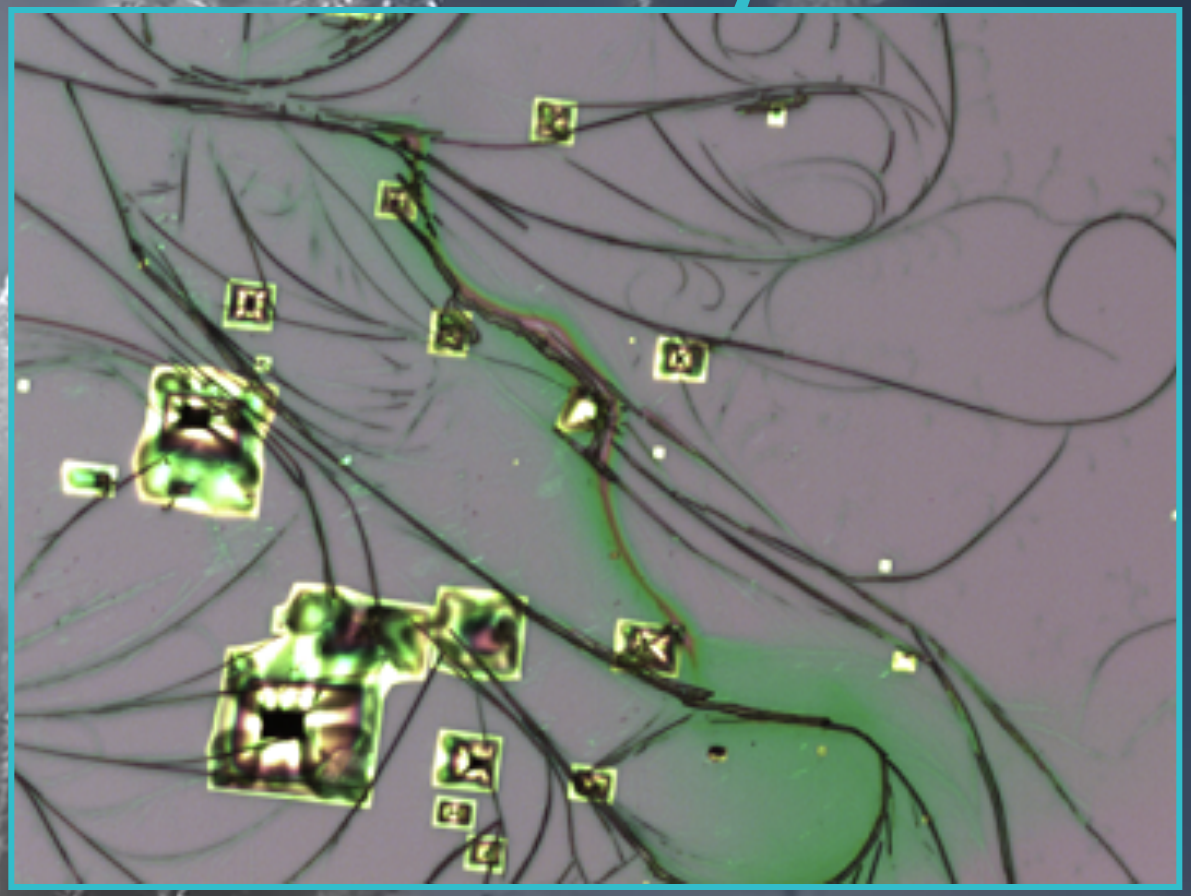
"Membranes on a stormy wafer"

Description:

I attempted to make *one* of these squares, which are in fact thin silicon nitride membranes.

The sample attempted to make art.

Me-Sample: 0-1



Submitted by: Madeleine Nilsen
Affiliation: EBS, Ulm University, Germany
Instrument: Nikon Mikrophot FXA
Magnification: 20x

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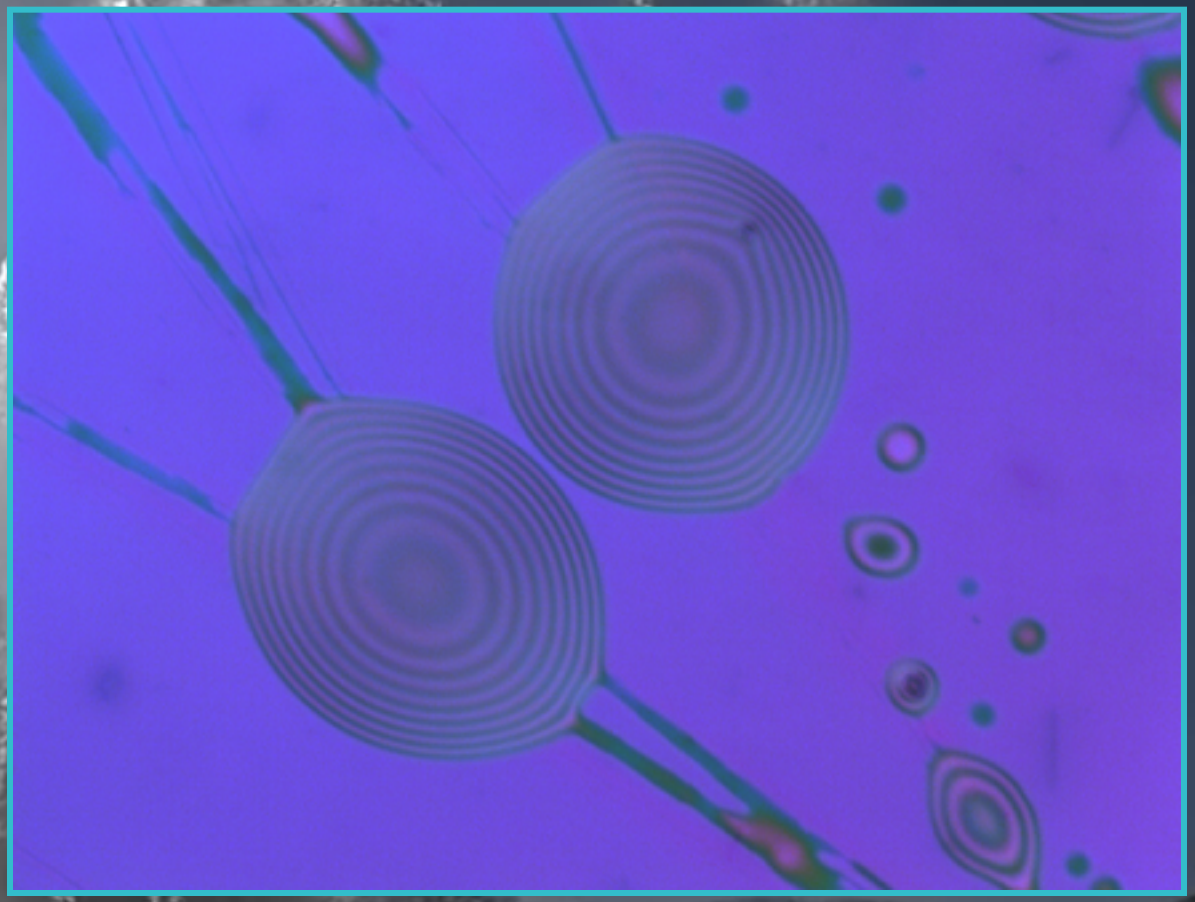
19

"Twin Mountains"

Description:

Looking like a topographic map of a landscape, these bubbles formed in PECVD silicon nitride during wet etching in KOH



Submitted by: Madeleine Nilsen
Affiliation: EBS, Ulm University, Germany

Instrument: Nikon Mikrophot FXA
Magnification: 40x

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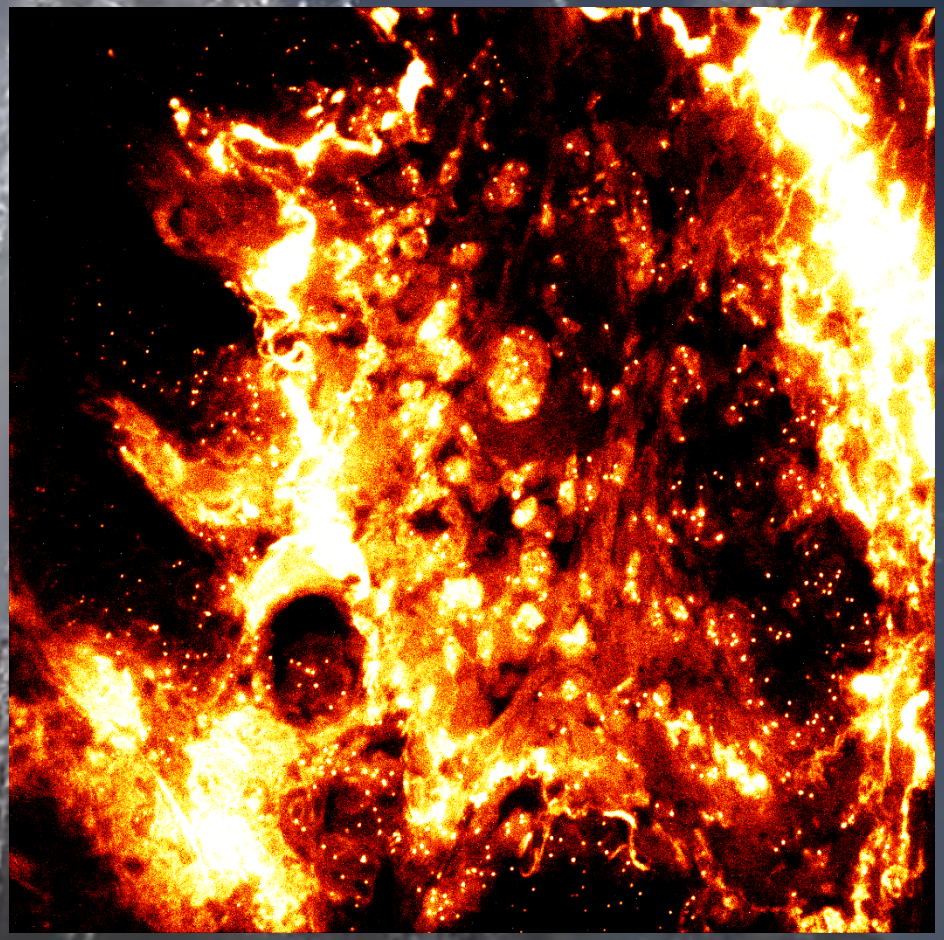
20

"Cells on fire"

Description:

The autofluorescent connective tissue resembles a fire with flying sparks.

Overexposed fluorescence micrograph of FISH signals after *in situ* hybridization.



Submitted by: Deborah Huber
Affiliation: IBM Research – Zurich,
Instrument: Nikon Microscope Eclipse Ti-E
Magnification: 40x

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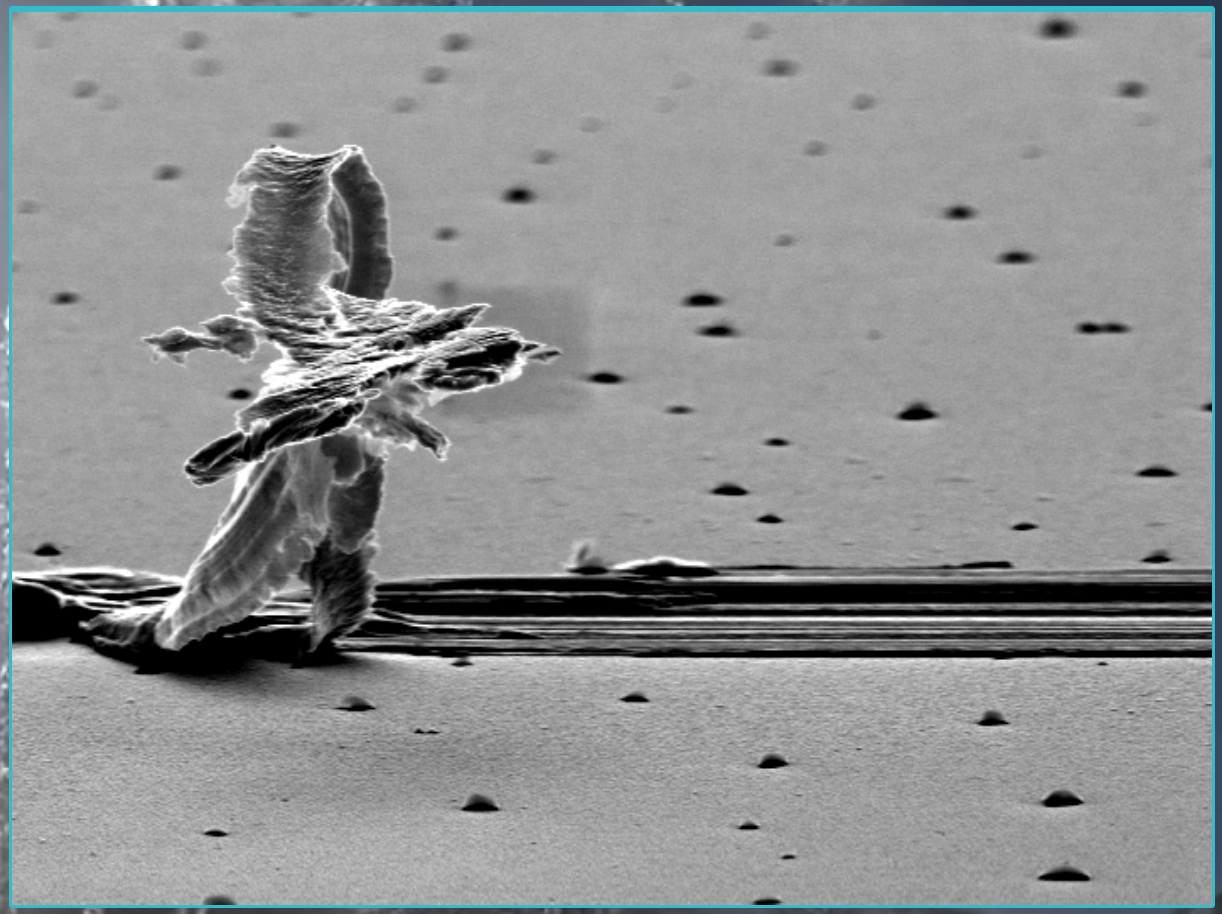
21

"Golden hooded μ-lumberjack"

Description:

A scratched gold film from which a μ-man raise. It wears a hood and a finely-crafted scarf, carrying freshly cut timber.



Submitted by: Mario Lodari
Affiliation: L-NESS, Politecnico di Milano
Instrument: SEM - Philips XL30
Magnification: 10000x

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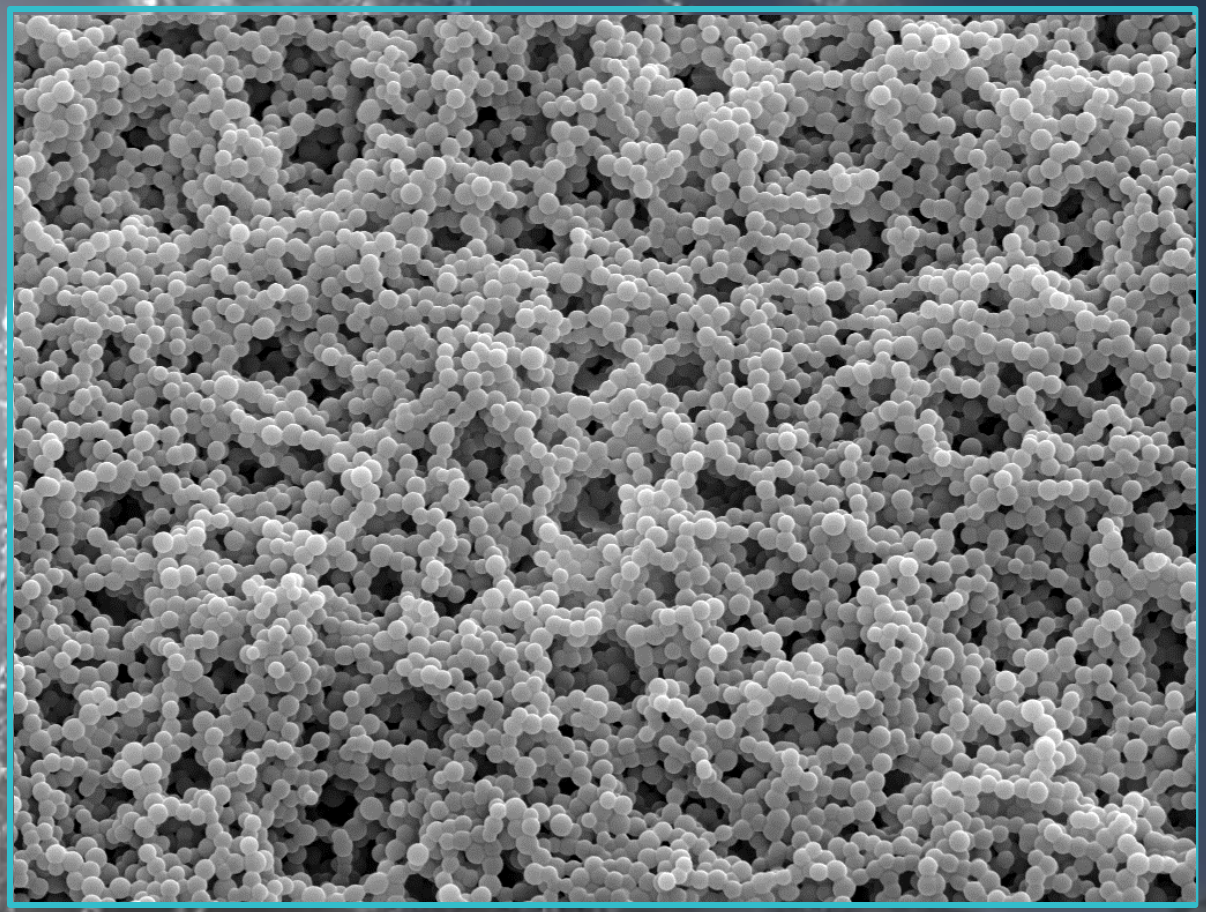
22

"There's Plenty of Room"

Description:

Highly porous monolith with huge surface-to-volume ratio, made of biocompatible thiol-ene polymer for enzyme immobilization.



Submitted by: Gowtham Sathyanarayanan
Affiliation: University of Helsinki
Instrument: FEI Quanta 250 FEG
Magnification: 10000x

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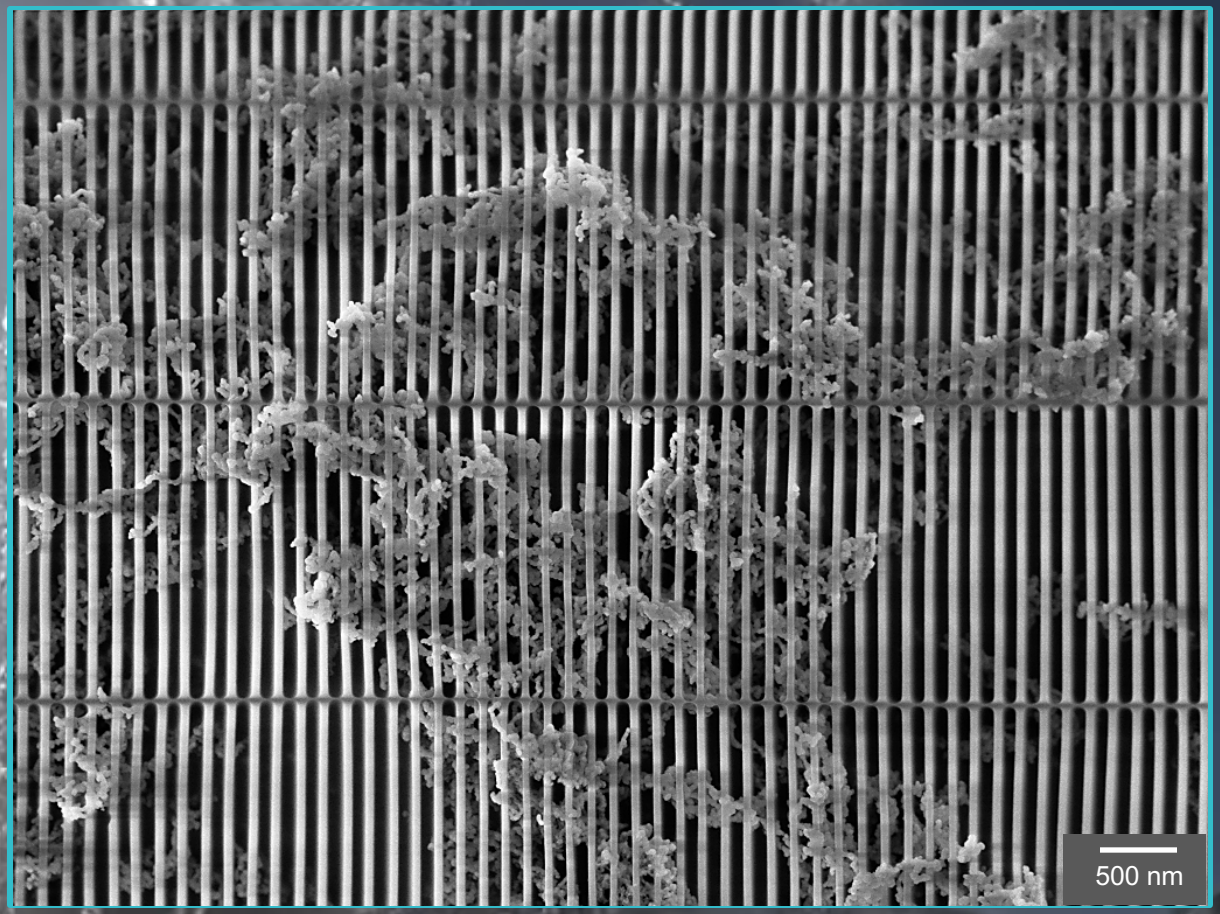
23

"Behind the bars"

Description:

Naughty particles have been jailed for attempting to ruin a sample. The image shows dirt residues trapped under HSQ grating.



Submitted by: Gediminas Seniutinas
Affiliation: Paul Scherrer Institute
Instrument: SEM Zeiss Supra 55 VP
Magnification: 47000x

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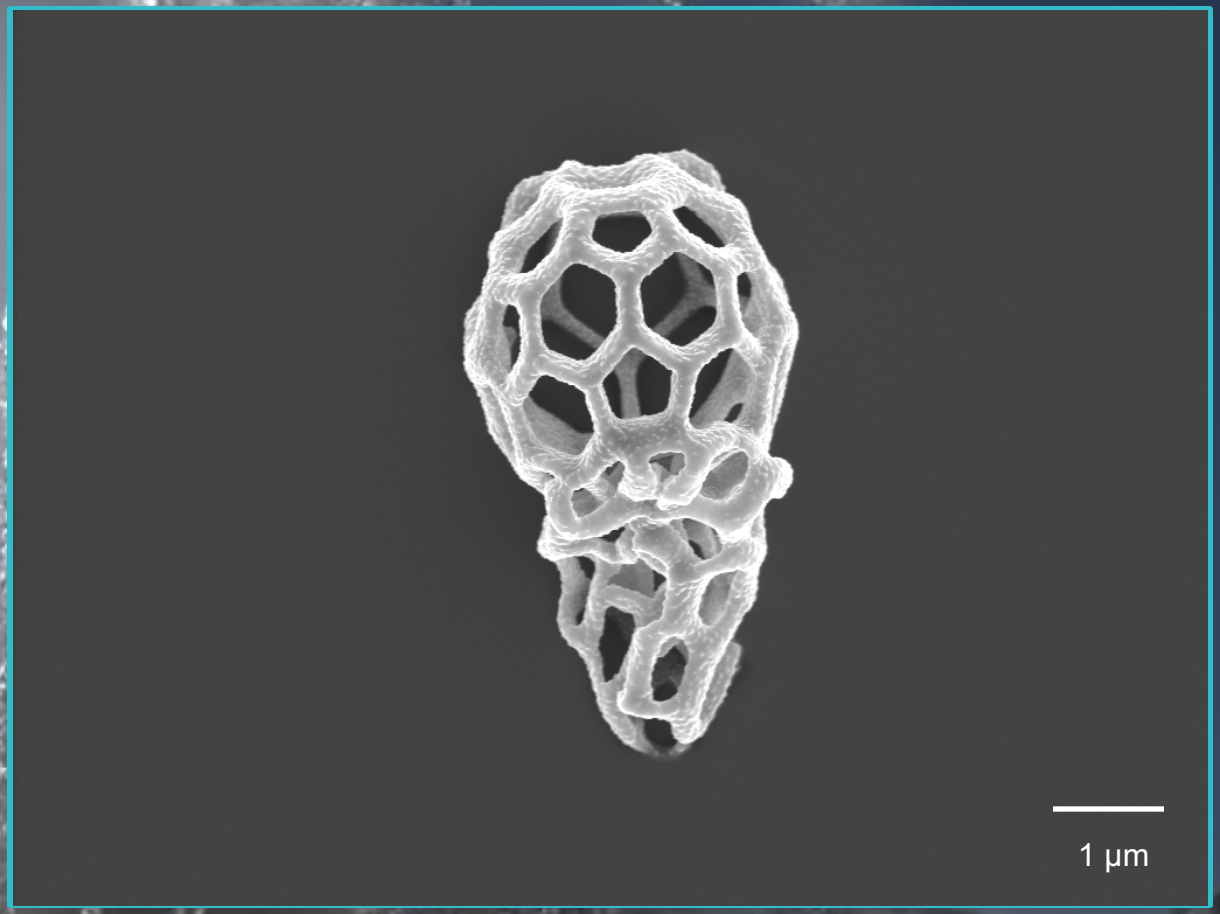
24

"Baby micro alien"

Description:

He might look like a cute transparent baby alien, but don't get fooled, they are here to conquer the Earth!



