

3RD THERMAL PROBE WORKSHOP



21st & 22nd January 2016



Technopark, Zurich, Switzerland



Workshop program & additional information

Contact

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Program

Thursday, 21st January 2016

09.00	Registration	
09.30 – 10.50	Session I	<i>Chair: Felix Holzner</i>
09.30 – 09.40	Welcome Organizers	
09.40 – 10.10	Nanofabrication at Age 55 – strong as ever Dieter Kern, University of Tübingen	
10.10 – 10.30	Single nanometer lithography in 2D and 3D using heatable scanning probes Colin Rawlings, IBM Research Zurich	
10.30 – 10.50	Lift-off Processes for Thermal Scanning Probe Lithography Simon Bonanni, SwissLitho	
10.50 – 11.20	Break, coffee & snacks – Poster area	
11.20 – 12.50	Session II	<i>Chair: Stefan Weber</i>
11.20 – 11.50	Scanning Probe Microscope as a Lab on an Instrument for Industrial application Hamed Sadeghian, TNO Delft	
11.50 – 12.10	Towards the MultiTip NanoFrazor Emine Cagin, NTB Buchs	
12.10 – 12.30	Towards sub-10 nm nodes by EUV lithography Tero Kumala, Paul-Scherrer Institute	
12.30 – 12.50	Next Generation of Maskless Lithography Theophane Besson, Heidelberg Instruments	
12.50 – 14.00	Lunch	<i>Technopark Cafeteria</i>
14.00 – 15.30	Session III	<i>Chair: Philip Paul</i>
14.00 – 14.30	Resistless Nanofabrication by Stencil Lithography Jürgen Brugger, EPFL	
14.30 – 14.50	PPA as commercial resist for advanced lithography Felix Holzner, SwissLitho	
14.50 – 15.10	High aspect ratio nanoscale-to-microscale 3D silicon patterns by thermal scanning probe lithography Yuliya Lisunova, EPFL	
15.10 – 15.30	Fabrication of ultra-thin suspended silicon nanowires Jordi Llobet, IMB-CNM Barcelona	
15.30 – 16.00	Break, coffee & snacks – Poster area	
16.00 – 17.00	Young Researcher Idea Competition – Award Ceremony Jury: <i>Peter Vettiger, Dieter Kern, Nico de Rooij</i>	
16.10 – 16.20	Finalist 1: Three-dimensional phase plates for transmission electron microscopy Simon Hettler (Karlsruhe Institute of Technology)	
16.20 – 16.30	Finalist 2: Nano security features using fluorescent supramolecular glassy materials Diederik Baldenende (Adolphe Merkle Institute) & Samuel Zimmermann (EPFL)	
16.30 – 16.40	Finalist 3: Controlled nanometric recrystallization of amorphized and implanted semiconductors Matteo Lorenzoni Galizia (IMB-CNM Barcelona) & Jordi Llobet (IMB-CNM Barcelona)	
17.45	Departure to social evening event at Lindt & Sprüngli Shuttle service leaves from the main entrance of Technopark	

Friday, 22nd January 2016

08.30	Registration	
09.00 – 10.30	Session IV	Chair: <i>Armin Knoll</i>
09.00 – 09.30	Modulating the electronic properties of 2D materials with thermal probes Paul Sheehan, U.S. Naval Research Laboratories	
09.30 – 09.50	Chemical patterning with thermal probes for studying charge binding interaction pertaining to DNA and particle assembly Urs Dürig, IBM Research Zurich	
09.50 – 10.10	Nanoparticle Brownian Motors fabricated by Thermal Scanning Probe Lithography Stefan Fringes, IBM Research Zurich	
10.10 – 10.30	Scanning probes for directed self-assembly of PMMA/PS based Block-Copolymers Matteo Lorenzoni Galizia, IMB-CNM Barcelona	
10.30 – 11.00	Break, coffee & snacks – Poster area	
11.00 – 12.30	Session V	Chair: <i>Bernd Gotsmann</i>
11.00 – 11.30	Imaging and Understanding Atomic-scale Adhesion and Wear: Quantitative Investigations Using In Situ Electron Microscopy Tevis Jacobs, University of Pittsburgh	
11.30 – 11.50	Characterization of NanoFrazor cantilevers Martin Spieser, SwissLitho	
11.50 – 12.10	Scanning Probe Thermometry Fabian Menges, IBM Research Zurich	
12.10 – 12.30	Accurate measurement of near-field thermal radiation Roy Bijster, Delft University of Technology	
12.30 – 13.30	Lunch	<i>Technopark Cafeteria</i>
13.30 – 15.00	Session VI	Chair: <i>Urs Dürig</i>
13.30 – 14.00	NanoFrazor in an open access University Nanofab, neuronal manipulations and other AFM applications Peter Grütter, McGill University	
14.00 – 14.20	Bacterial traps: simultaneous AFM and fluorescence analysis of bacteria with various shapes Oliver Peric, EPFL	
14.20 – 14.40	Direct fabrication and electrical response of thin layer WSe2 nanoscale transistors by oxidation scanning probe lithography Yu Kyoung Ryu, Instituto de Ciencia de Materiales de Madrid CSIC	
14.40 – 15.00	Closing remarks Organizers	
15.00 – open	Meetings and discussions Several meeting rooms are available for meetings and discussions; please use the blackboard in the conference room for scheduling. Coffee & snacks provided	