Submitted by: Gediminas Seniutinas
Affiliation: Paul Scherrer Institute
Instrument: SEM Zeiss Supra 55 VP
Magnification: 36000x

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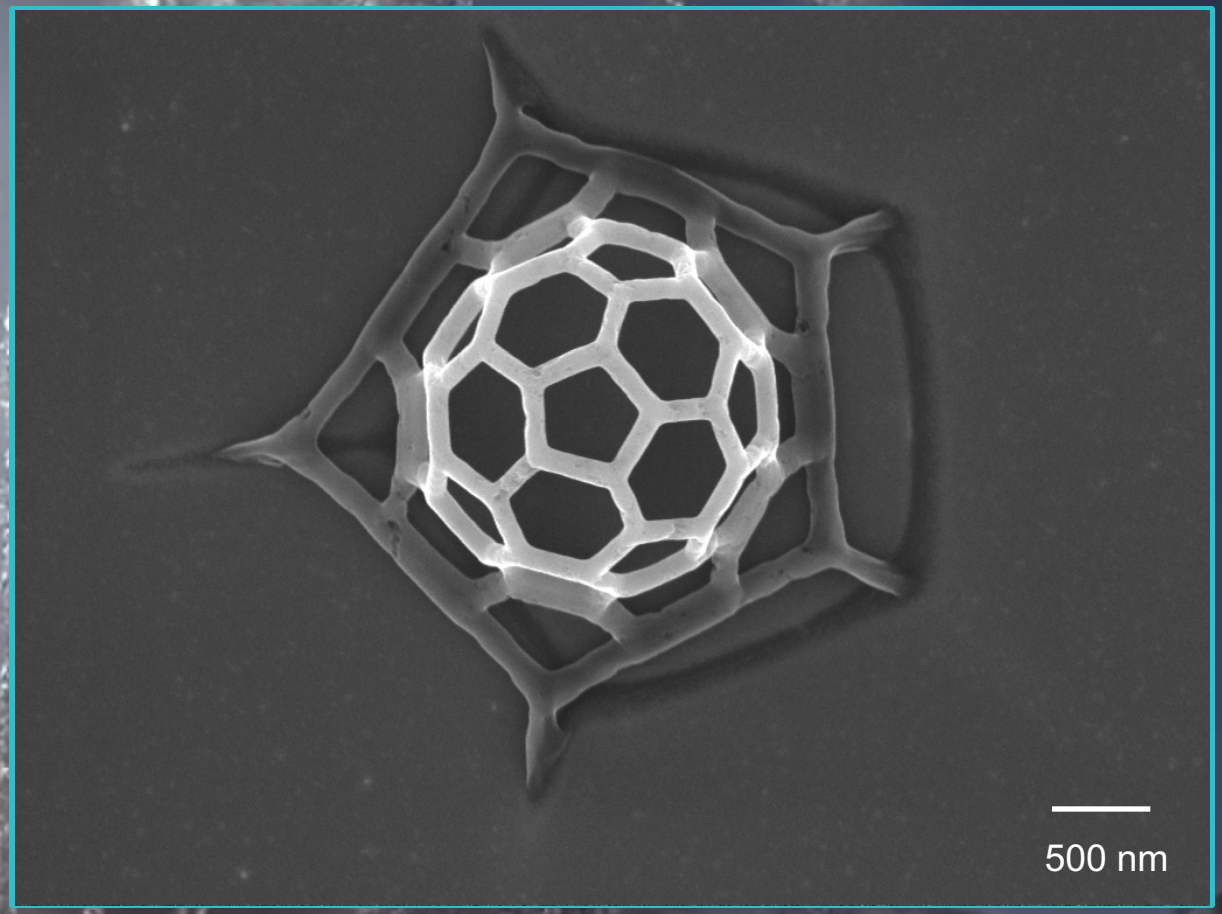
25

"Goal!"

Description:

A ball in a spider web. Who said spiders do not play football?

This glassy carbon structure was formed by 3D laser lithography and pyrolysis.



Submitted by: Gediminas Seniutinas
Affiliation: Paul Scherrer Institute
Instrument: SEM Zeiss Supra 55 VP
Magnification: 80000x

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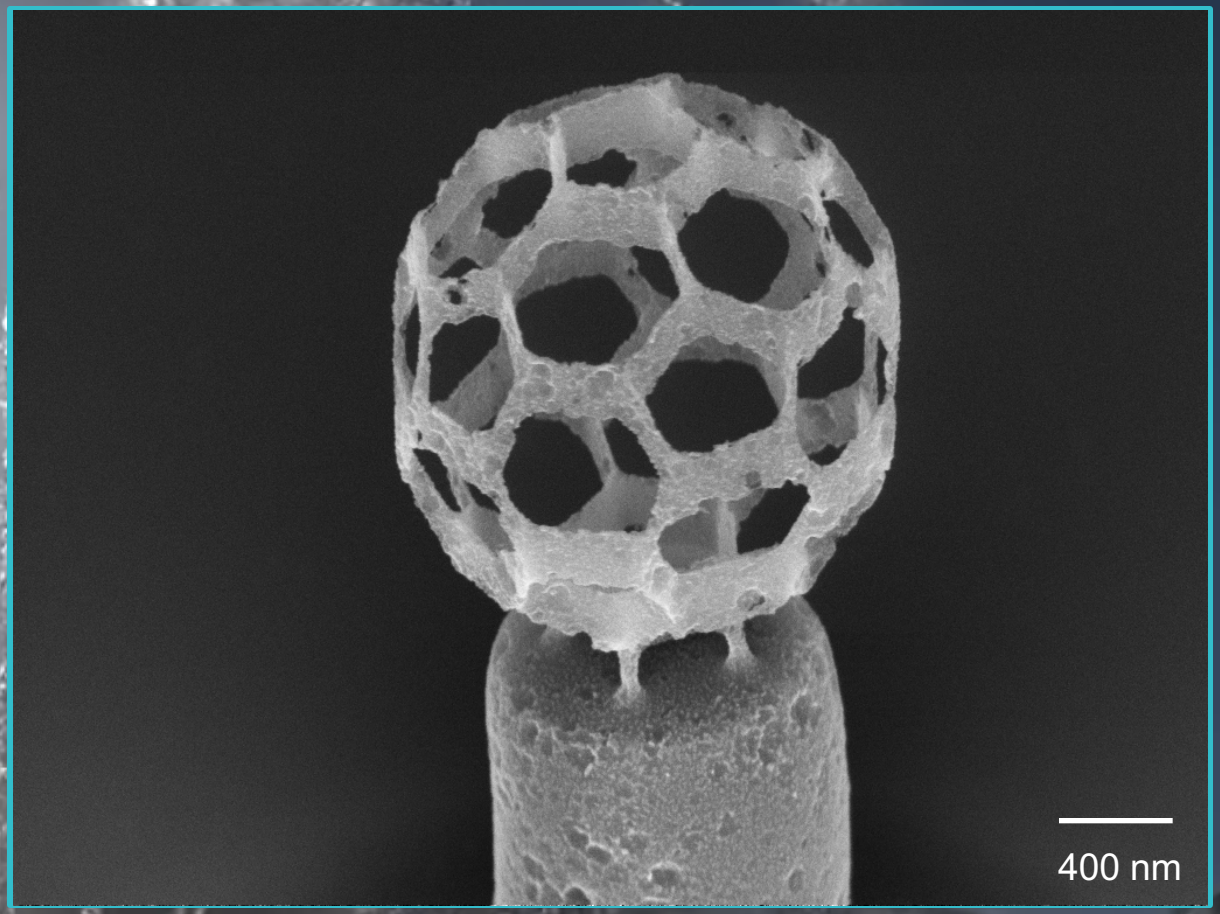
26

"World Cup Trophy"

Description:

The best of the micro-world football players are competing harshly for this carbon World Cup Trophy. Watch games live on SEM!



Submitted by: Gediminas Seniutinas
Affiliation: Paul Scherrer Institute
Instrument: SEM Zeiss Supra 55 VP
Magnification: 90000x

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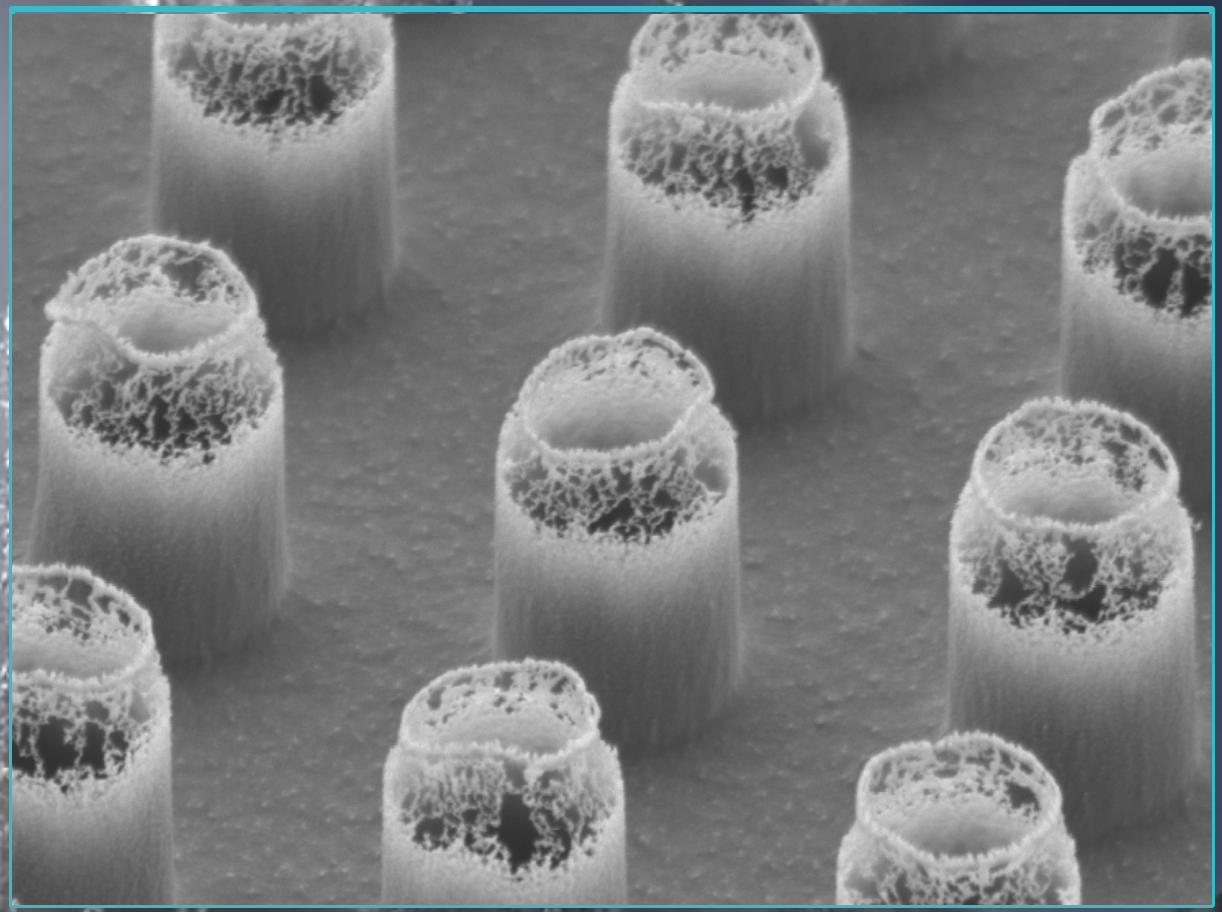
27

"HSQuid"

Description:

Marine nano-Life was created by transferring 20nm HSQ rings made with e-beam lithography in bulk silicon. The slight underetch and the high stability of the circular HSQ mask prevents the HSQ ring from collapsing and leaves it suspended on a web-lilke structure.



Submitted by: Stefano Varricchio
Affiliation: LMIS4 - EPFL

Instrument: Zeiss Merlin
Magnification: x20k

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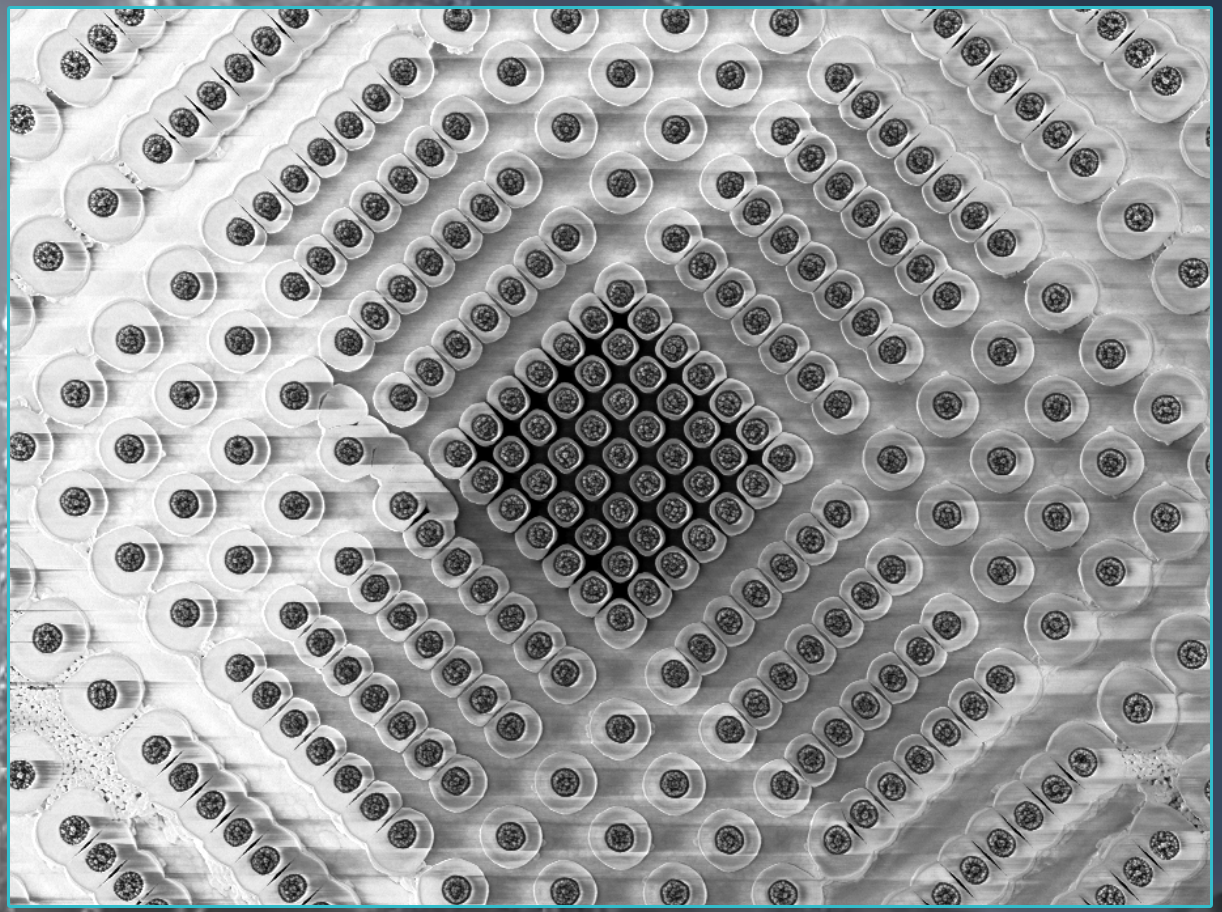
28

"Sushi boat"

Description:

Nanostructured silicon of different densities embedded in amorphous carbon and silicon dioxide surface after planarization. Not edible!



Submitted by: Stefano Varricchio
Affiliation: LMIS4 - EPFL

Instrument: Zeiss Merlin
Magnification: x6.82k

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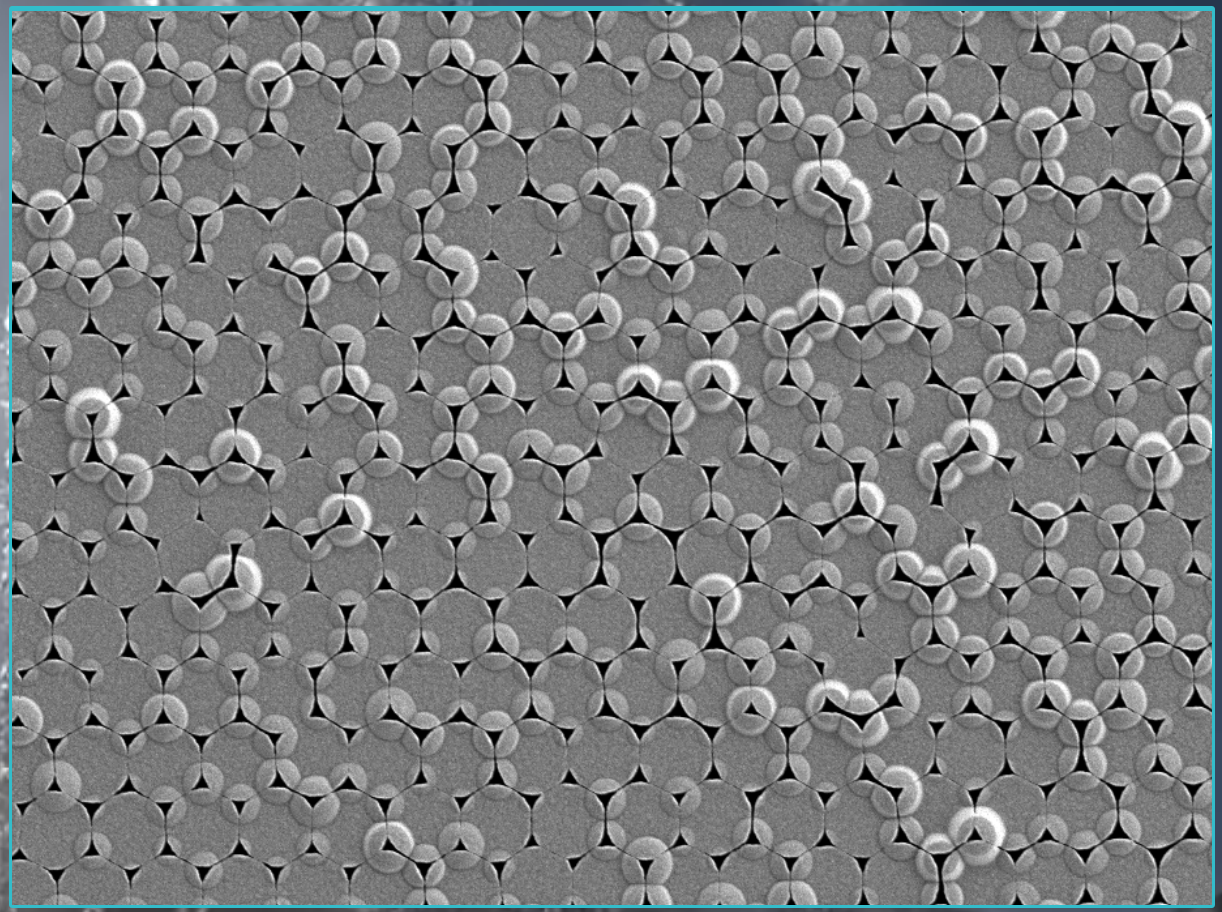
29

"Bee nice today"

Description:

Planarization of Si pillars coated with SiO_2. The void left during SiO_2 deposition appears between the structures making it looking like a honeycomb. The production of nano-bees is under development.



Submitted by: Stefano Varricchio
Affiliation: LMIS4 - EPFL

Instrument: Zeiss Merlin
Magnification: x6.53k

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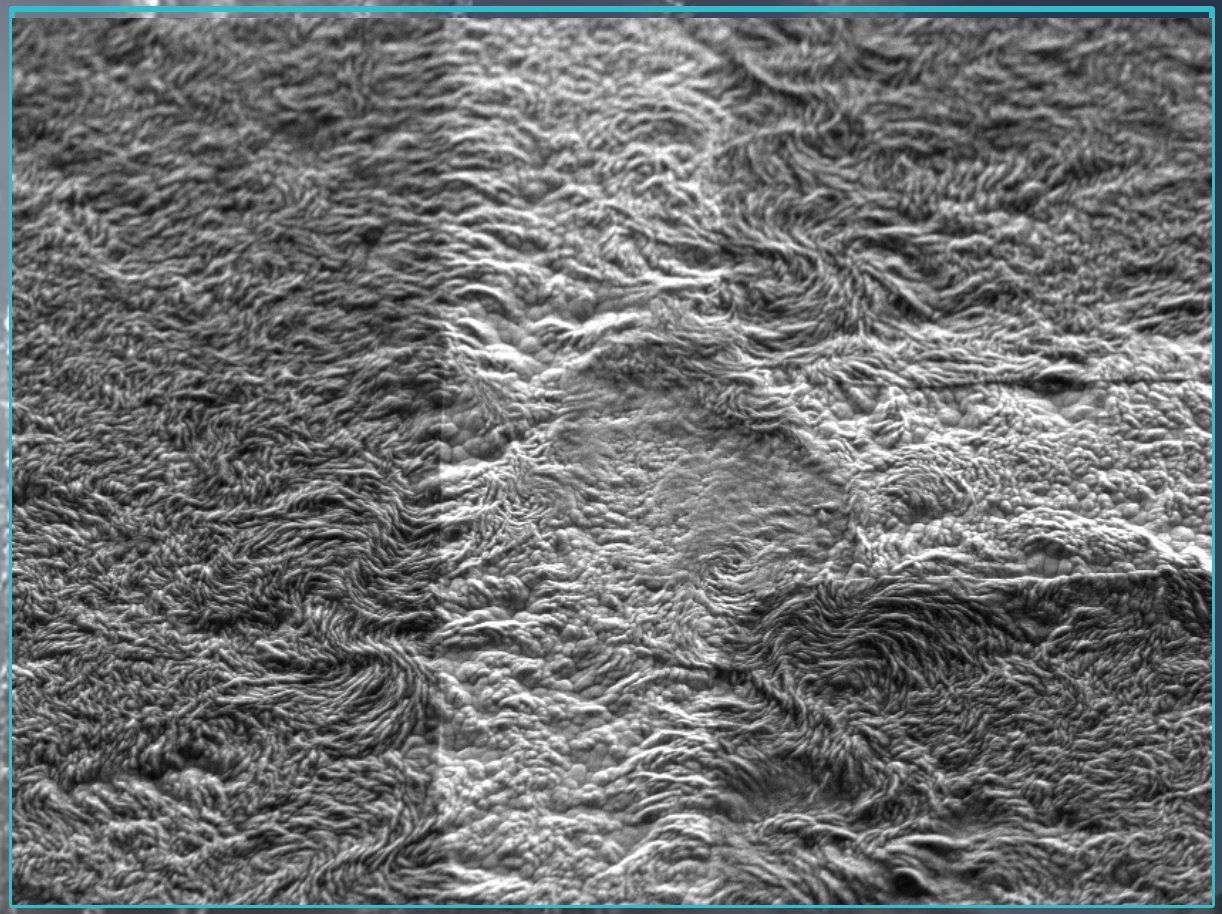
30

"Storm in a wafer"

Description:

Surface status of a cured Parylene layer after ion-beam etching. The contrast is given by the underlying Si structure. Van Gogh would be impressed!



Submitted by: Stefano Varricchio
Affiliation: LMIS4 - EPFL

Instrument: Zeiss Merlin
Magnification: x2.81k

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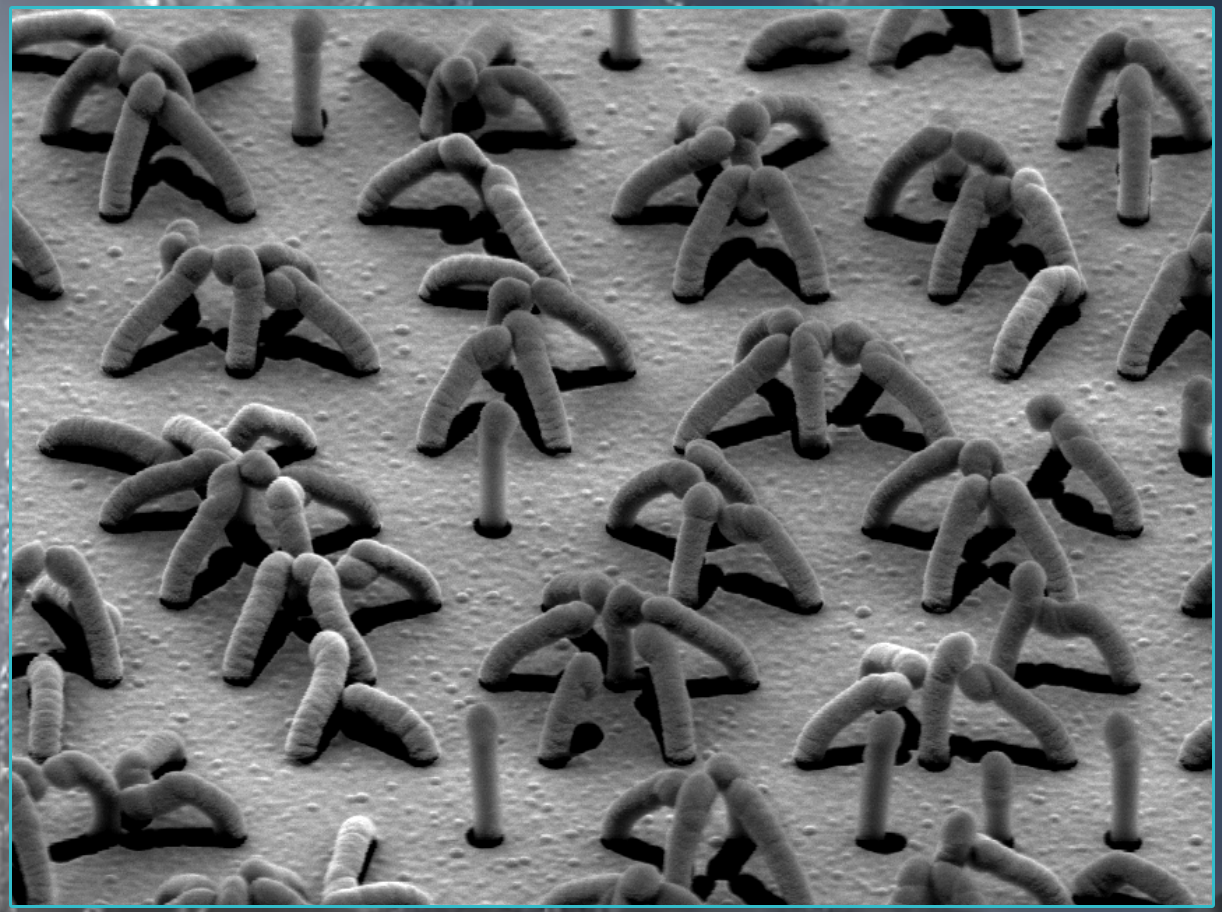
31

"Linguiça brawl"

Description:

Composite silicon and carbon structures collapses against each other under surface tension while drying. An evaporated Pt layer combines well defined shadows on the surface and enhances the roughness of the structures.



Submitted by: Stefano Varricchio
Affiliation: LMIS4 - EPFL

Instrument: Zeiss Merlin
Magnification: x10.26k

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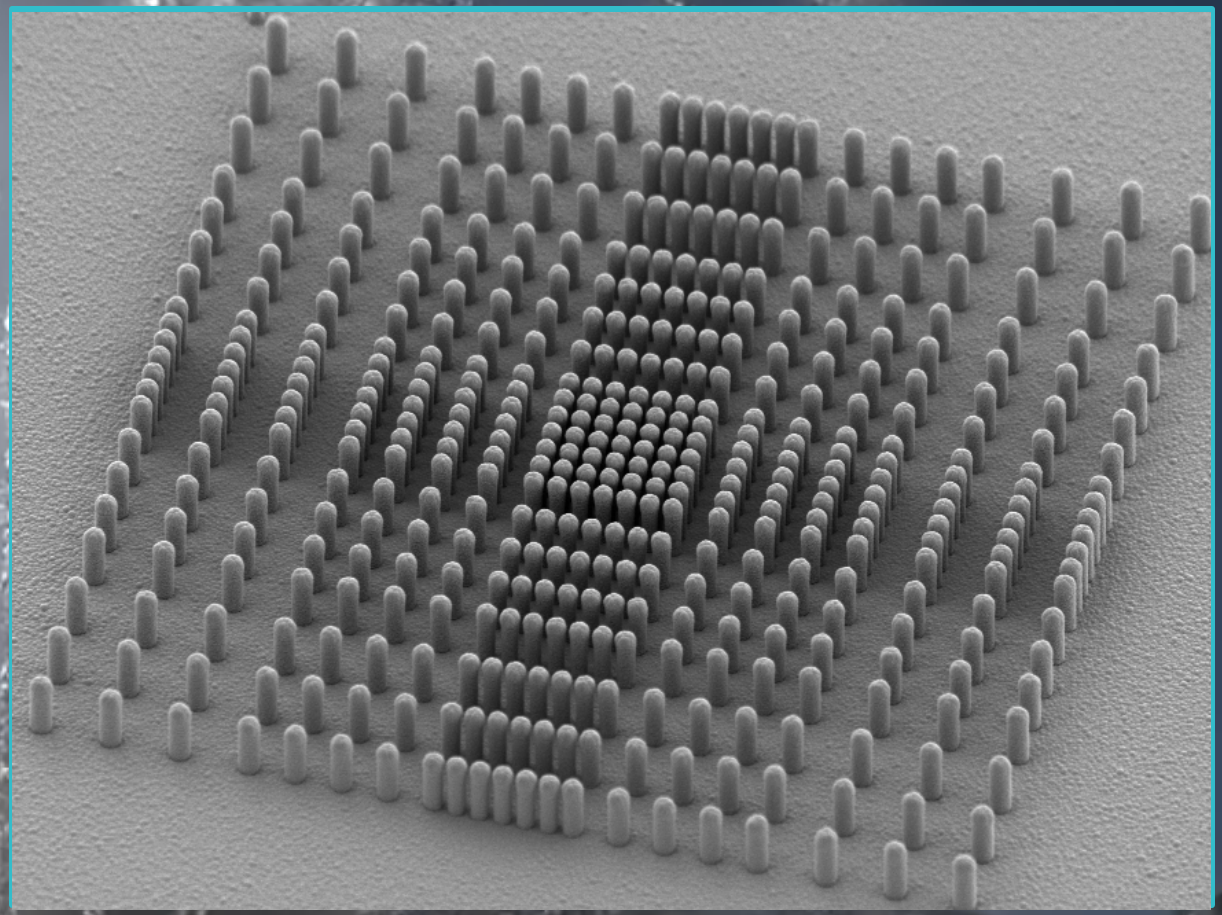
32

"SiTONEHENGE"

Description:

Ruins of prehistoric silicon nanopillars covered through the ages by a layer of SiO2. The utility of the structure is still uncertain, archeologist believe it delimits a burial ground for the hopes and dreams of PhD students working at night



Submitted by: Stefano Varricchio
Affiliation: LMIS4 - EPFL

Instrument: Zeiss Merlin
Magnification: x4k

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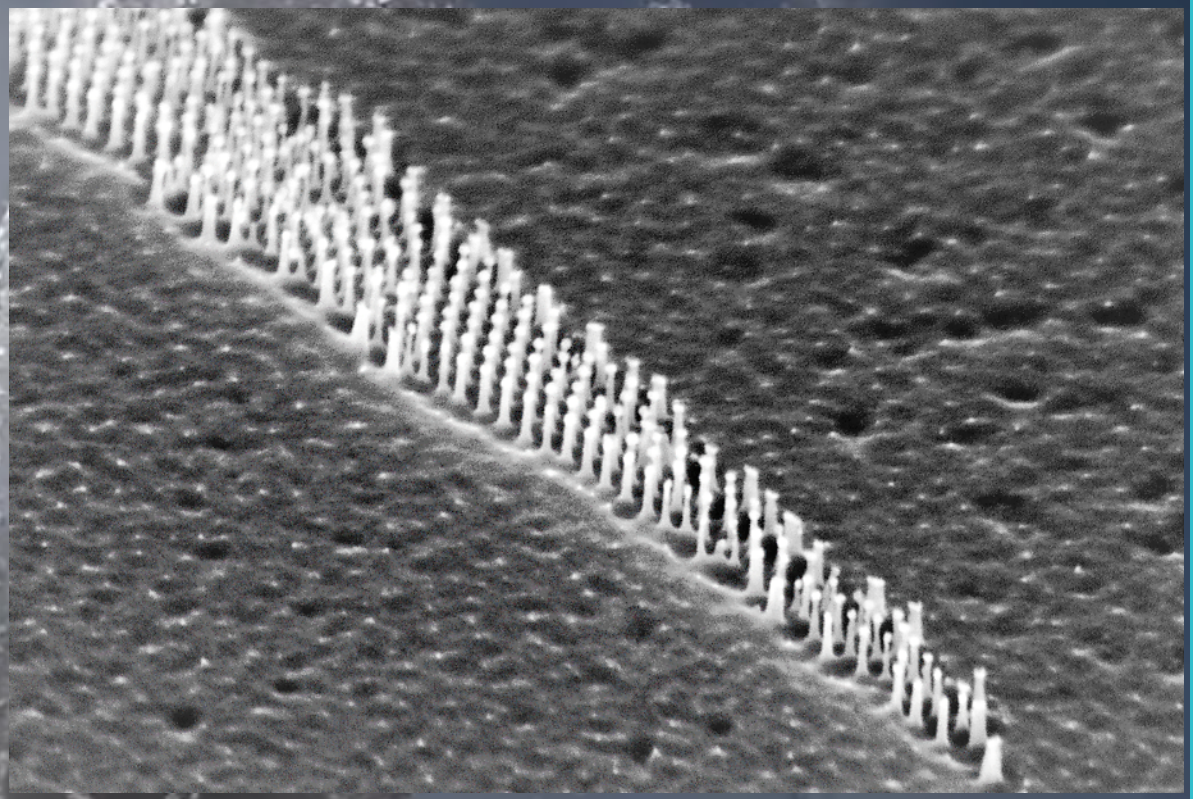
33

"Walking Through the Desert"

Description:

A large group of nano pillars crossing the desert on their way to a close-by nano oasis.



Submitted by: Steven Gottlieb
Affiliation: CNM-CSIC
Instrument: SEM AURIGA (ZEISS)
Magnification: 170k

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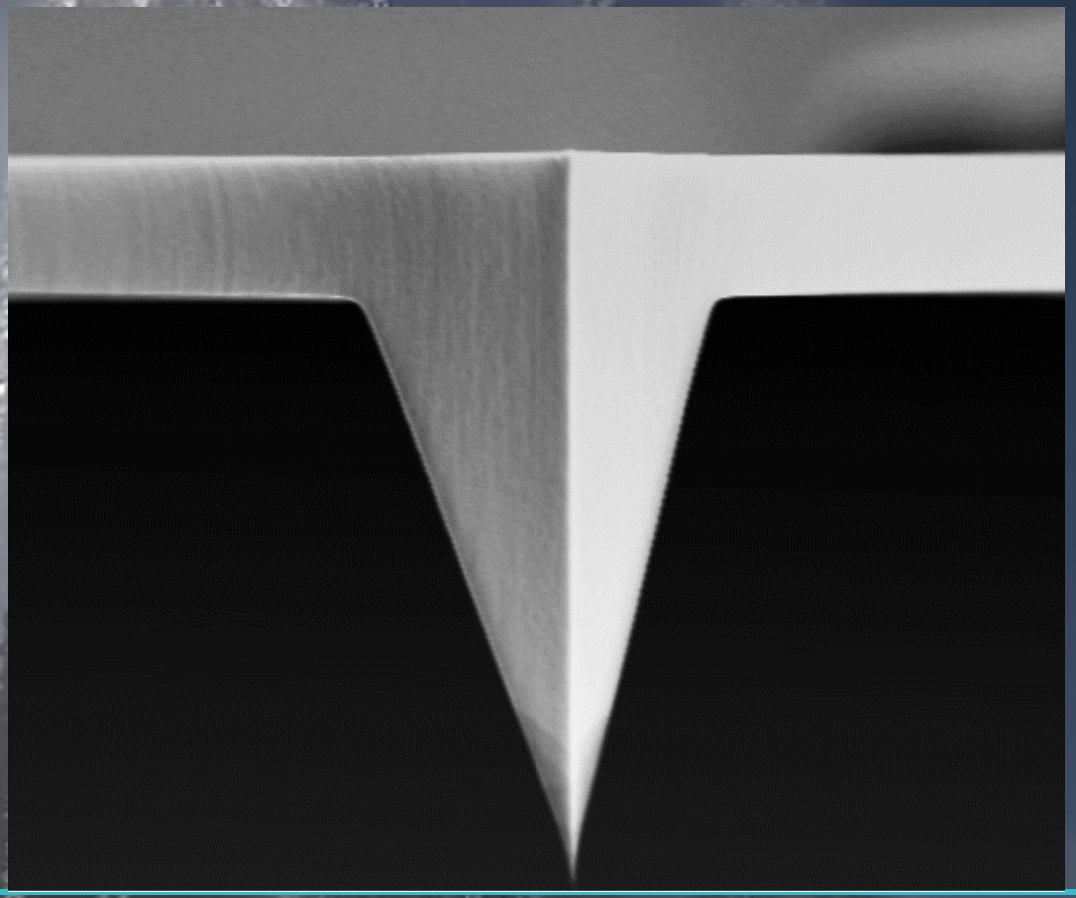
34

"Tesla's Prophecy"

Description:
Logos from innovative enterprises are sometimes found where we don't expect them.
SEM micrograph of an AFM tip.



Submitted by: Steven Gottlieb
Affiliation: CNM-CSIC
Instrument: SEM AURIGA (ZEISS)
Magnification: 6k

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35

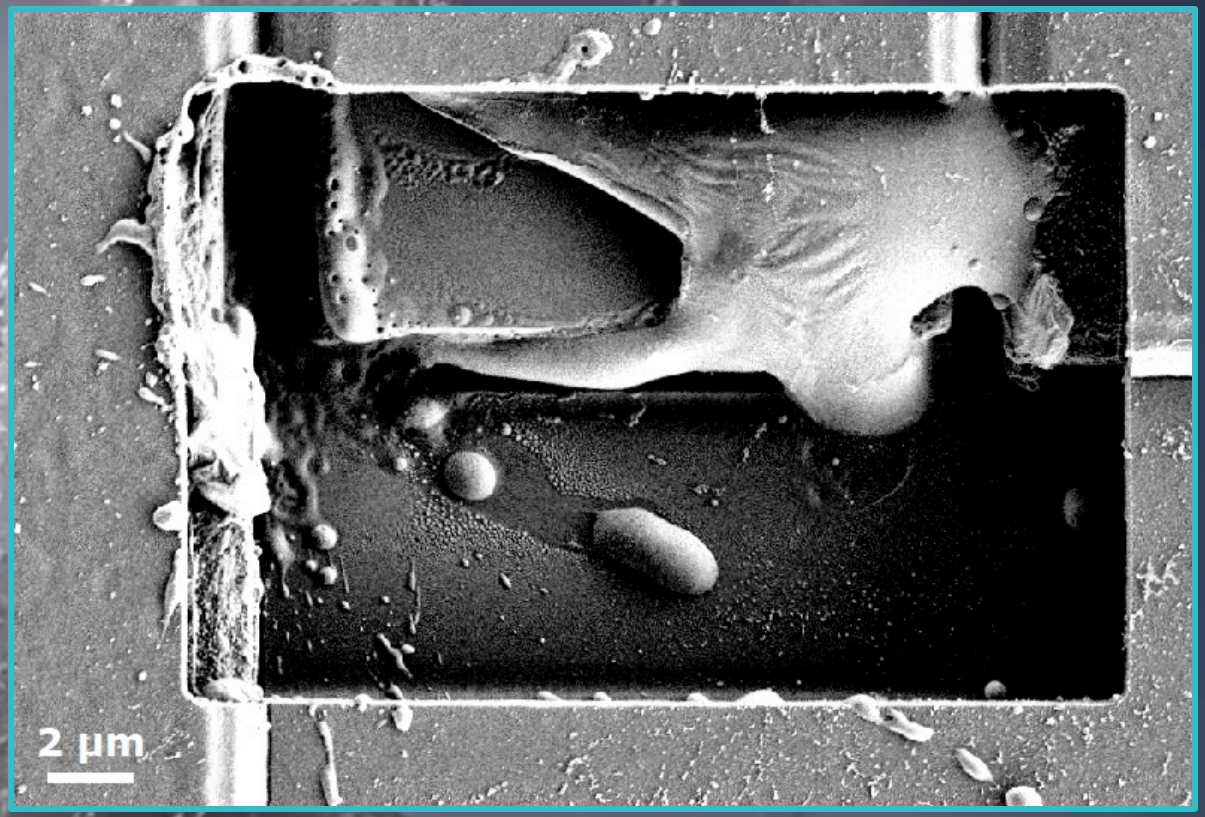
"Ops, I have applied 100 V"

Description:

This is a fantastic image of a completely melted CMOS-MEMS cantilever. Applying too much dc-voltage, catastrophic breakdown can occur.

***

This was supposed to be a cantilever, but unfortunately I applied 100 V.



Submitted by: Martin Riverola
Affiliation: Universitat Autònoma de Barcelona
Instrument: Zeiss Merlin FE-SEM
Magnification: 10.00 kX

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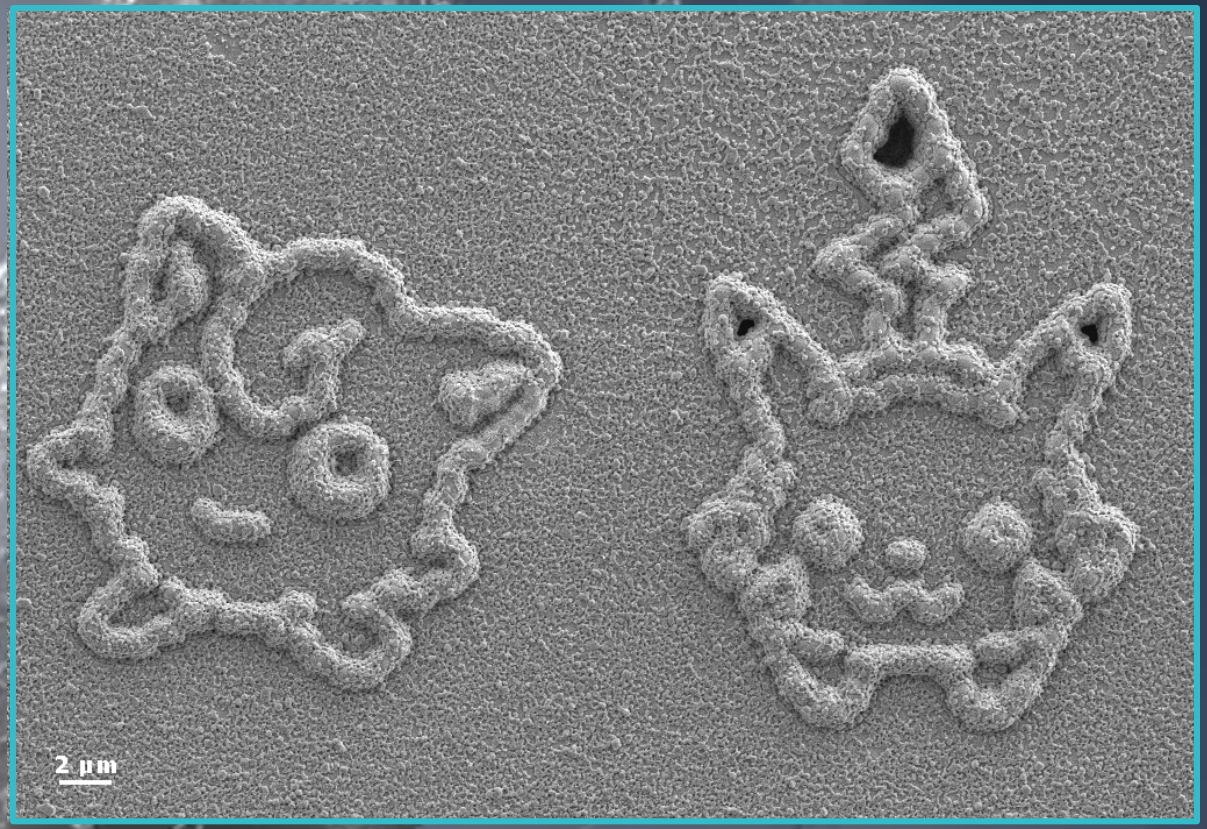
36

"Gotta Catch 'Em All"

Description:

Pattern made with the top metal of a standard CMOS technology.
Do you dare to identify them?



Submitted by: Martin Riverola
Affiliation: Universitat Autònoma de Barcelona
Instrument: Zeiss Merlin FE-SEM
Magnification: 2.5 kX

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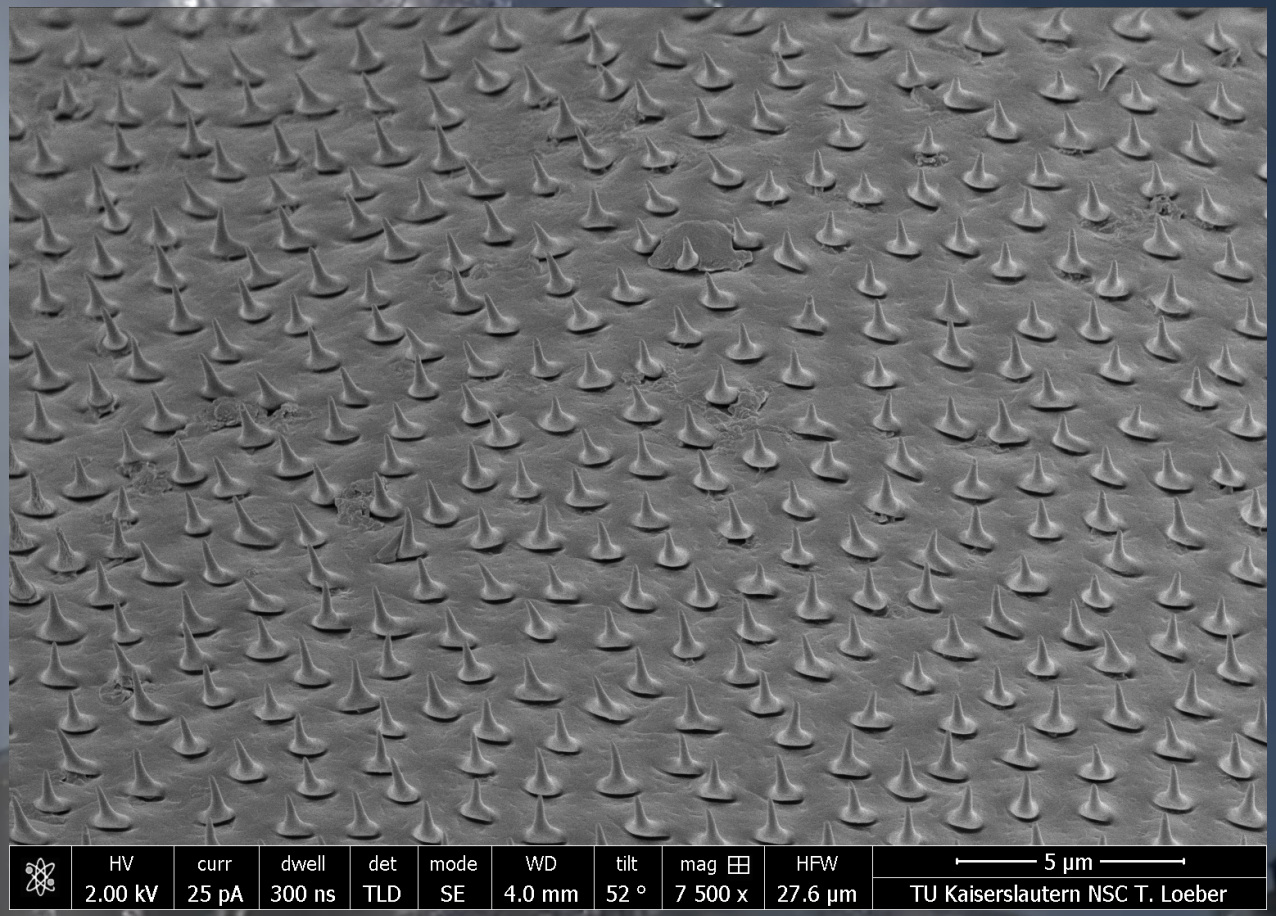
37

"Fakir bed"

SEM image of a wing of the beetle Cyphochilus. On its surface little spikes can be seen.



Sample provided by Marie-Christin Angermann, AG Optical Technologies and Photonics, TU Kaiserslautern

Submitted by: Thomas Loeber
Affiliation: NSC, TU Kaiserslautern, Germany

Instrument: FEI Helios 650 NanoLab
Magnification: 7.5 kX

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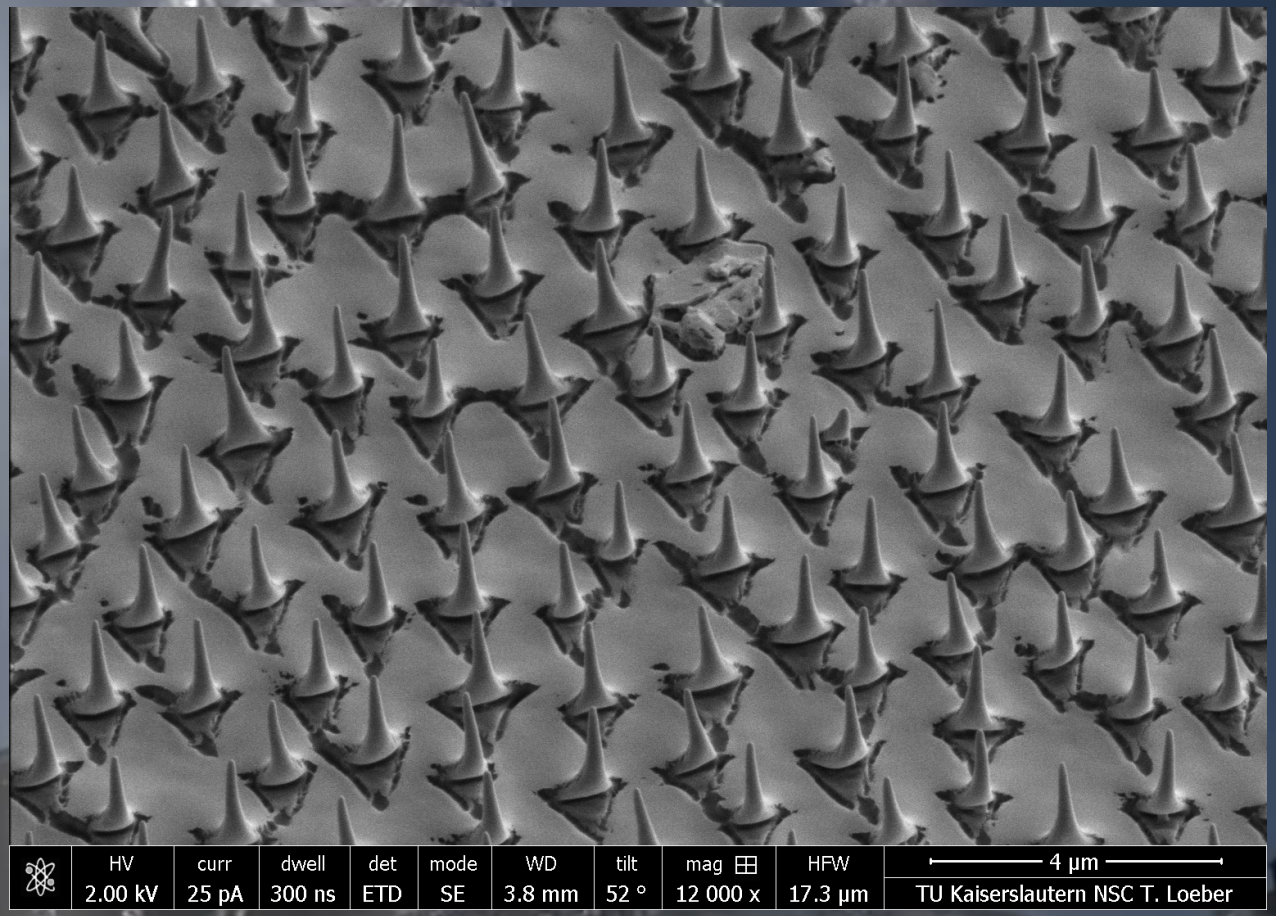
38

"Snappish coating"

SEM image of a wing of the beetle Cyphochilus. The wing was sputtered with iridium and parts of the surface were not coated, because the spikes functioned as shadow masks.



Sample provided by Marie-Christin Angermann

Submitted by: Thomas Loeber
Affiliation: NSC, TU Kaiserslautern, Germany
Instrument: FEI Helios 650 NanoLab
Magnification: 12 kX

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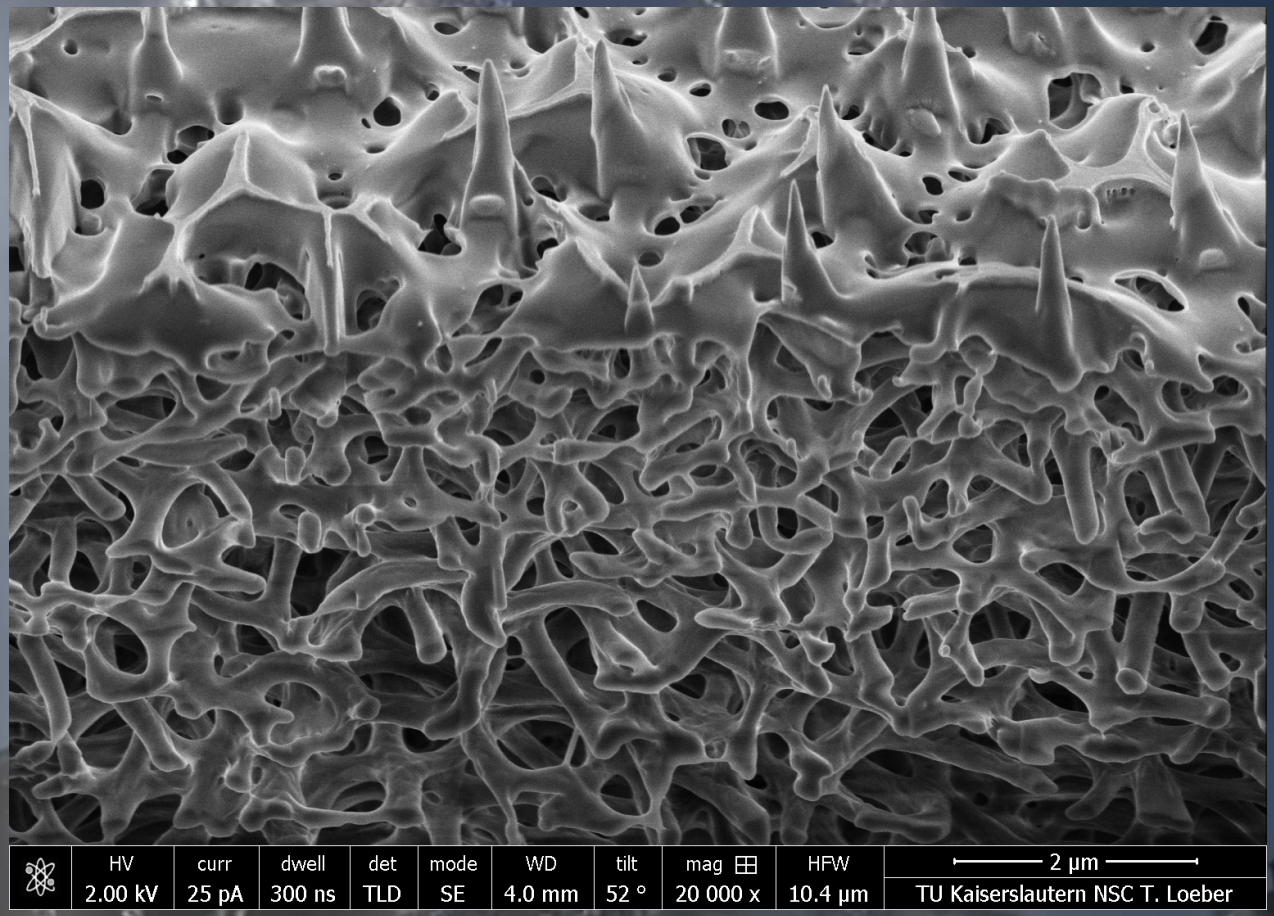
39

"Follow the white light"

SEM image of a cross section of a beetle's wing. The inner structure of the wing as well as the spikes on its surface can be seen. Because of the chaotic inner structure the sun light is reflected such that the beetle seems to be white.

Sample provided by Marie-Christin Angermann



Submitted by: Thomas Loeber

Affiliation: NSC, TU Kaiserslautern, Germany

Instrument: FEI Helios 650 NanoLab

Magnification: 20 kX

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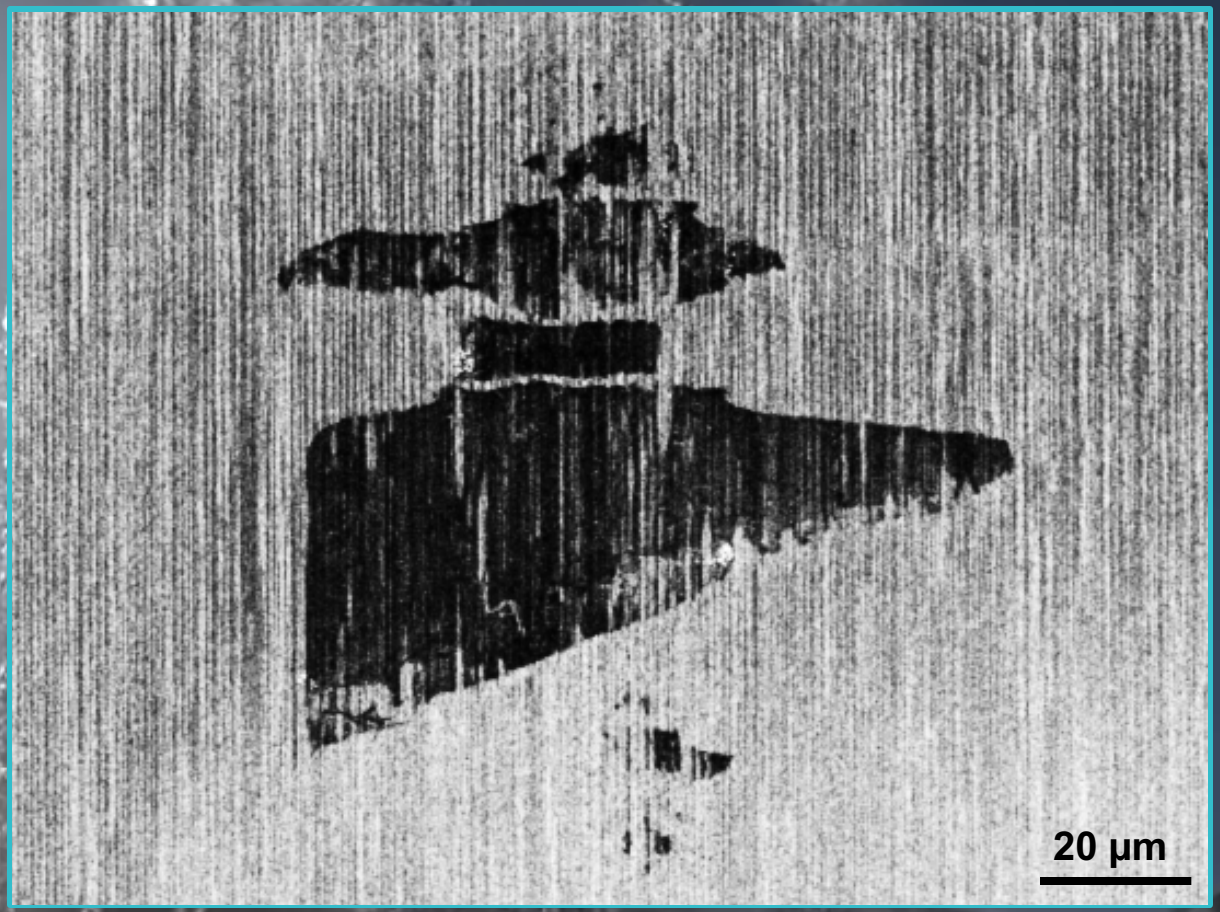
40

"Ninja of Graphene"

This agile ninja is made of graphene.

It was found after processing electrochemically a sample consisting in epitaxial graphene grown on a silicon carbide substrate.



Submitted by: Gemma Rius
Affiliation: IMB-CNM, CSIC
Instrument: FE-SEM LEO 1530
Magnification: 1000x

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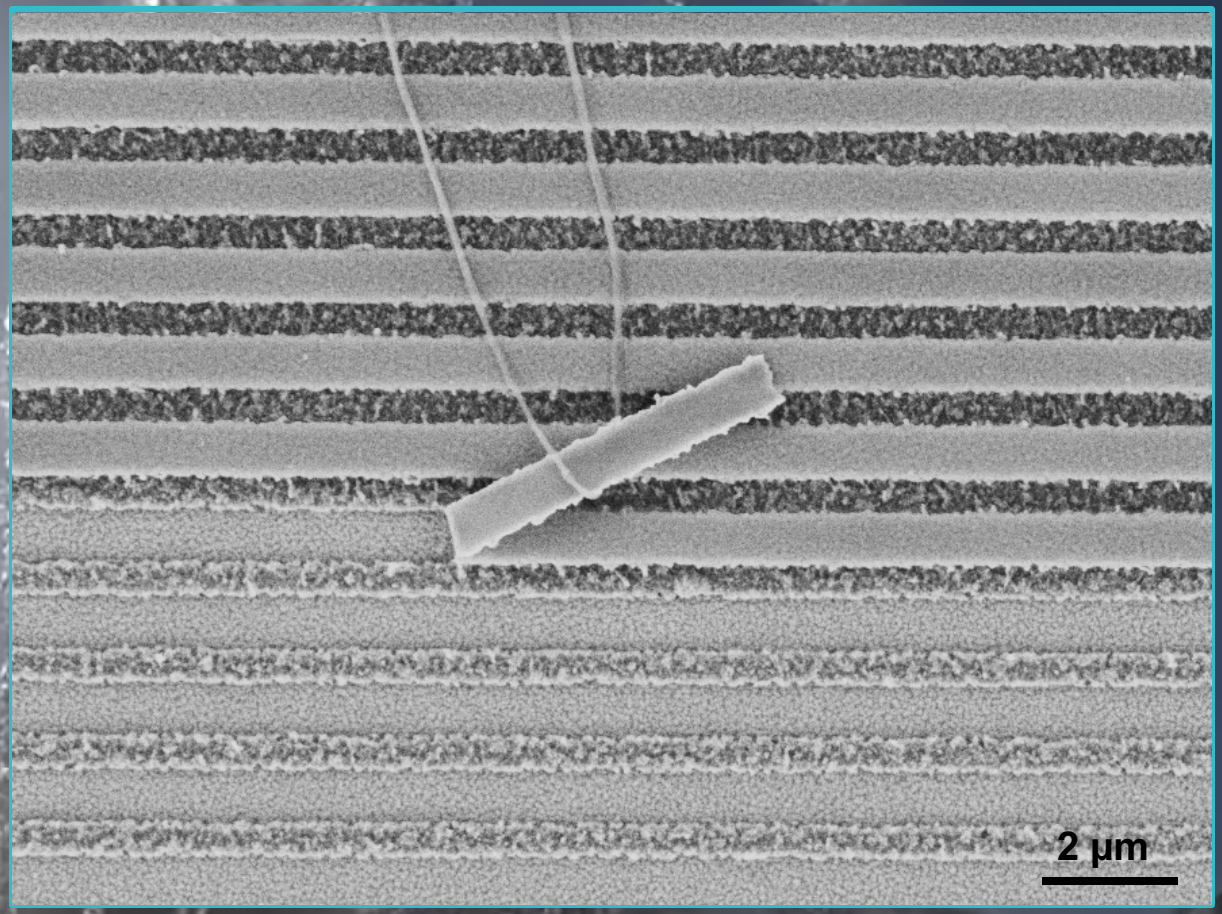
41

"Manual Lift Off"

Accidental result of metal deposition plus resist lift off of a dense array of stripes defined by electron beam lithography. It looks as if nanostripes could be actually manipulated by tweezers. When nanoscale lift off fails, one dreams it could be done by hand...



Submitted by: Gemma Rius
Affiliation: IMB-CNM, CSIC
Instrument: FE-SEM LEO 1530
Magnification: 15.000x

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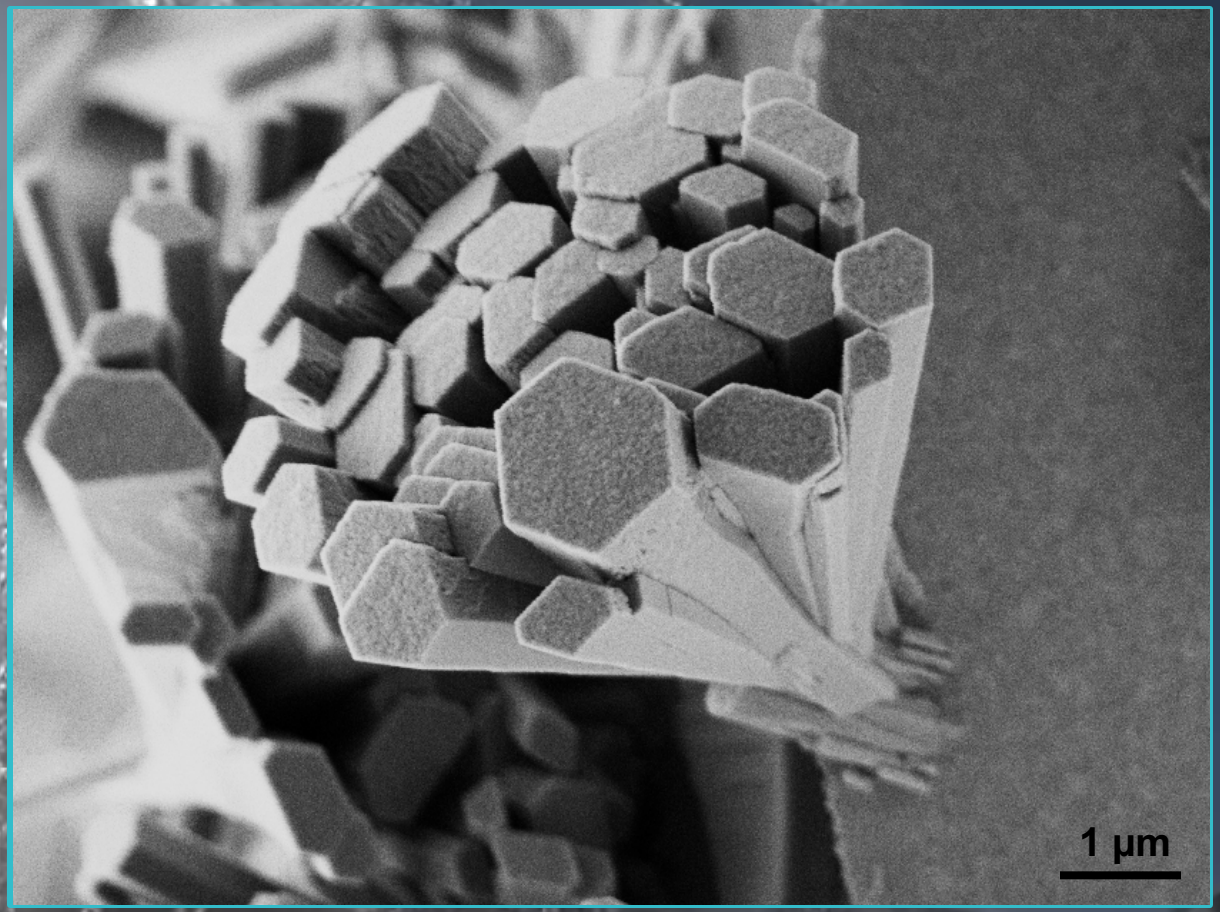
42

"Nanowire bunch"

This bunch of ZnO nanowires has been obtained by hydrothermal growth method. Sometimes clustering of the seed layer is not that bad, is it?



Submitted by: Gemma Rius
Affiliation: IMB-CNM, CSIC
Instrument: FE-SEM LEO 1530
Magnification: 25000x

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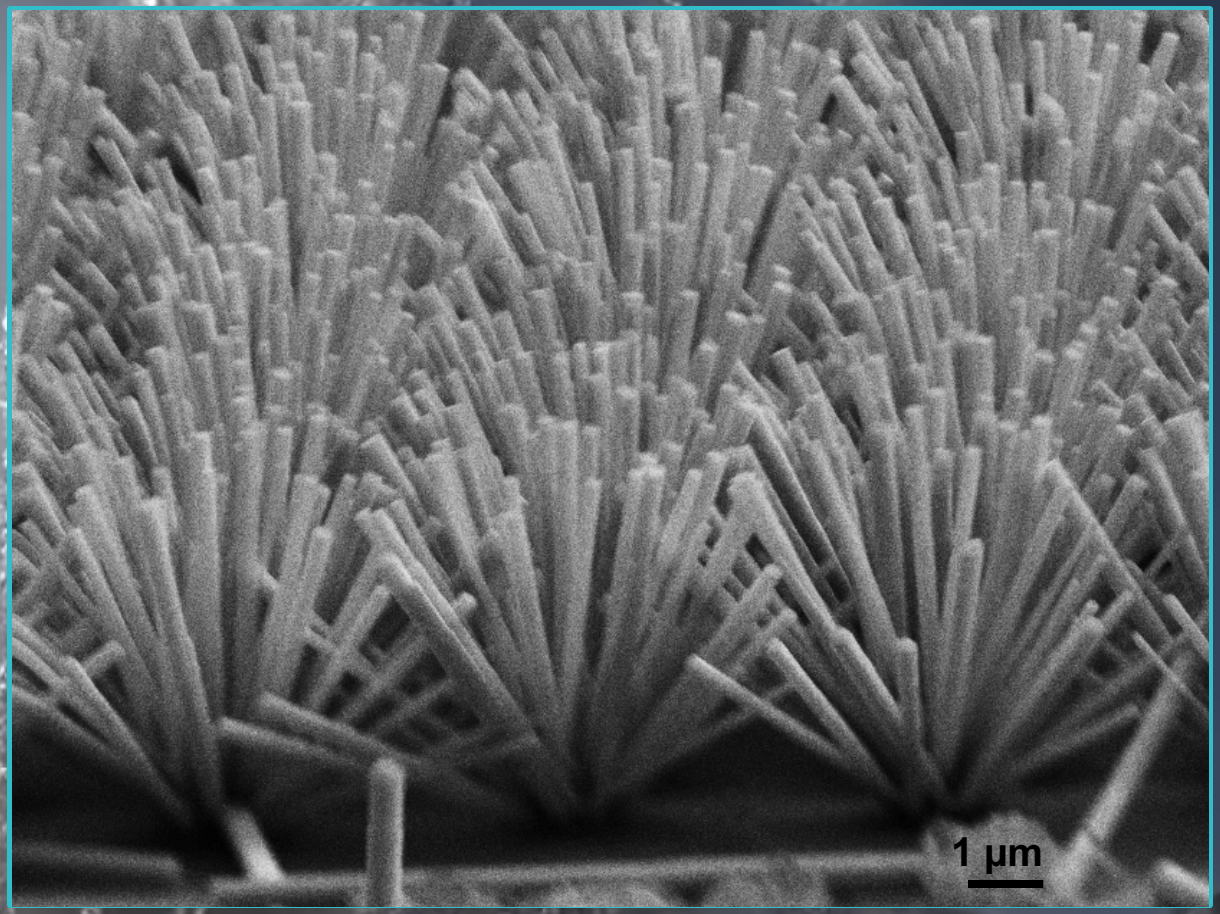
43

"Gardening Nanowires"

Array of groups of ZnO nanowires synthesized by the hydrothermal growth method.

A nanopatterned thin film resist has been used as a mask for their selective growth and to control their regular arrangement.



Submitted by: Gemma Rius and Anna Morales
Affiliation: IMB-CNM, CSIC
Instrument: FE-SEM LEO 1530
Magnification: 15.000x

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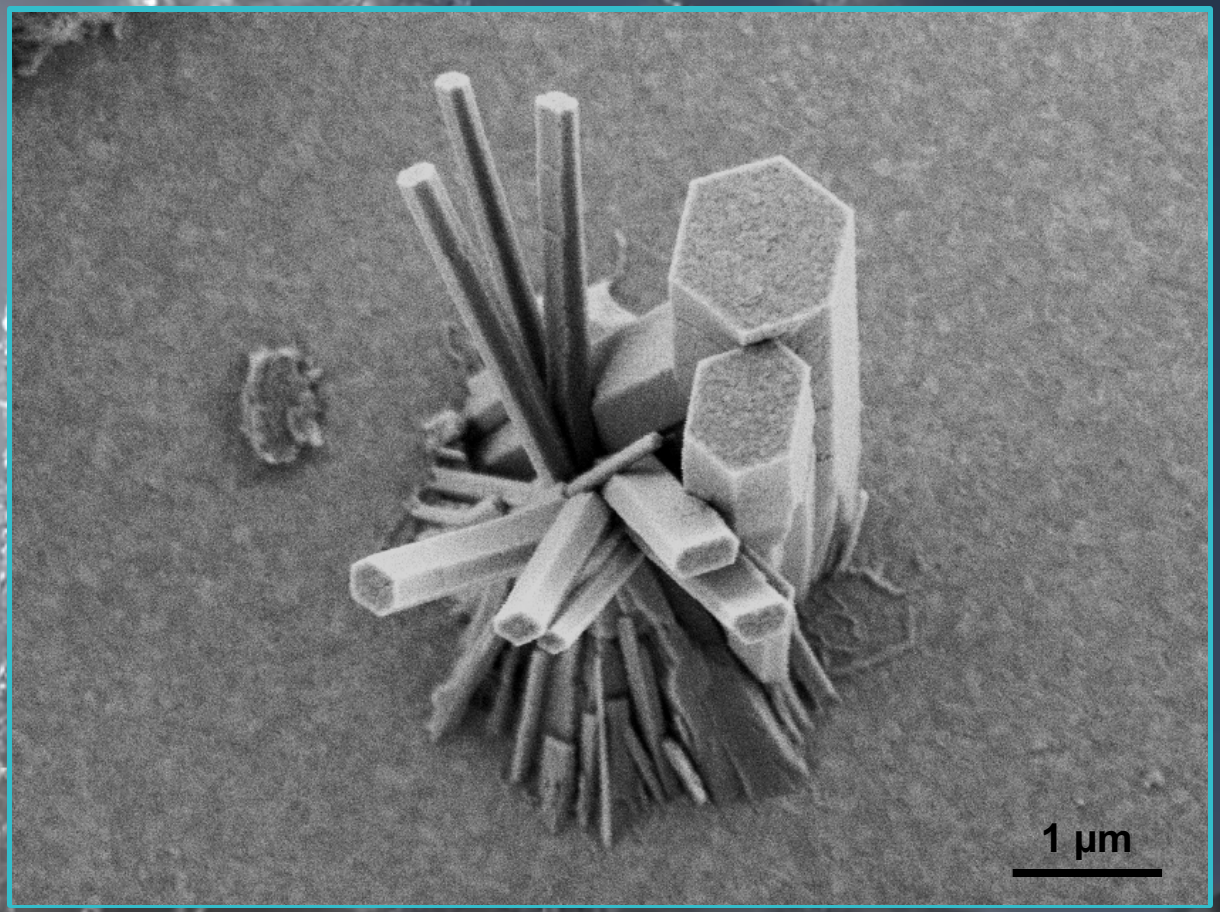
44

"Nanowire Ikebana"

ZnO nanowires obtained by the hydrothermal growth method.

Unintentionally, they became arranged as one of most carefully balanced ikebana.



Submitted by: Gemma Rius
Affiliation: IMB-CNM, CSIC
Instrument: FE-SEM LEO 1530
Magnification: 30.000x

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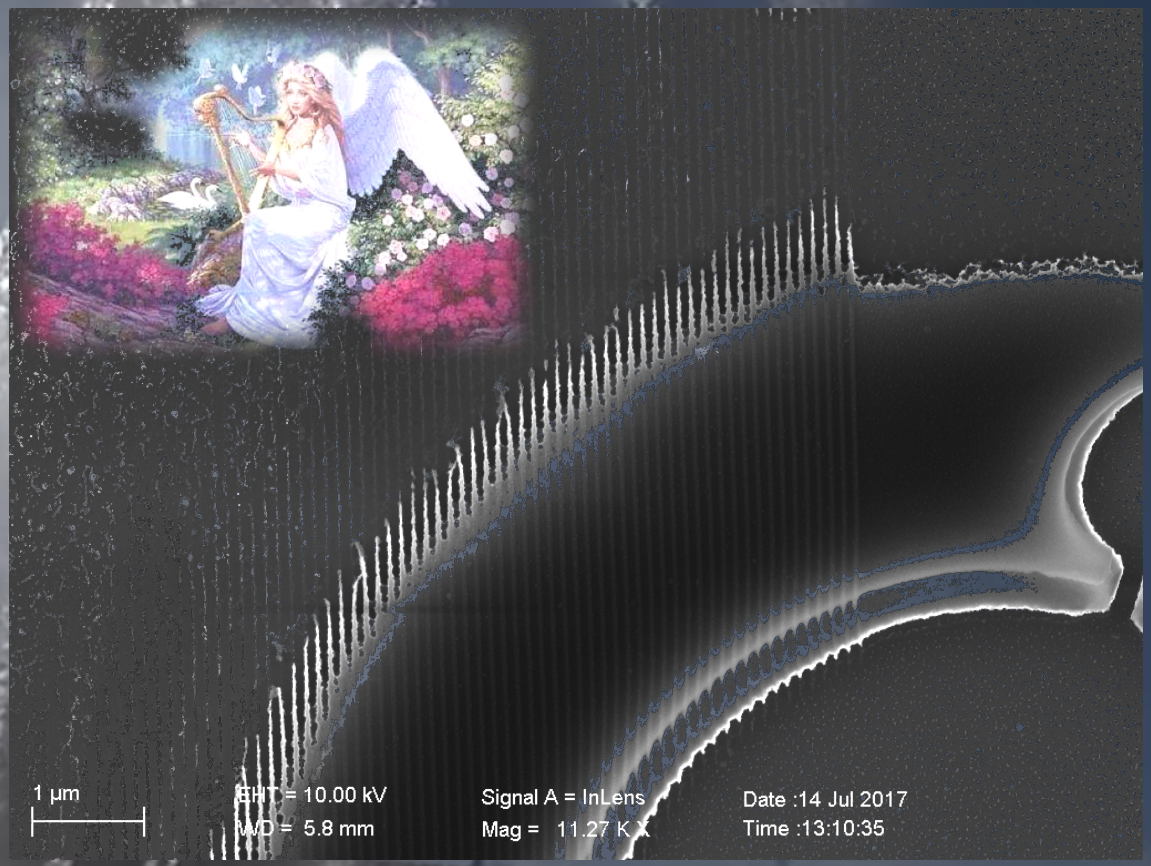
45

"Unattended Harp of the Stars nymph "

Description:

The micrograph shows a nanoscale harp fabricated by using RIE, masking by the HSQ lines and films on the SOI substrate.



Submitted by: Bo Feng
Affiliation: Fudan University, Shang hai, China
Instrument: Scanning Electron Microscope
Magnification: 11.27K

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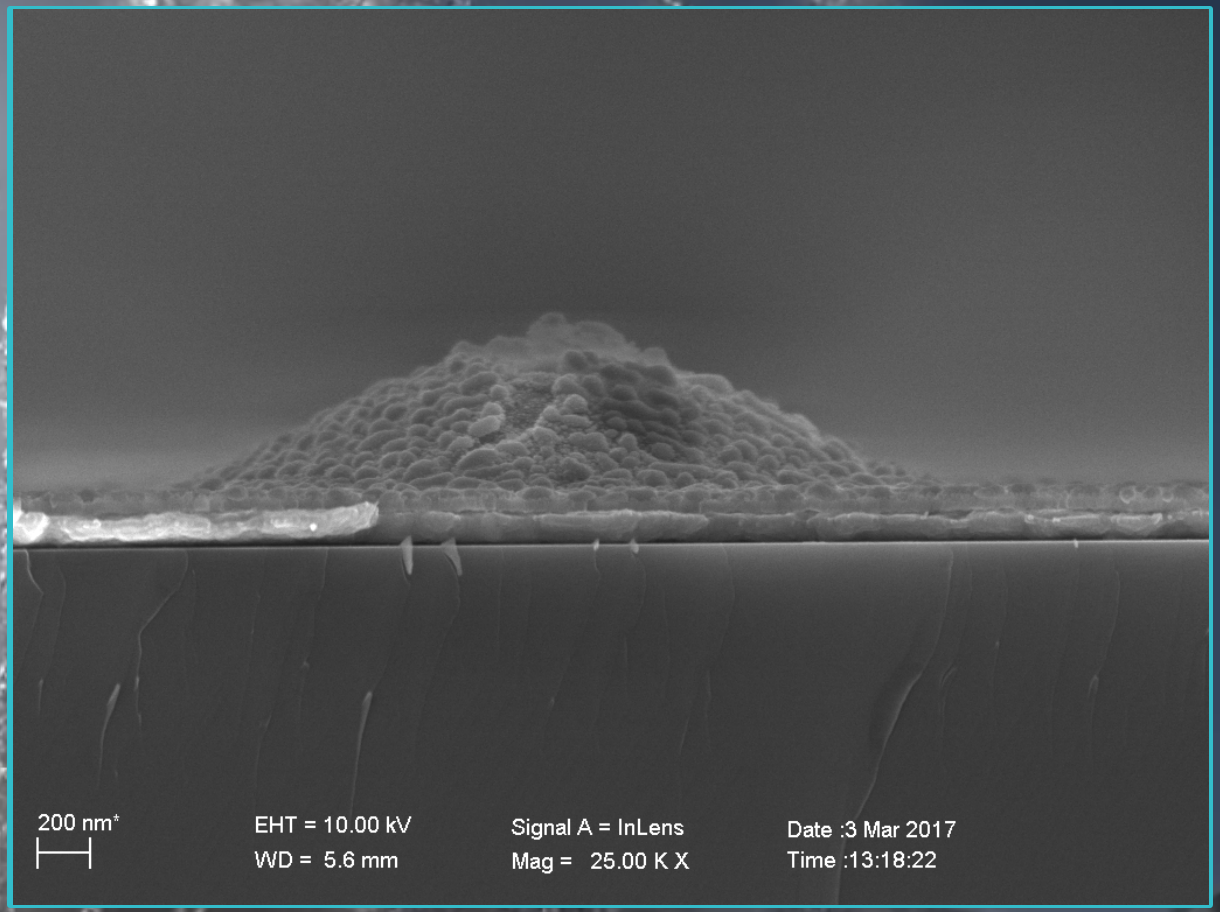
46

"Mount Fuji"

Description:

The micrograph shows the cross section of a single gold particle on the $Si/Ag/Al_2O_3$ wafer. It is very similar to the popular photo of Mount Fuji in Japan.



Submitted by: Jianan Deng
Affiliation: Fudan University
Instrument: scanning electron microscope (SEM)
Magnification: 25k

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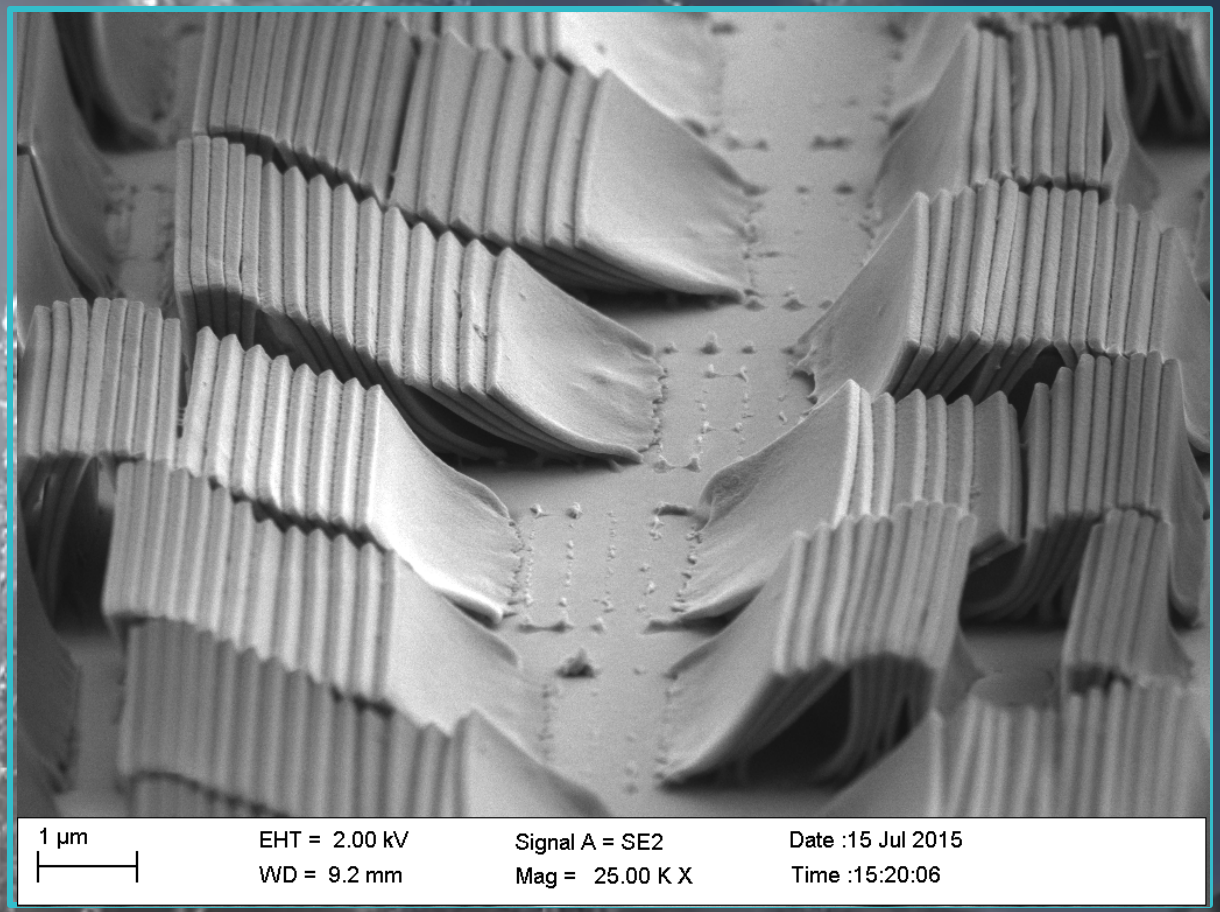
47

"Parting the Red Sea"

Description:

Look at the collapsed high aspect ratio PMMA lamellas, just like the prophet Moses parting the Red Sea.



Submitted by: Sichao Zhang
Affiliation: Fudan University, Shanghai, China
Instrument: Zeiss Sigma HD
Magnification: 25 K X

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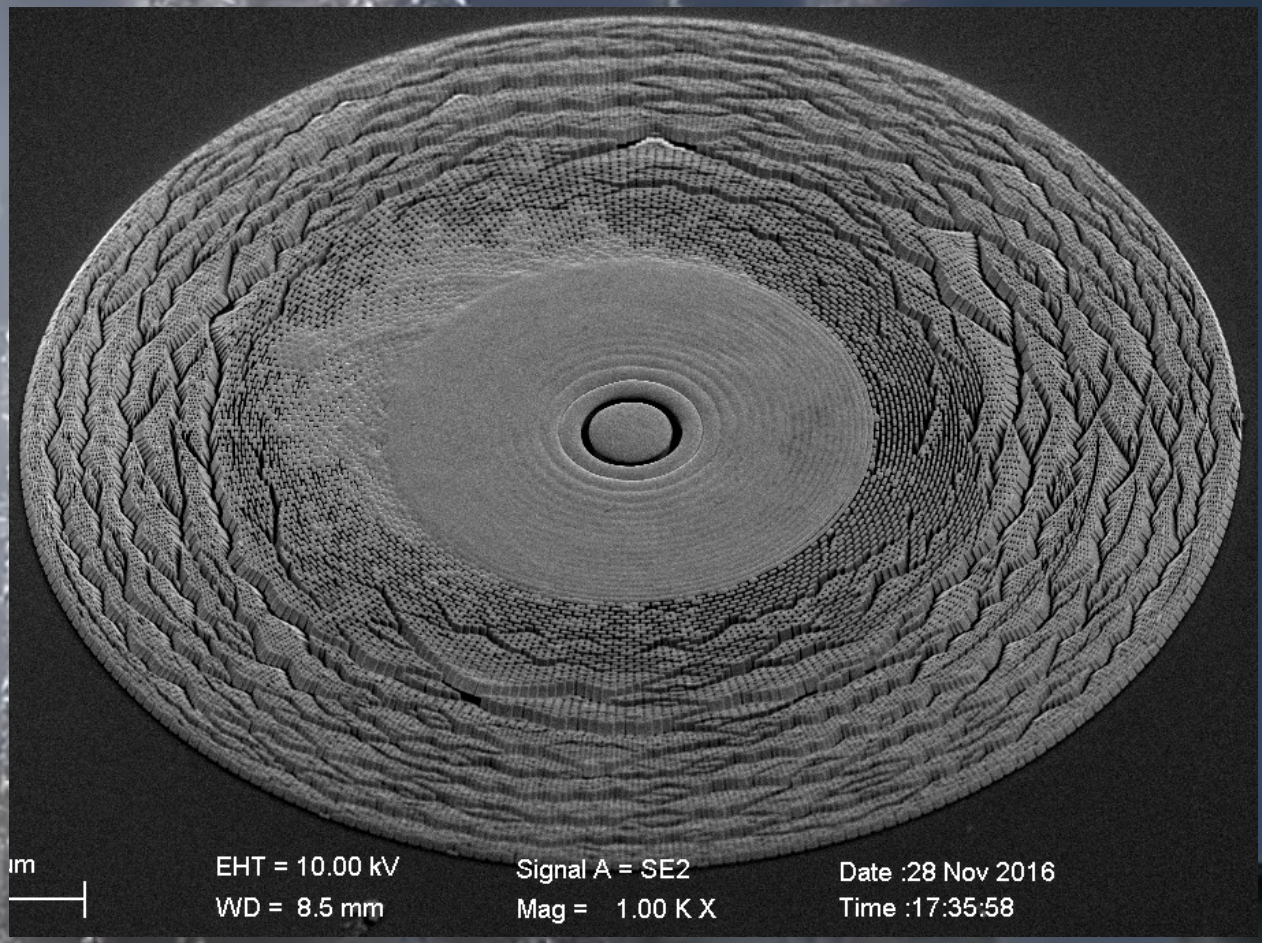
48

"Climbing precipitous mountains"

Description:

The collapsed gold structure of Fresnel zone plate fabricated by electron beam lithography, looking like precipitous mountains.



Submitted by: Shanshan Xie
Affiliation: Fudan University
Instrument: SEM Zeiss Sigma HD
Magnification: 1.00kx

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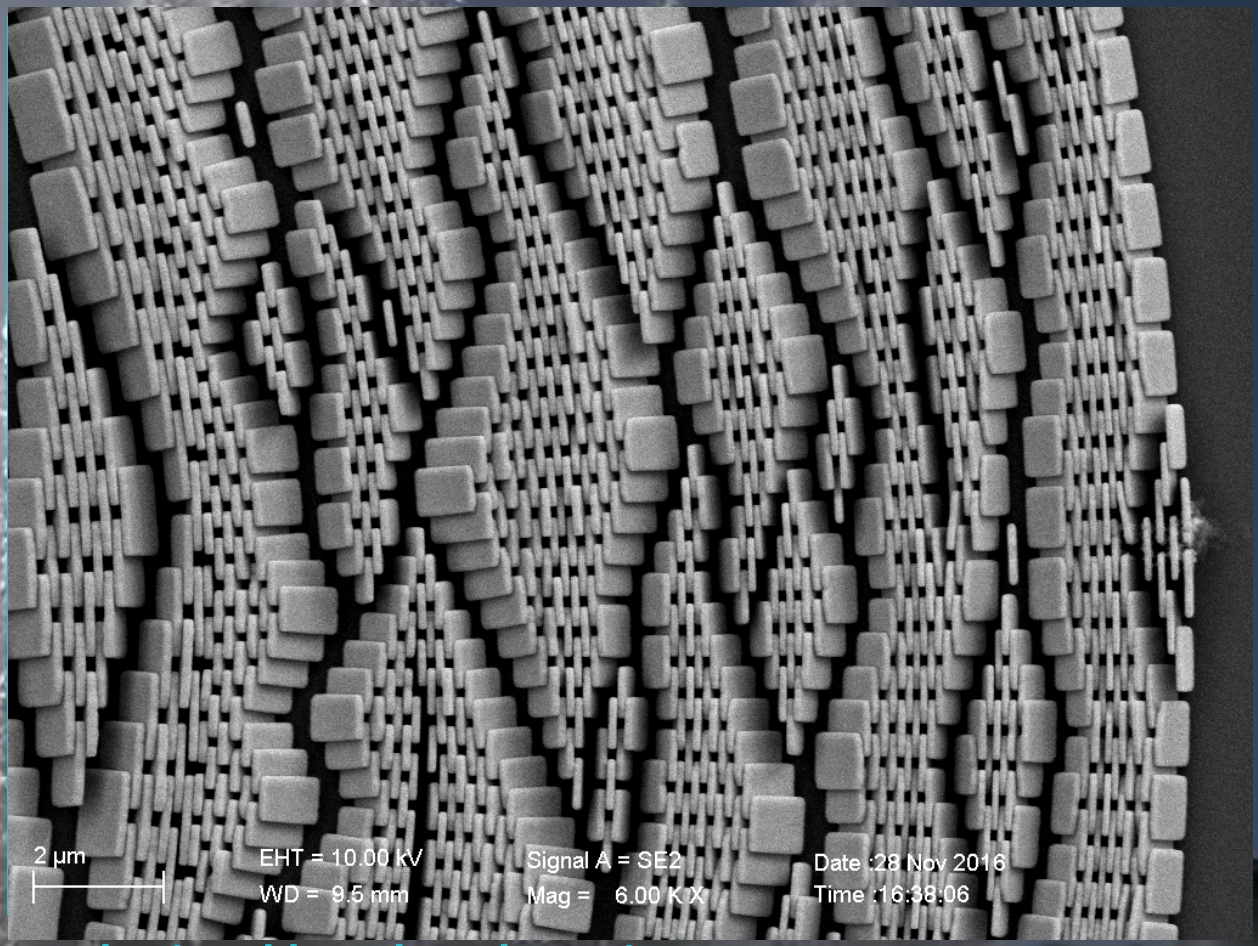
49

"Domino Effect"

Description:

The nanostructure collapses one by one like a set of dominoes.



Submitted by: Shanshan Xie
Affiliation: Fudan University
Instrument: SEM Zeiss Sigma HD
Magnification: 6.00kx

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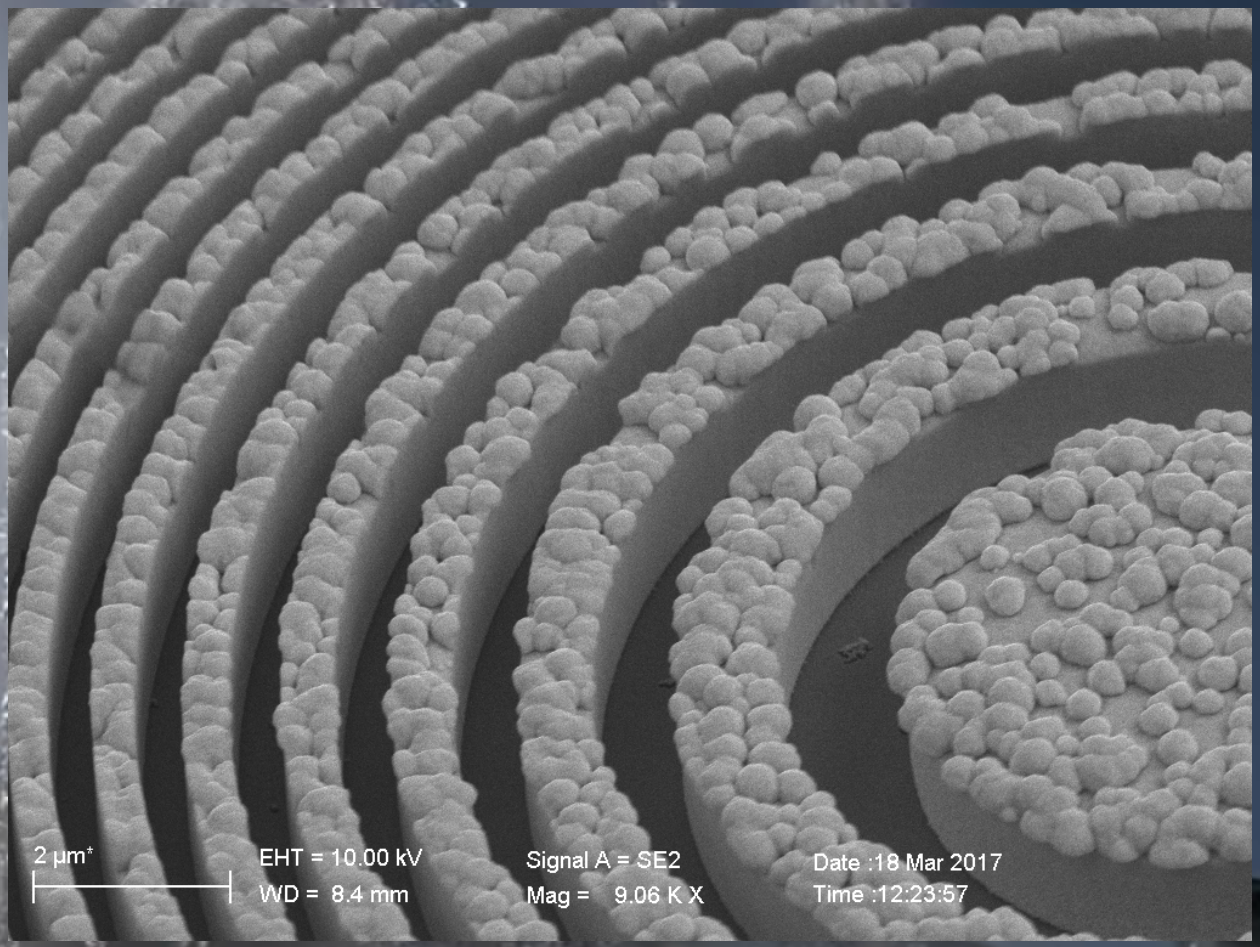
50

"Popcorn in nanometer scale"

Description:

It's like freshly baked popcorn fabricated by electron beam lithography and electroplating.



Submitted by: Shanshan Xie
Affiliation: Fudan University
Instrument: SEM Zeiss Sigma HD
Magnification: 9.06kx

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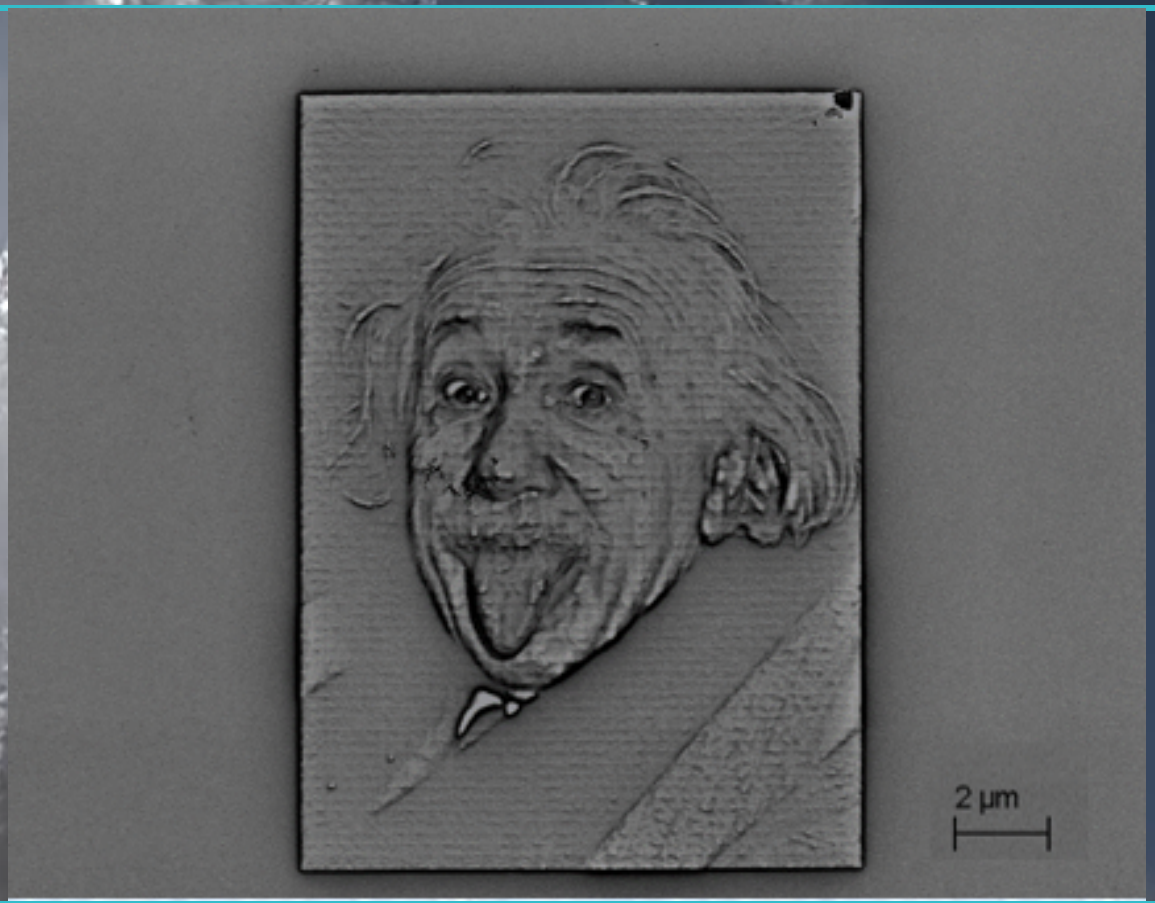
51

"Micro-Einstein"

Description:

The photo of Albert Einstein is fabricated by grayscale e-Beam lithography and the scale is 13.6 μm *10.6 μm.



Submitted by: Alan Xu
Affiliation: Fudan University
Instrument: SEM-Zeiss Sigma HD
Magnification: 4K

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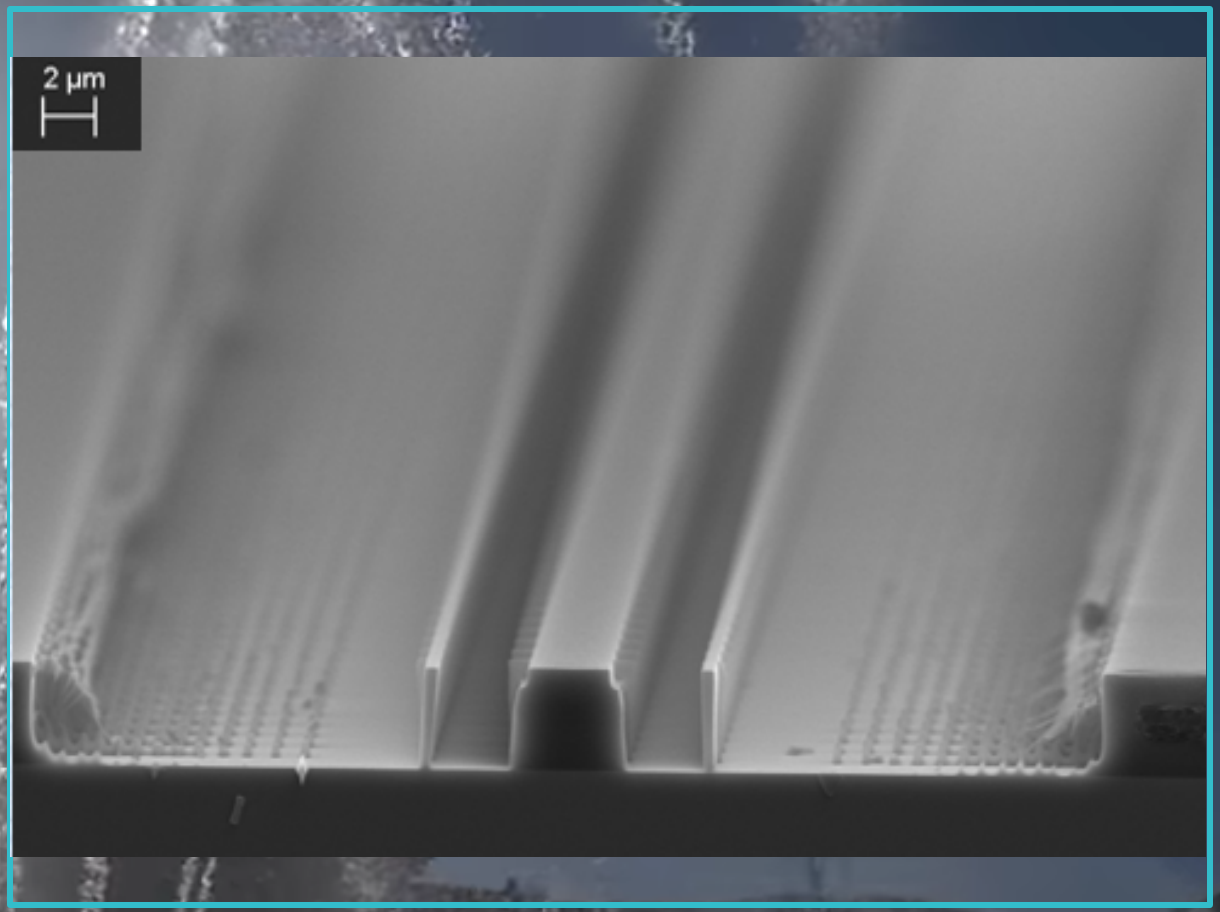
52

"Waiting for the train"

Description:

It is a fail SEM result of Kinoform lens on PMMA photoresist.

In the image, people are standing in line waiting for the train.



Submitted by: Alan Xu
Affiliation: Fudan University
Instrument: SEM-Zeiss Sigma HD
Magnification: 2K

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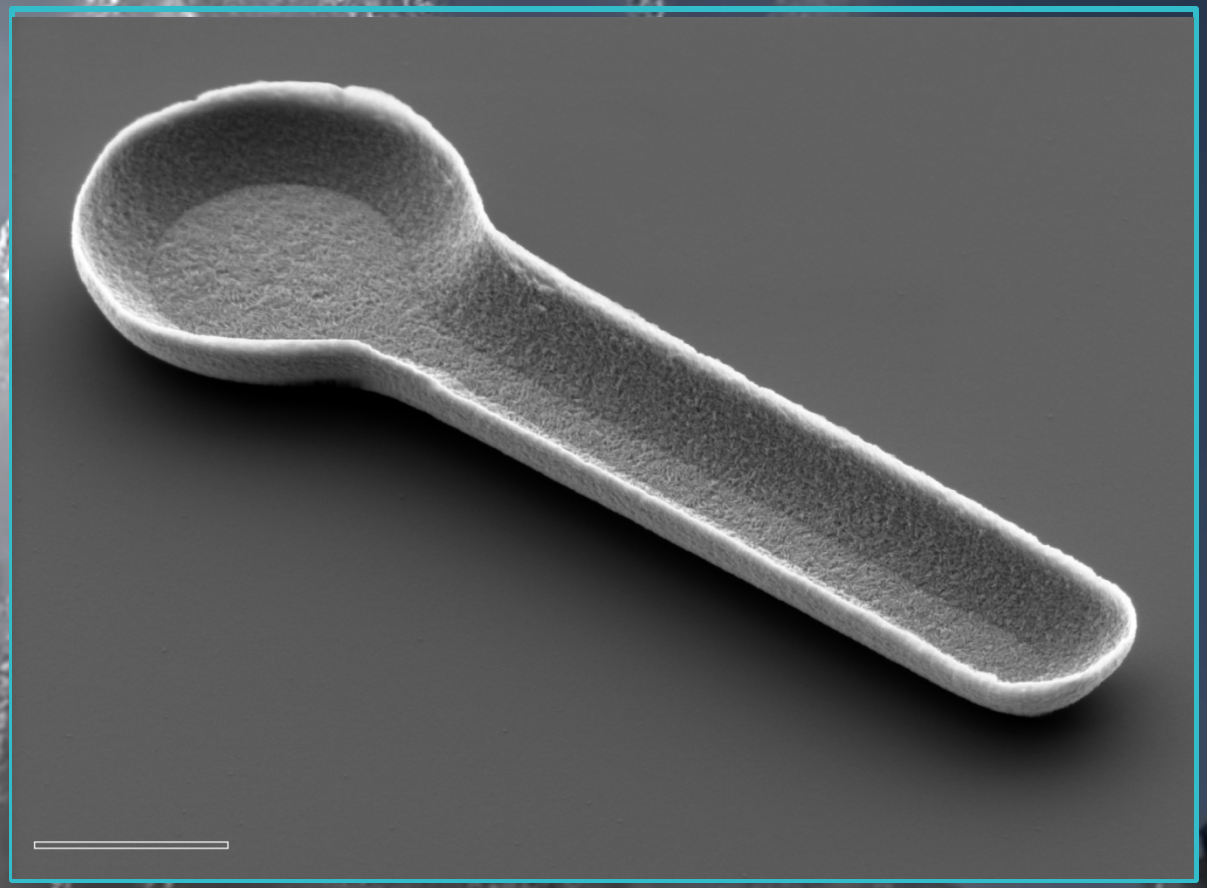
53

"Microspoon"

Description:

Probably, the world's smallest spoon. It is made of AlN, after a lift-off process and photolithography. It can stimulate living cells as a new bioelectronic nano-medicine. To give syrup to a cell is possible!



Submitted by: Gonzalo Murillo
Affiliation: IMB-CNM (CSIC)
Instrument: SEM Zeiss Auriga
Magnification: 45.000X (scale bar = 1 micron)

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54

"Microgeometric fantasy"

Description:
They are piezoelectric microstructures, fabricated by photolithography. They will be used to interact with living human cells, as intelligent microdevices for nanomedicine.

Submitted by: Gonzalo Murillo
Affiliation: IMB-CNM (CSIC)
Instrument: SEM Zeiss Auriga
Magnification: 5.000X

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55

"Desert nanorose"

Description:

These are piezoelectric nanosheets of ZnO growth by hydrothermal method over a catalyst layer made of AlN. They have a thickness of less than 10 nm!

Submitted by: Gonzalo Murillo
Affiliation: IMB-CNM (CSIC)
Instrument: SEM Zeiss Auriga
Magnification: 10.000X

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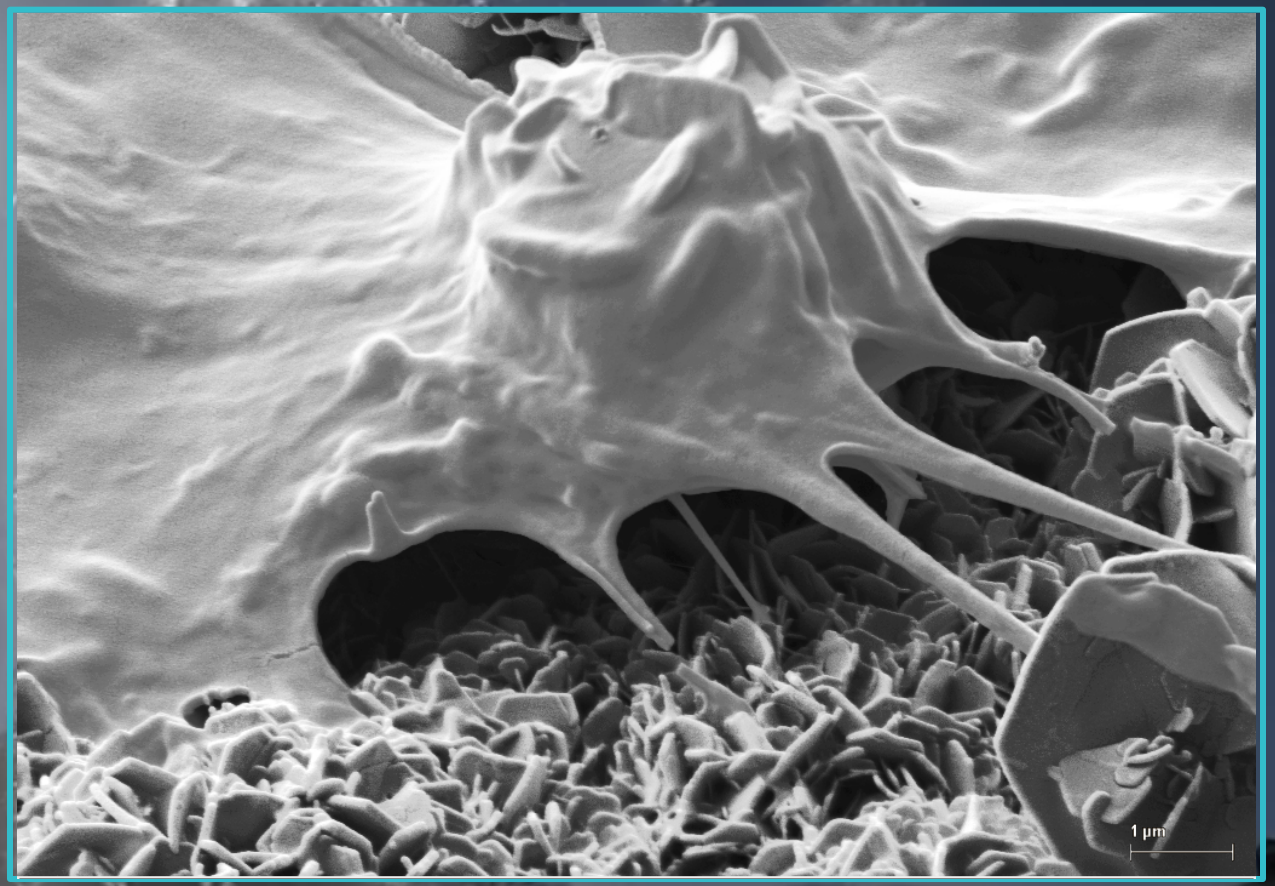
56

"Living chewing gum"

Description:

This Saos-2 cell has been cultured on top of piezoelectric ZnO nanosheets which can electrically stimulate the cell when moving. The cell perfectly adapts its shape to the substrate topography.



Submitted by: Gonzalo Murillo
Affiliation: IMB-CNM (CSIC)
Instrument: SEM Zeiss Auriga
Magnification: 10.000X

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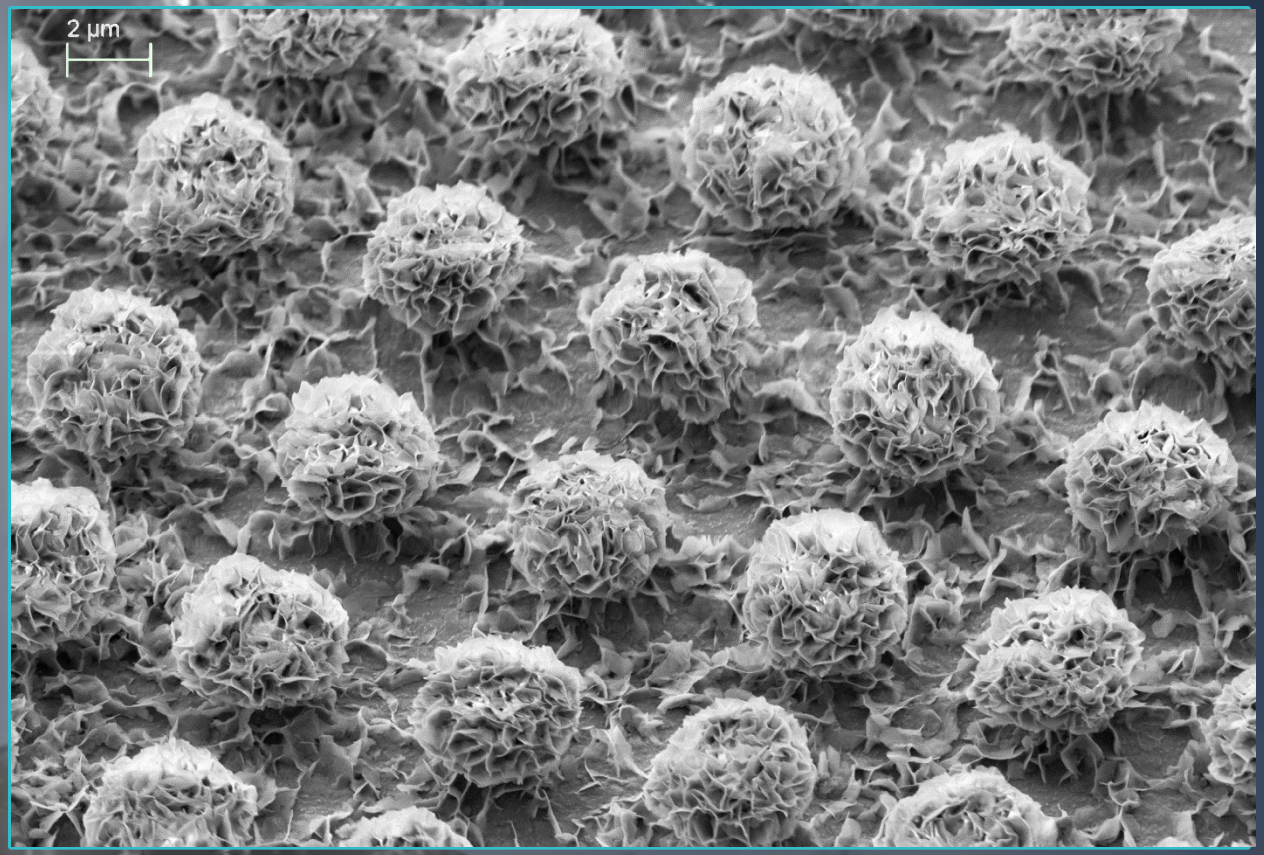
57

"Microenergy forest"



Description:

The threes of this forest are particles made of silicon/AlN surrounded by piezoelectric nanosheets of ZnO growth by hydrothermal method. This is a microenergy forest!

Submitted by: Gonzalo Murillo
Affiliation: IMB-CNM (CSIC)
Instrument: SEM Zeiss Auriga
Magnification: 10.000X

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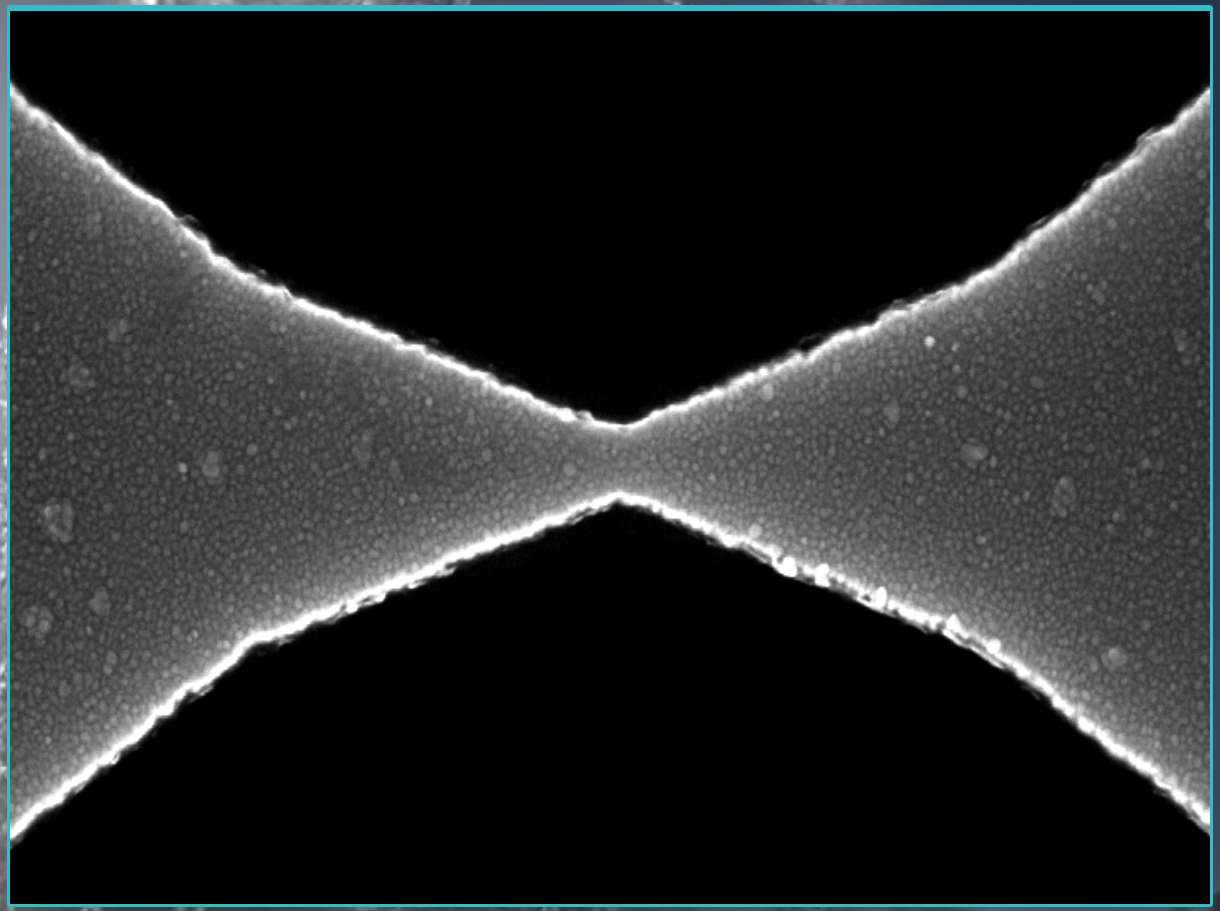
58

"Live diffusion of atoms"

Description:

In-situ imaging of controlled electromigration in Py nanoconstriction made by EBL. Atoms are diffusing under the action of a high current density, reducing the size of the junction until the formation of a nanogap.



Submitted by: Joseph Lombardo
Affiliation: University of Liège

Instrument: Raith - Pioneer Two
Magnification: 62950 X

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59

"The crossroads"

Description:

Focus on a superconducting Al nanowire (50 nm) made by EBL. One can appreciate clearly the granularity of such films.

Submitted by: Joseph Lombardo
Affiliation: University of Liège

Instrument: Raith - Pioneer Two
Magnification: 31370 X

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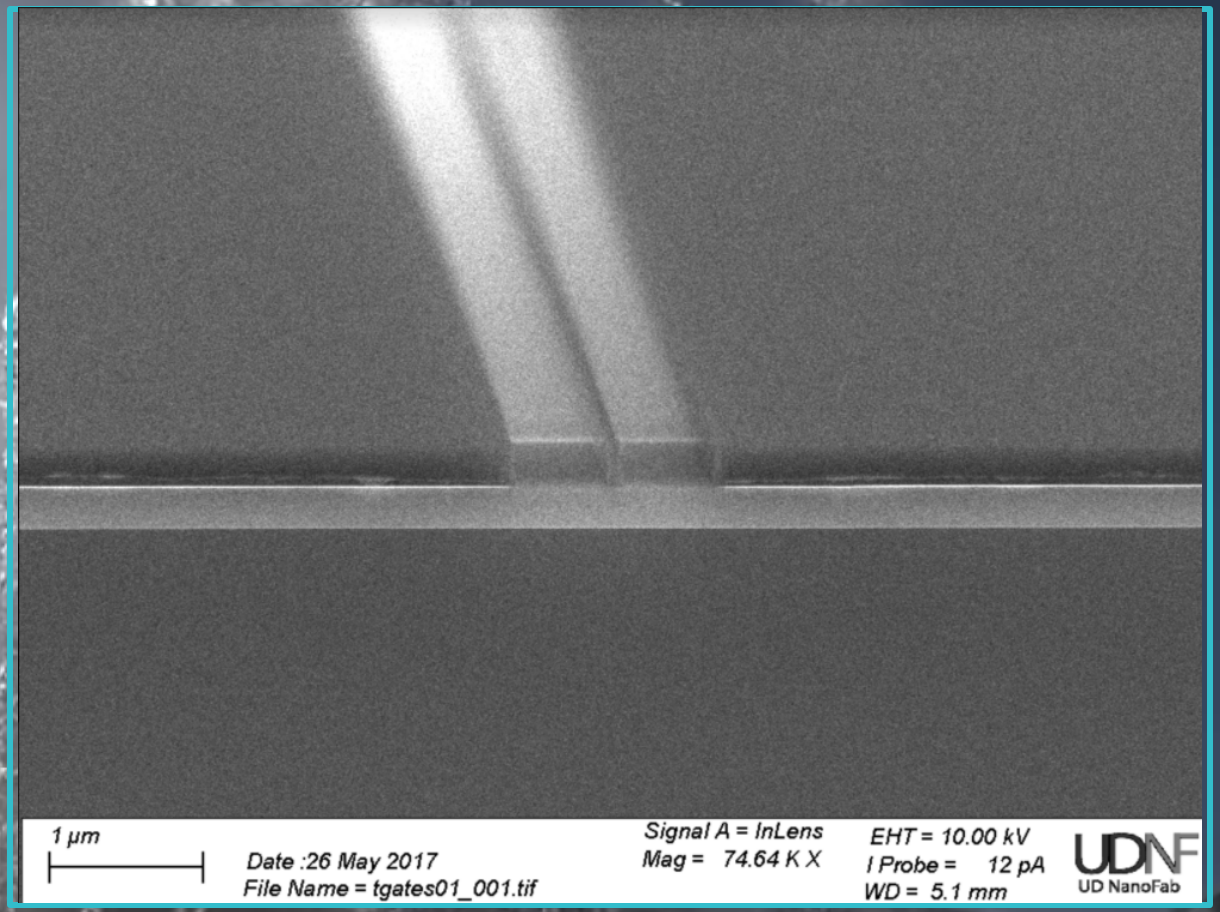
60

"The grand canyon"

Description:
It reminds me of the great canyon in Corolado.



Submitted by: Qi Cheng, Zilun Wang
Affiliation: University of Delaware

Instrument: Zeiss SEM
Magnification: 74KX

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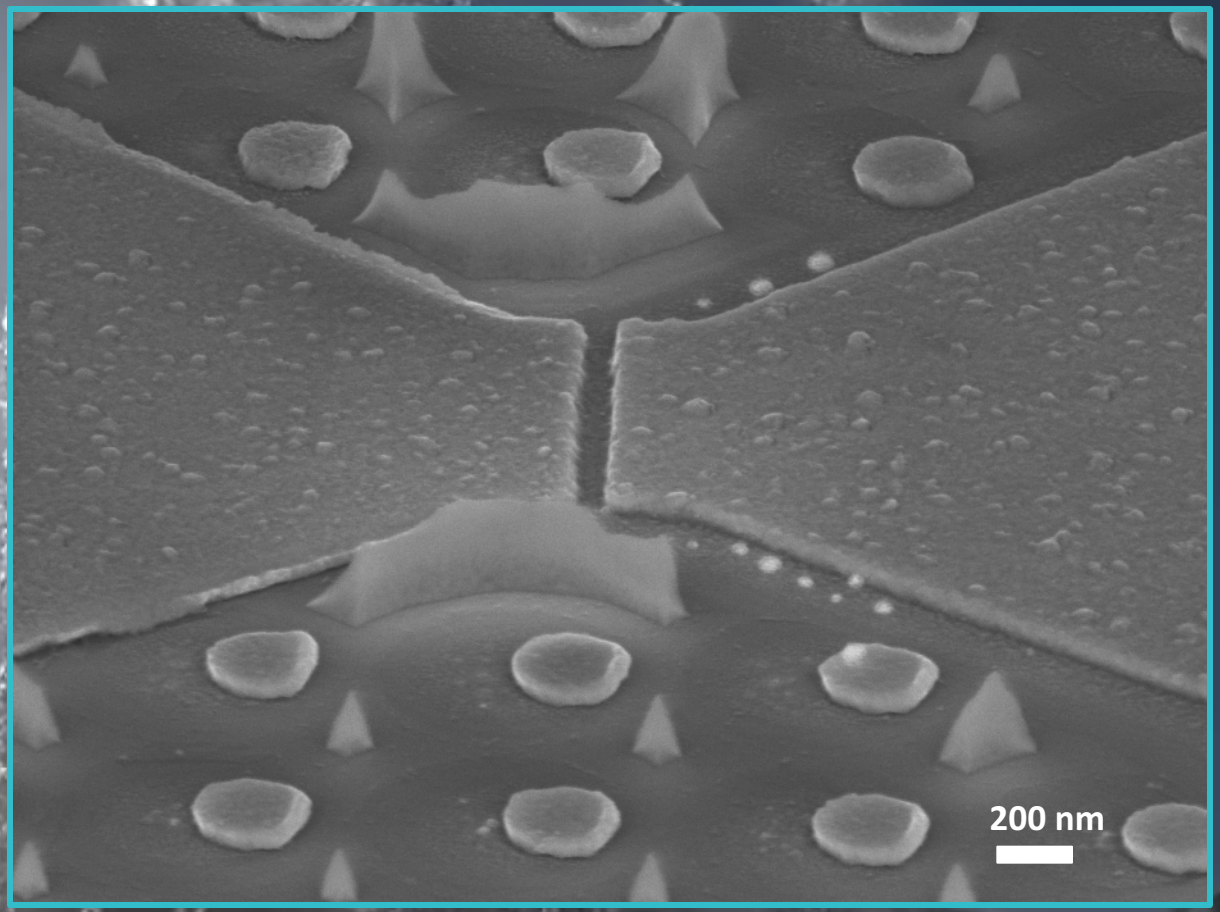
61

"Majorana Highway"

Description:

This device was fabricated in-situ! Due to the high interface quality one can observe signatures of the elusive Majorana mode, which is a prime candidate for future quantum computer applications



Submitted by: Peter Schüffelgen
Affiliation: Forschungszentrum Jülich
Instrument: Zeiss 1550 SEM
Magnification: 100kX

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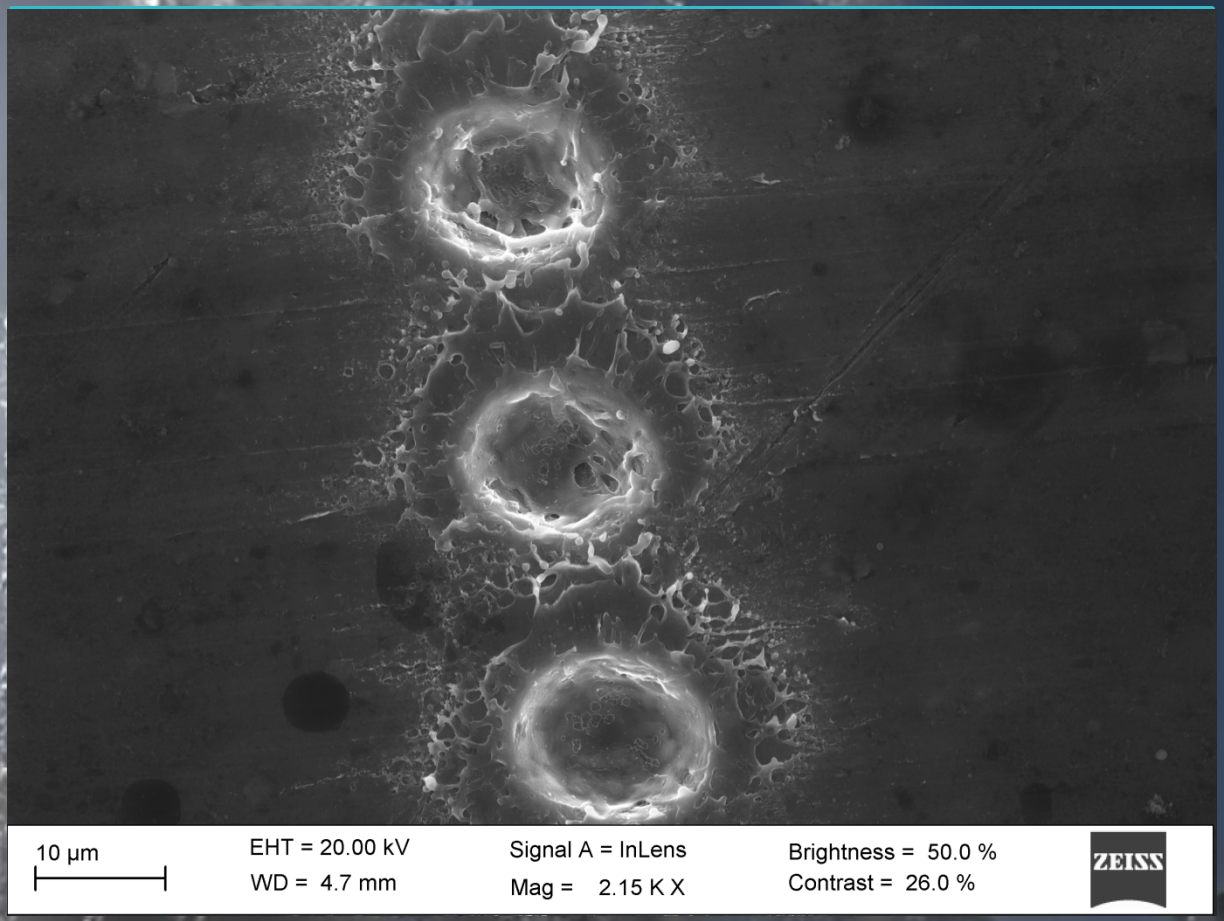
62

"fs-laser shots"

Description:

The image shows a sequence of impacts of fs-laser pulses over the surface of an aluminum plate. The energy released is able to melt the metal causing these craters.



Submitted by: Manuel Gómez

Affiliation: CIQUS, Santiago de Compostela University

Instrument: Zeiss FESEM Ultra-Plus

Magnification: on Original Micrograph

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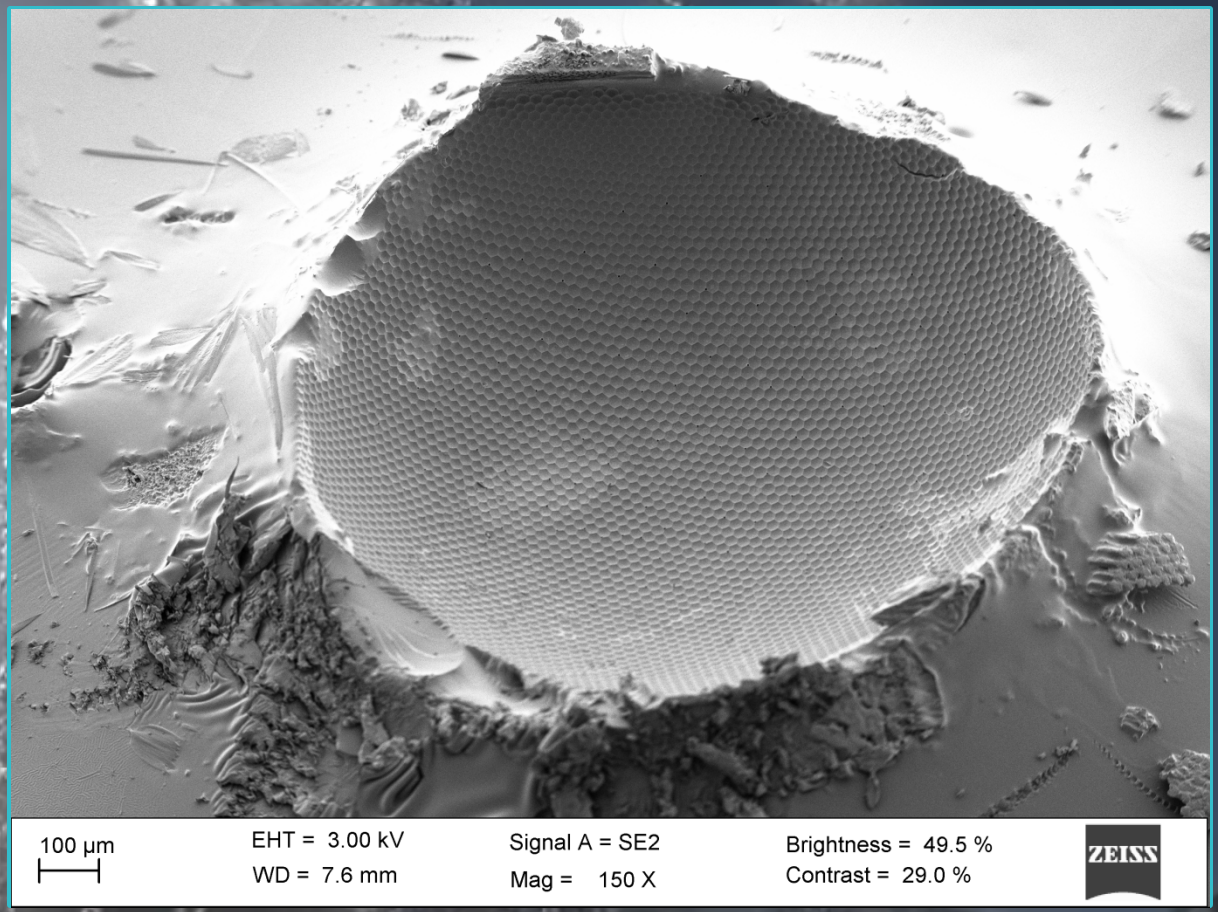
63

"Micro Arecibo telescope"

Description:

This image shows a polymeric replica of a moth eye made by UV-NIL. It resembles a bit the shape of Arecibo telescope. Every element is micro, but they are actually an array of nanostructures.



Submitted by: Manuel Gómez
Affiliation: CIQUS, Santiago de Compostela University
Instrument: Zeiss FESEM Ultra-Plus
Magnification: on Original Micrograph

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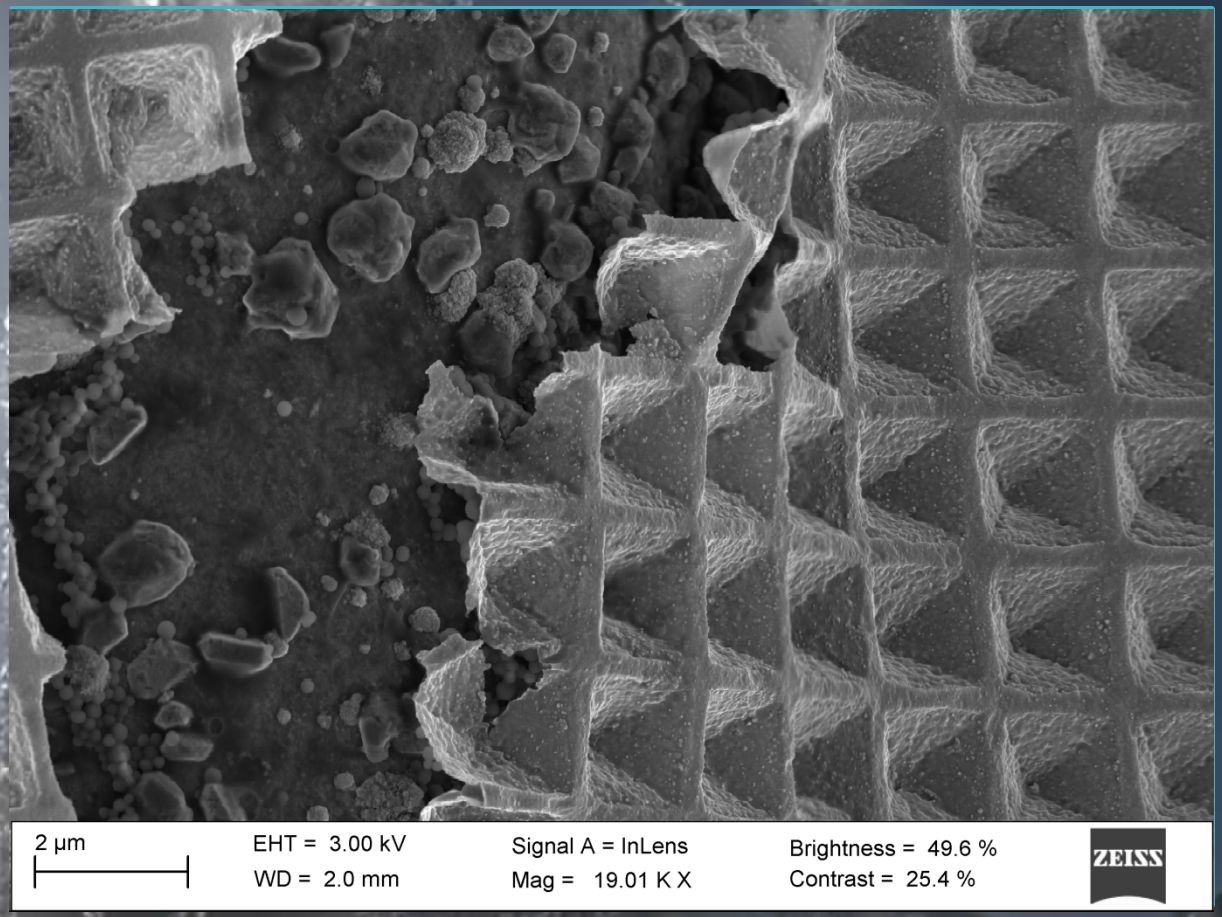
64

"Collapse in the TEM grid"

Description:

When you remove the polymer background of a metal coated structure, the thin metallic film is so thin that it can broke. The big rocks are copper and the balls are polymer remains.



Submitted by: Manuel Gómez

Affiliation: CIQUS, Santiago de Compostela University

Instrument: Zeiss FESEM Ultra-Plus

Magnification: on Original Micrograph

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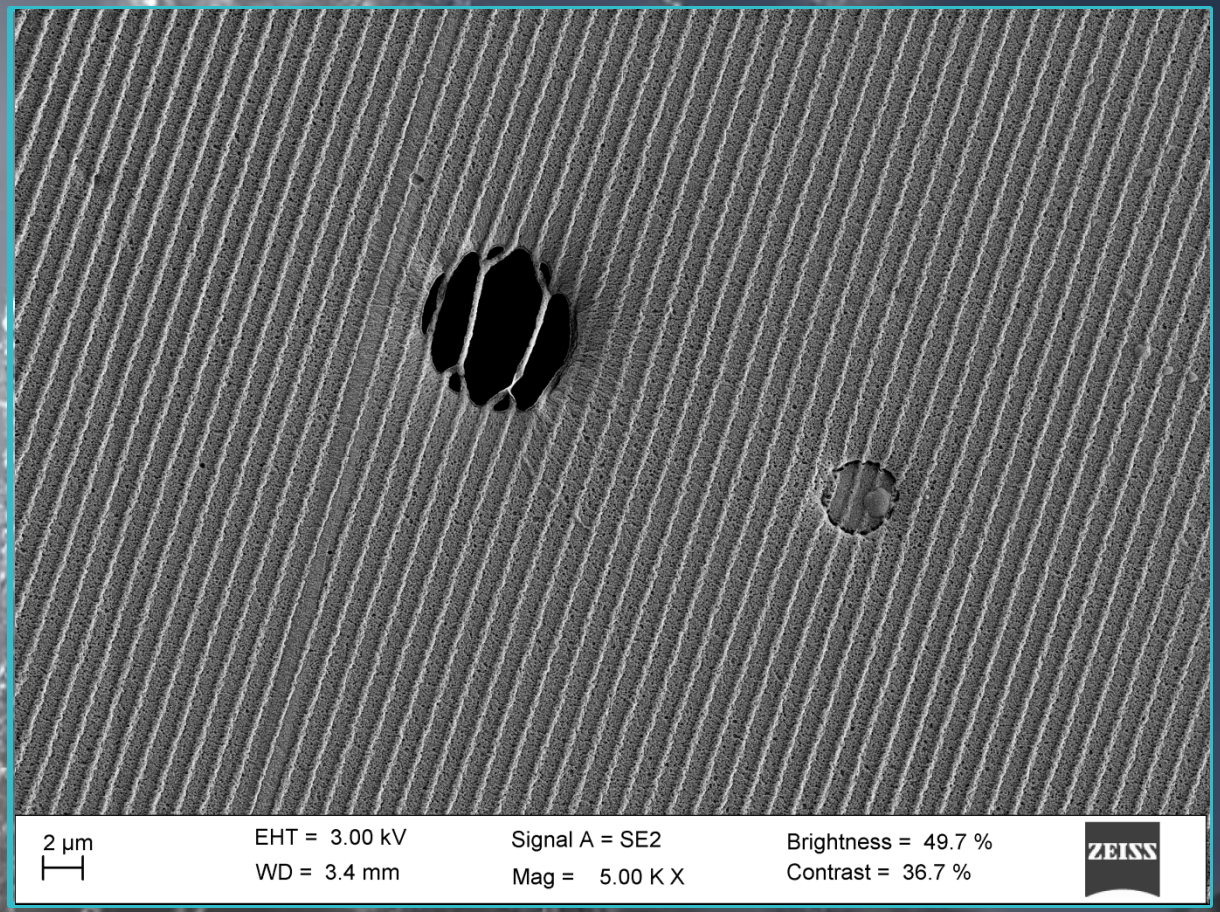
65

"Bridge over the black hole abyss"

Description:

Here we can see a couple of nano-bridges over a black hole abyss. The bridges are strips of a diffraction grating caused by an air bubble trapped in the polymer during a UV-NIL process.



Submitted by: Manuel Gómez
Affiliation: CIQUS, Santiago de Compostela University
Instrument: Zeiss FESEM Ultra-Plus
Magnification: on Original Micrograph

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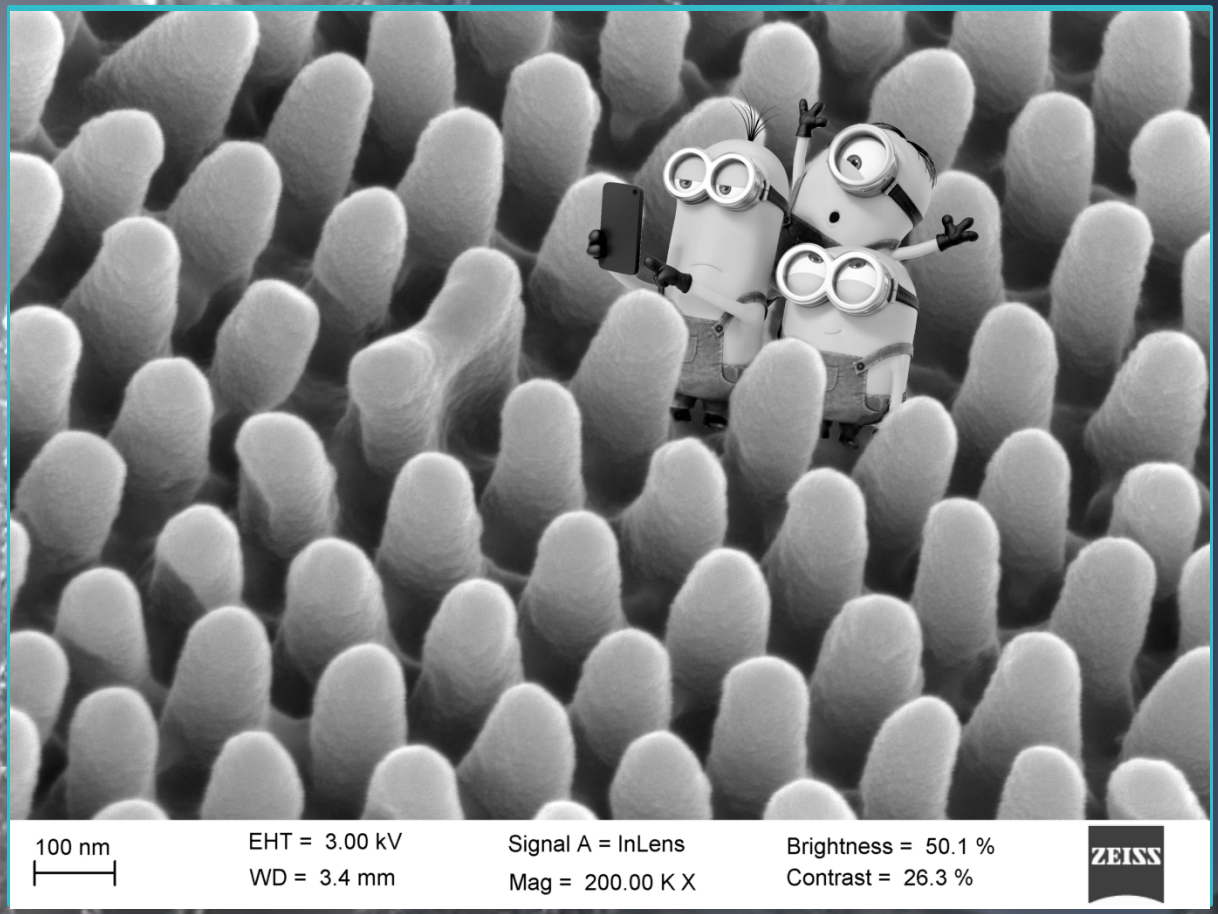
66

"Say Bananaaaah!

Or Bob, Stuart and Kevin at MNE-2017"

Description:
Unexpected things appear when you examine your samples ... here some minions taking a selfie ... No the micrograph is not photoshopped :)



Submitted by: Manuel Gómez
Affiliation: CIQUS, Santiago de Compostela University

Instrument: Zeiss FESEM Ultra-Plus
Magnification: on Original Micrograph

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67

"Machine Empire: Wrench "

Description:

The micrograph shows a nanoscale wrench fabricated by using RIE, masking by the HSQ films on the SOI substrate.

Submitted by: Bo Feng
Affiliation: Fudan University, Shang hai, China
Instrument: Scanning Electron Microscope
Magnification: 11.27K

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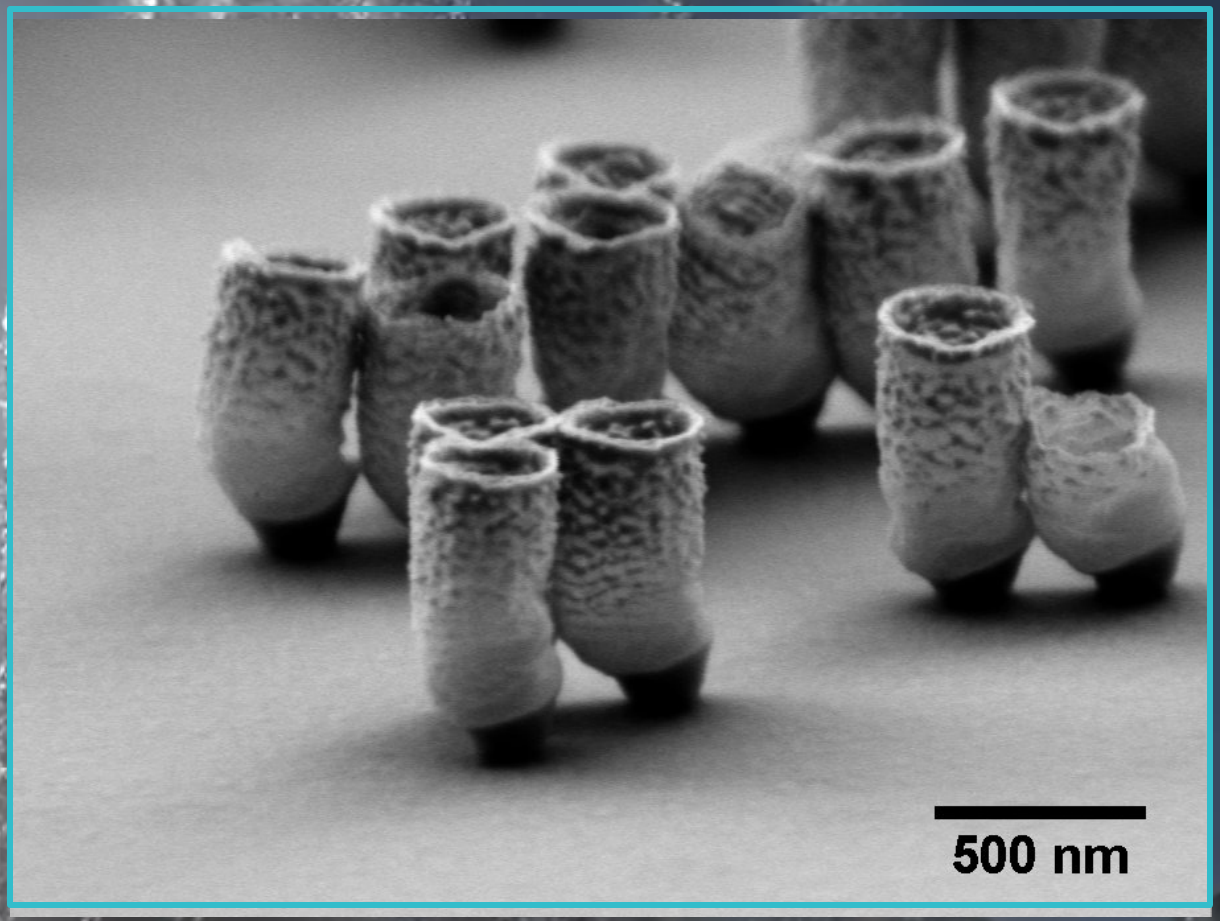
68

"Need a shot of caffeine?"

Description:

Au cup-shaped nanostructures fabricated by NIL and sputtering metallization. Perfect for a shot of coffee to keep working!



Submitted by: Ana Conde Rubio
Affiliation: Universitat de Barcelona and IN2UB
Instrument: SEM AURIGA (ZEISS)
Magnification: 93.61 K

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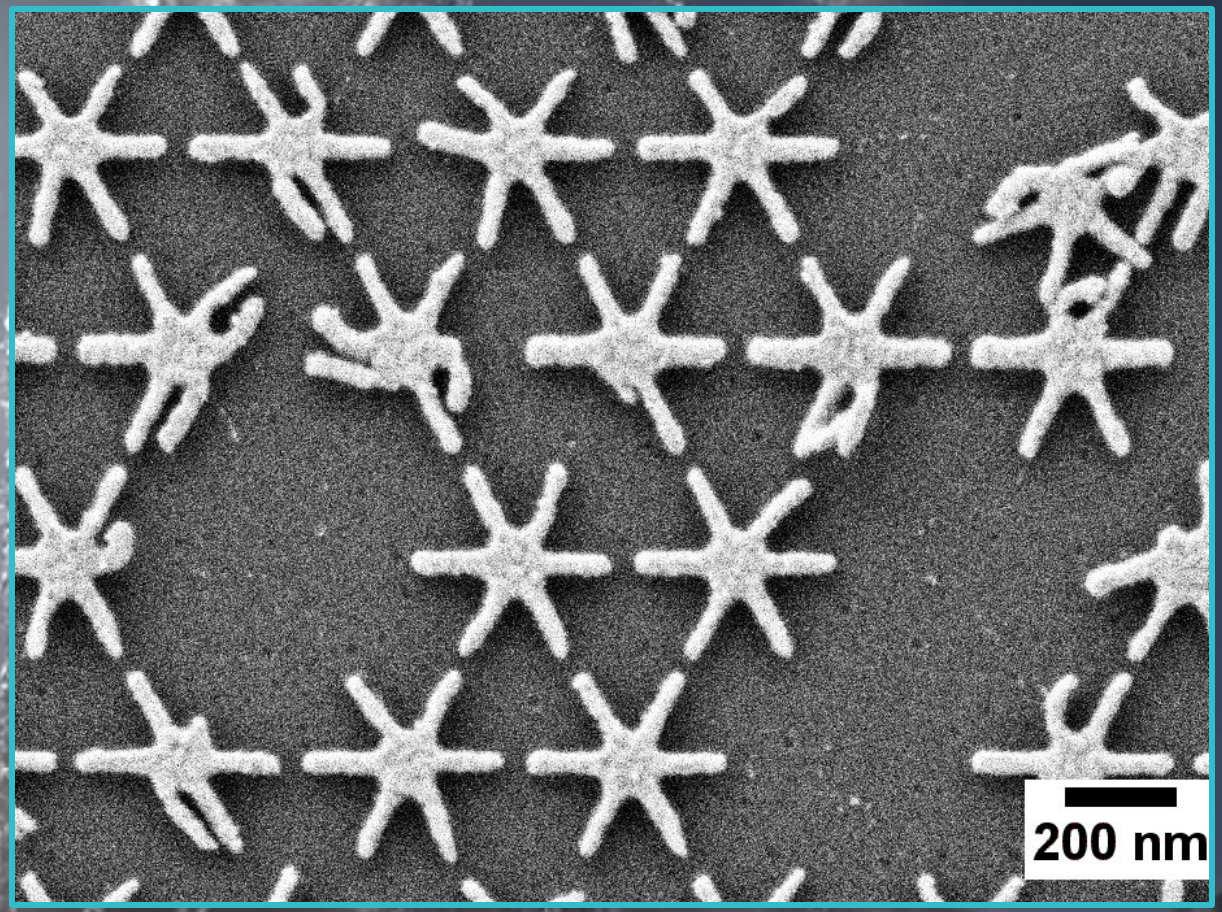
69

"Dancing stars"

Description:
Au star-shaped nanostructures fabricated by EBL. Due to the bad adhesion of Au, during the lift-off process, some stars lifted away from the substrate.



Submitted by: Ana Conde Rubio
Affiliation: Universitat de Barcelona and IN2UB
Instrument: FE-SEM LEO 1530
Magnification: 125.90 K

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70

"Bad draft"

Description:
During the lift off process the nanostructures Au film wadded up. It looks just as a crumpled paper ball!

Submitted by: Ana Conde Rubio
Affiliation: Universitat de Barcelona and IN2UB
Instrument: SEM AURIGA (ZEISS)
Magnification: 83

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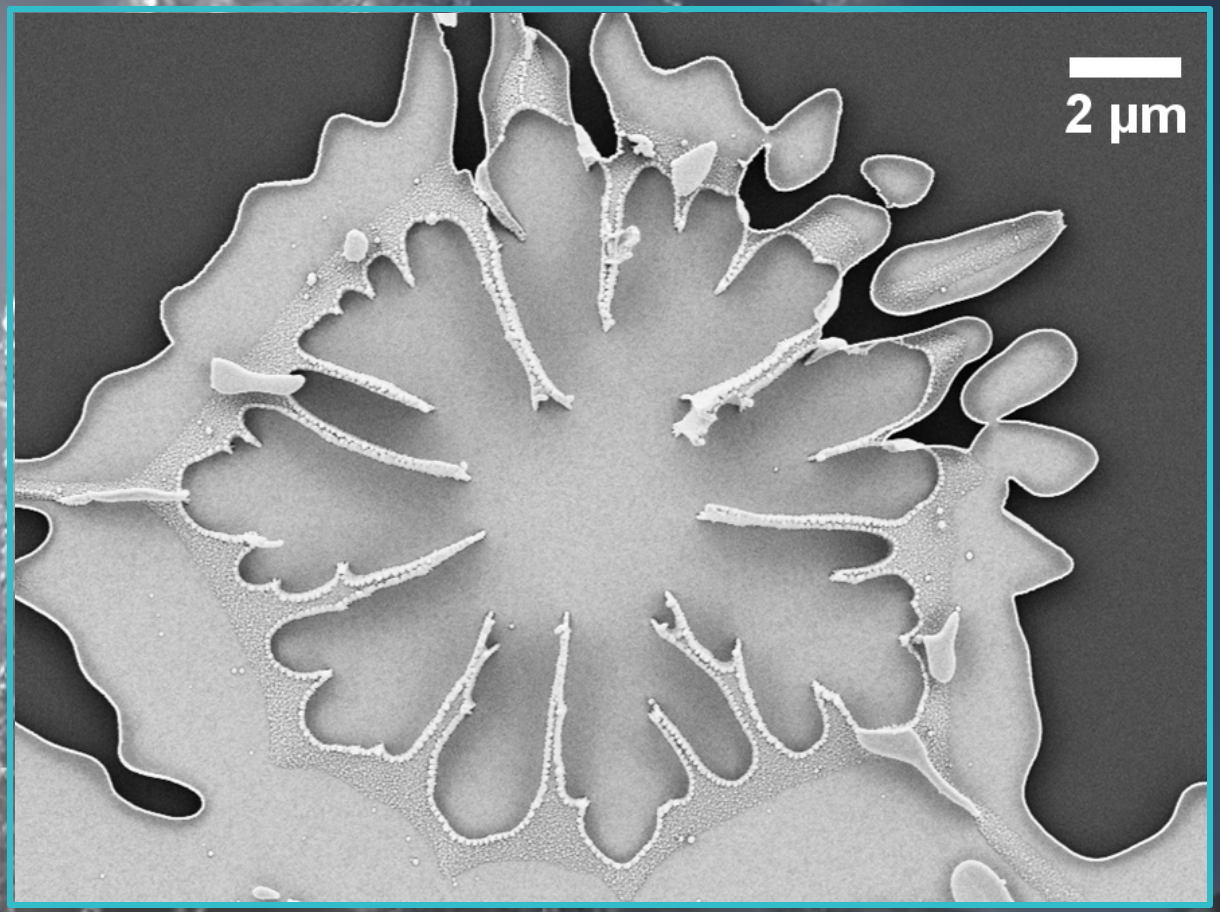
71

"Nanoflower"

Description:
This nanoflower appeared as a result of a defect in the NIL process, after metallization and lift-off.



Submitted by: Ana Conde Rubio
Affiliation: Universitat de Barcelona and IN2UB
Instrument: FE-SEM LEO 1530
Magnification: 12.66 K

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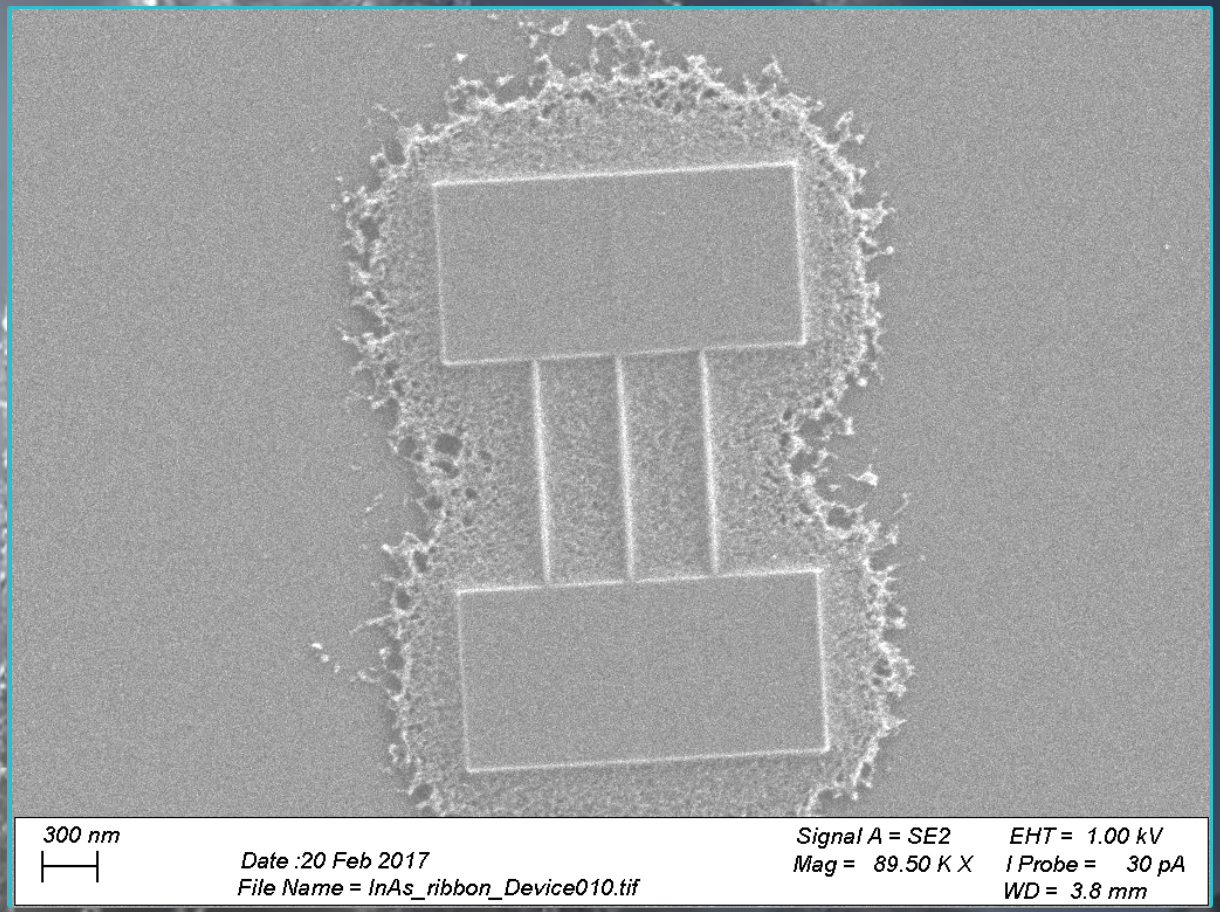
72

"There is no real beauty without some slight imperfection."

Description:

This is an SEM image of FinFET on SiO2/Si Substrate. The fins are 15nm wide. The resist used here is HSQ. The HSQ resist is very much over exposed. But this imperfection adds a subtle beauty to the image.



Submitted by: Kazy Shariar
Affiliation: University of Delaware
Instrument: Zeiss Gemini 2 (SEM)
Magnification: 89.50k X

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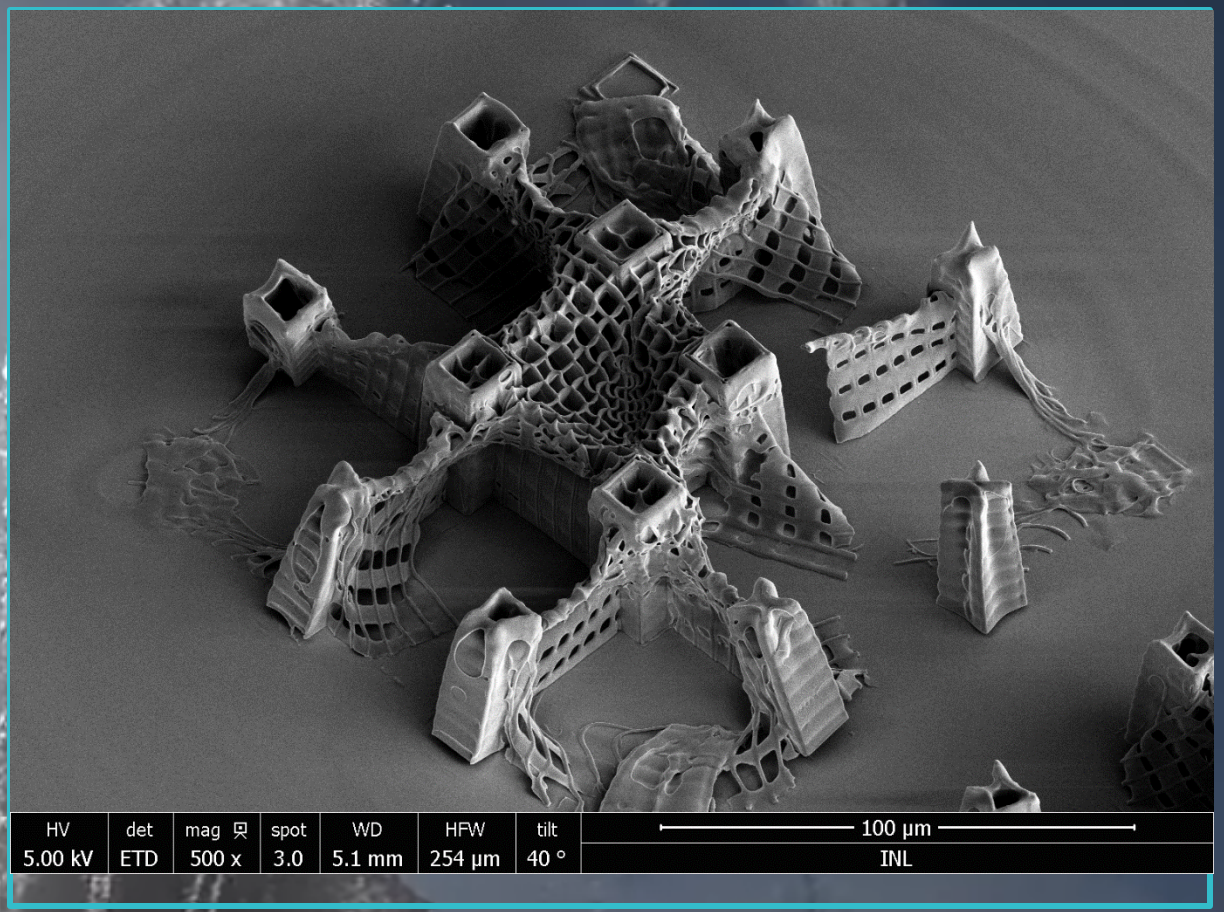
73

"Dreamcatcher"

Description:
Cell motility cage-like structures, parallel written by using a 9 spot diffraction optical element in SZ2080 resist gone badly.



Submitted by: Christian Maibohm
Affiliation: INL
Instrument: Newport laser uFab microfabrication workstation and NanoSEM, FEI
Magnification: 500x

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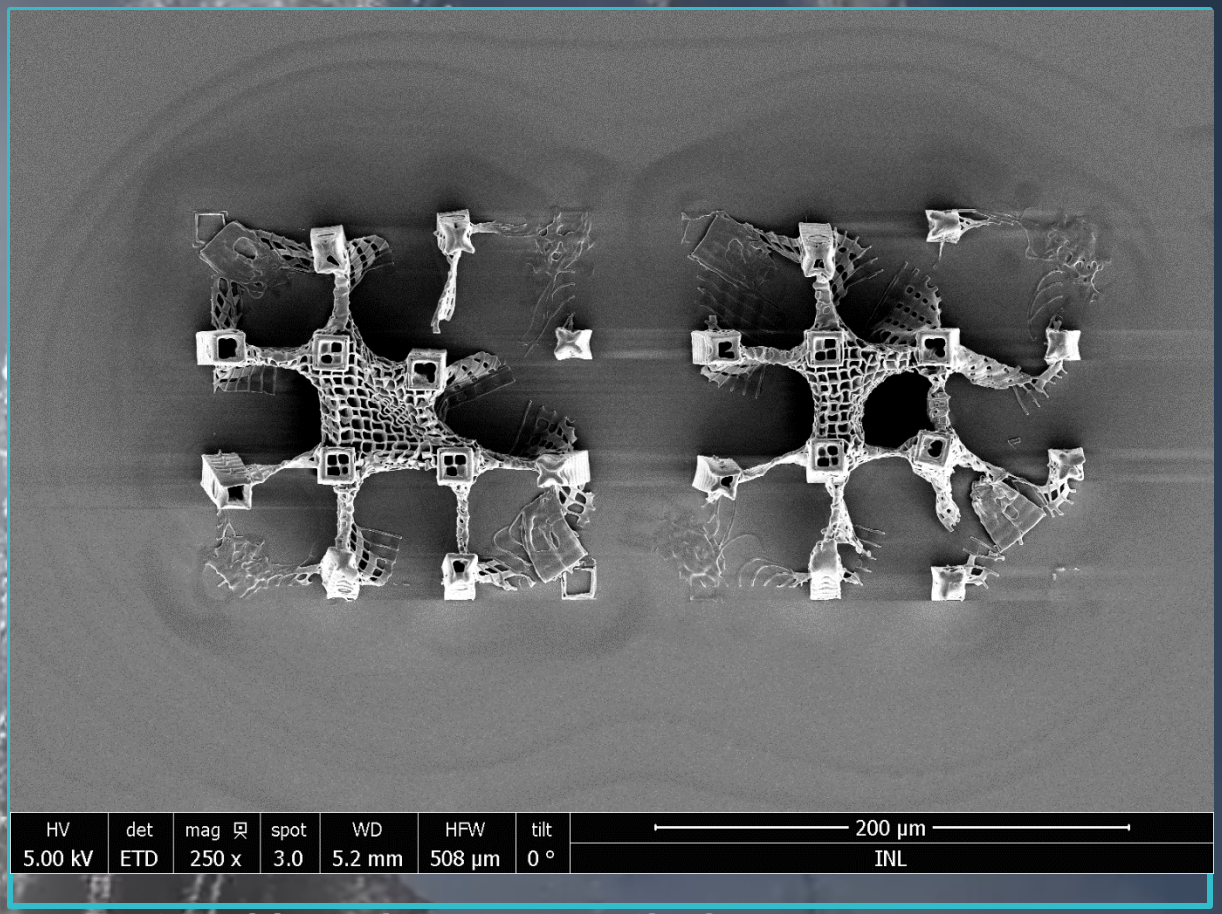
74

"Web of thoughts"

Description:
Cell motility cage-like structures, parallel written by using a 9 spot diffraction optical element in SZ2080 resist gone badly.



Submitted by: Christian Maibohm
Affiliation: INL
Instrument: Newport laser uFab microfabrication workstation and NanoSEM, FEI
Magnification: 500x

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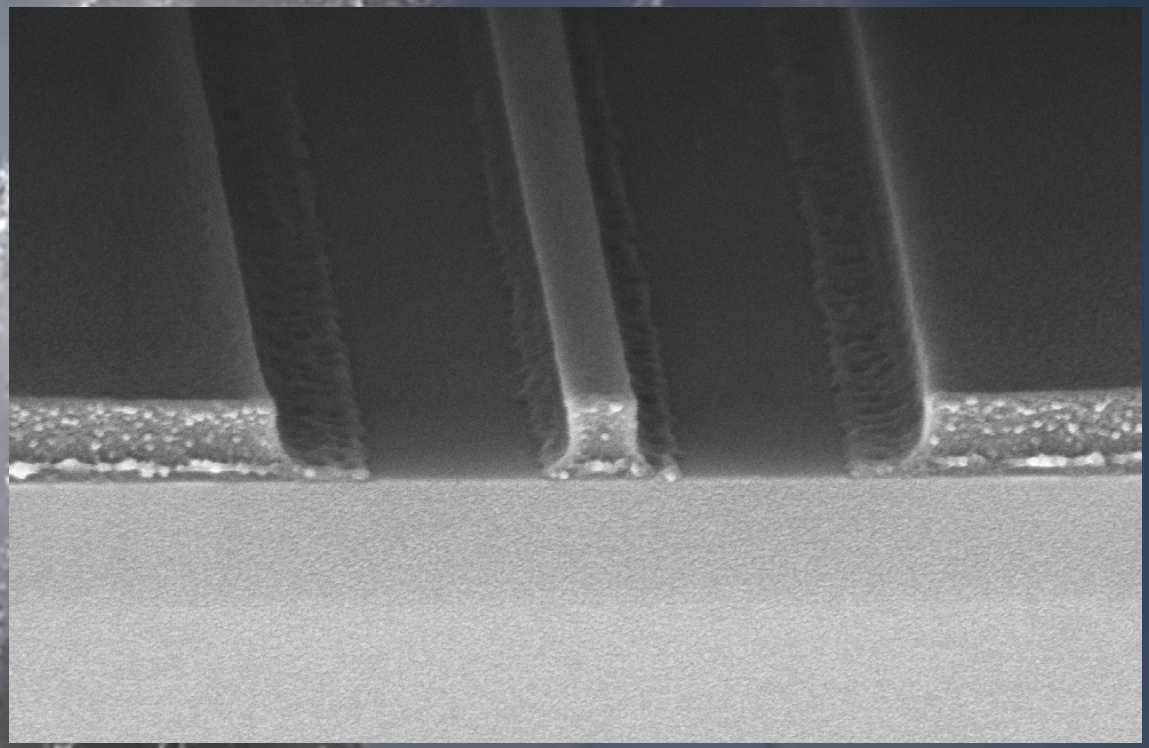
75

"Self-aligned scaling down technique "

Description:

PMMA/Co-PMMA Profile on Si/SiO2 substrate for shrinking gate length.

It is a self-aligned technique to make short gate length and scaling down extension region.



Submitted by: Yuping Zeng

Affiliation: University of Delaware

Instrument: Zeiss ultra55

Magnification: 145K

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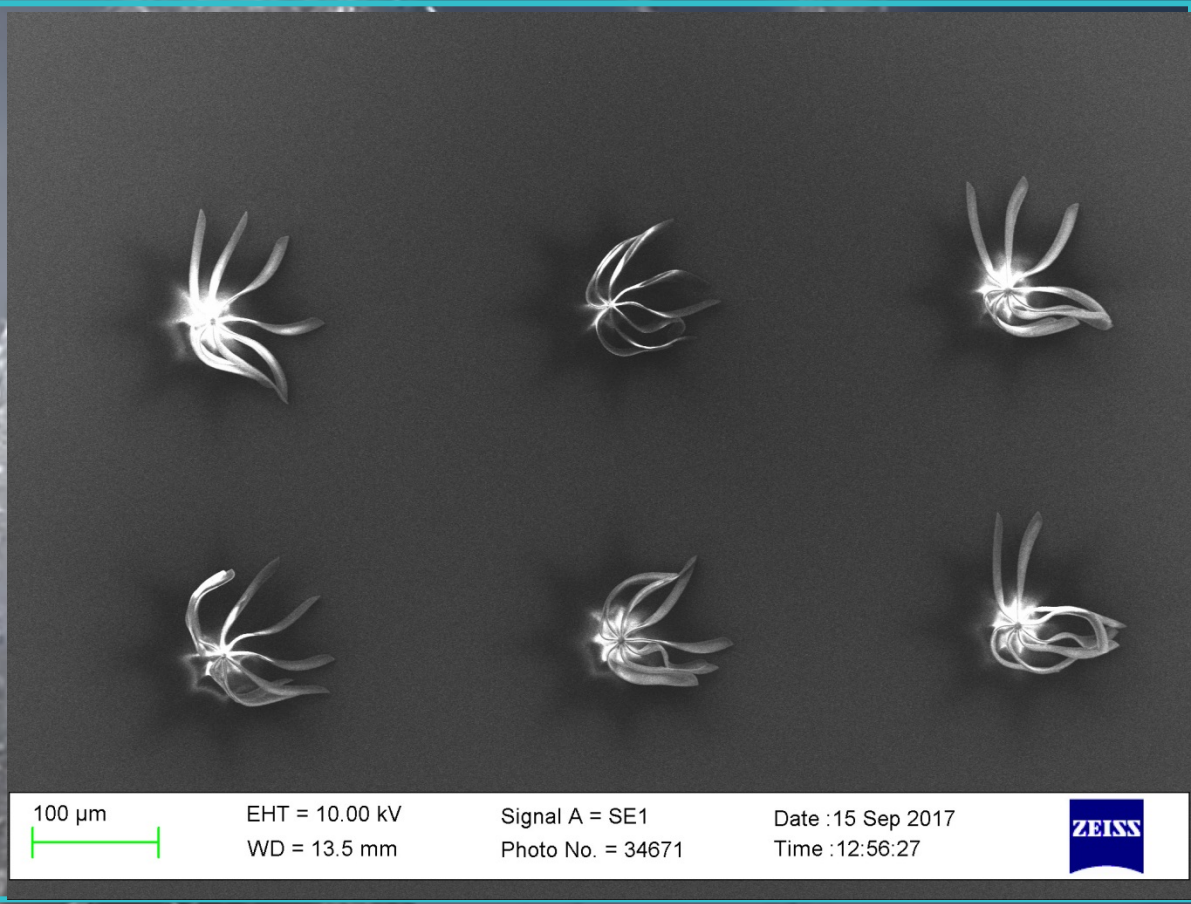
76

"Resist in the wind"

Description:
resist su8 3050, 30"
@ 3000rpm
(thickness: 50 um)

Aspect ratio: 1:10
EBL 100KV
dose 3uC/cm^2

Tests to verify the highest thickness we can expose on SU8 by 100kV EBL



Submitted by: Francesca Bertani, Luca Businaro, Adele De Ninno, Annamaria Gerardino
Affiliation: CNR-IFN
Instrument: Zeiss EVO 10
Magnification: on Original Micrograph

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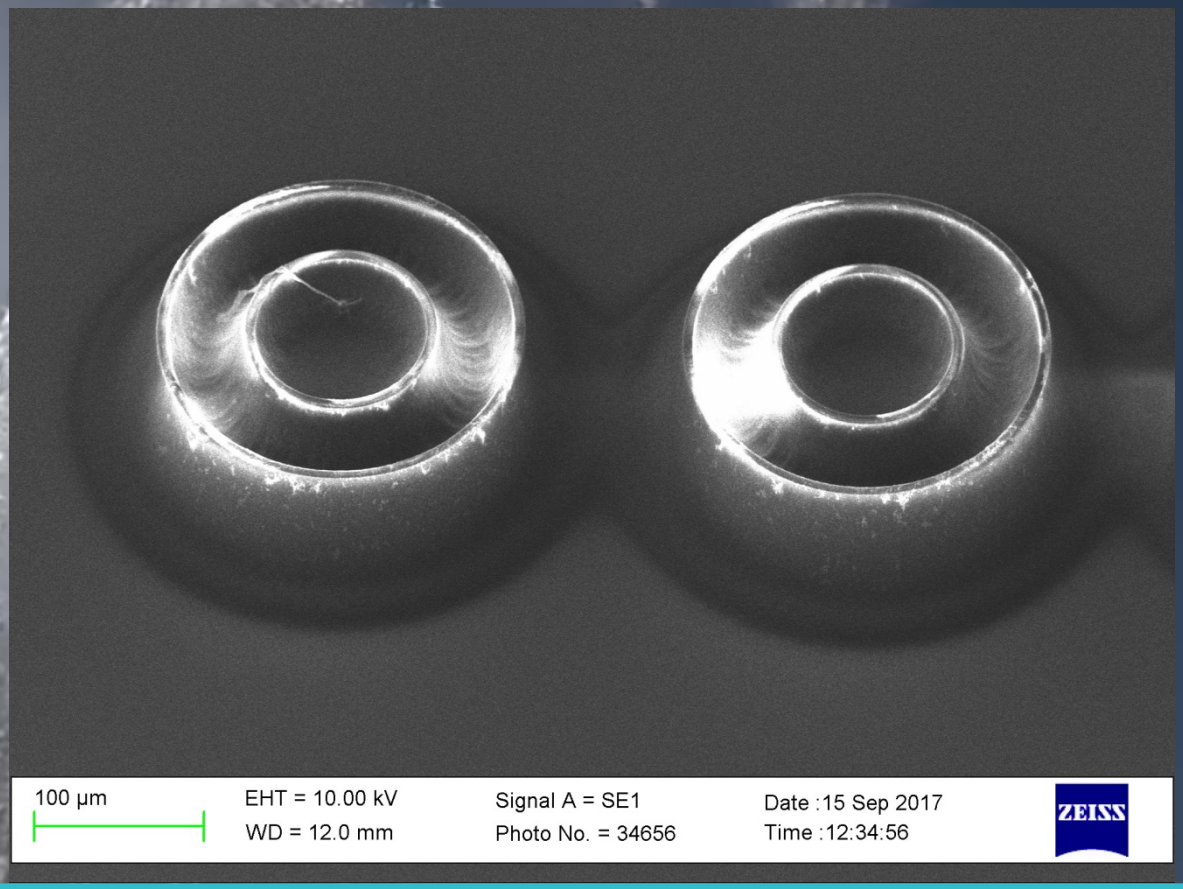
77

"Minion Look"

Description:
resist su8 3050, 30" @ 3000rpm (thickness: 50 um)

Aspect ratio: 1:10
EBL 100KV
dose 3uC/cm^2

Tests to verify the highest thickness we can expose on SU8 by 100kV EBL



Submitted by: Francesca Bertani, Luca Businaro, Adele De Ninno, Annamaria Gerardino
Affiliation: CNR-IFN
Instrument: Zeiss EVO 10
Magnification: on Original Micrograph

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