Additional information

Hands-on NanoFrazor training

There is the chance to test the NanoFrazor yourself. Short sessions are available during the breaks.

Session I (Thursday, 21.01.)	10.50 – 11.20
Session II (Thursday, 21.01.)	15.30 – 16.00
Session III (Friday, 22.01.)	10.30 – 11.00

Location: SwissLitho Lab, 2nd floor “Edison”-Wing

Addresses, travel directions and transport

Workshop location

Technopark, Zurich
Technoparkstrasse 1
8005 Zurich

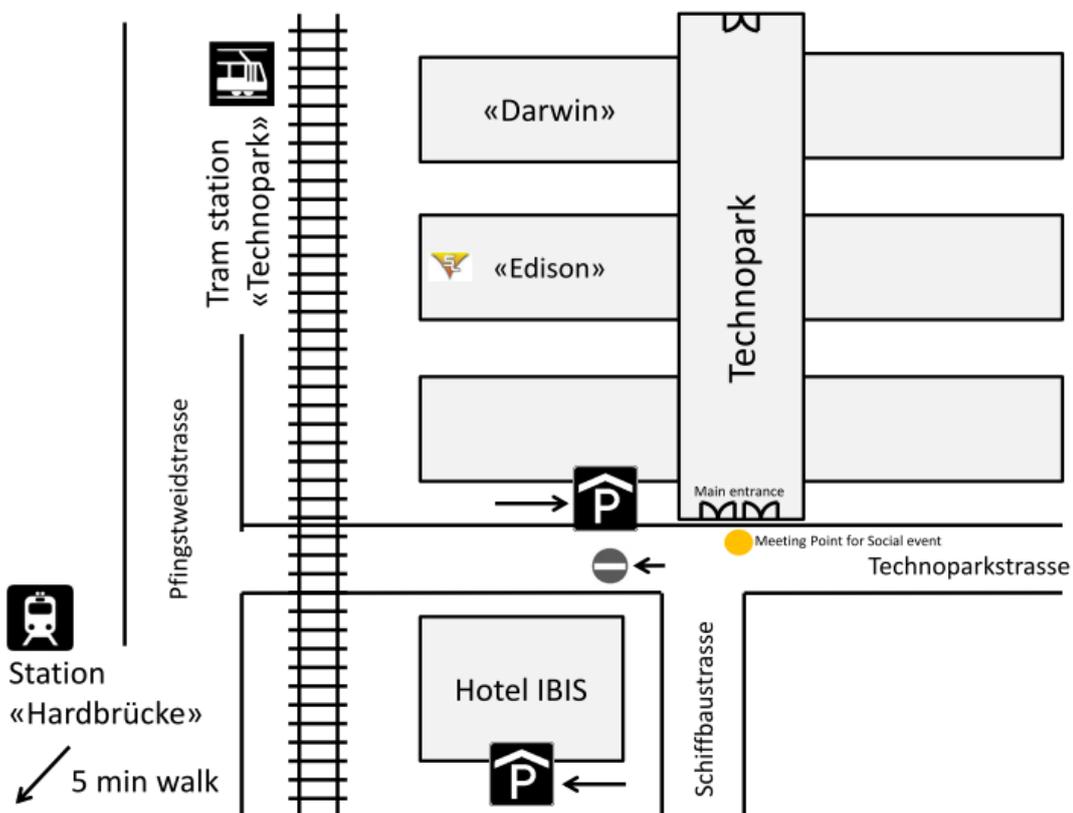
Travel directions

By public transport:

From **Zurich HB** (main train station): Take tram 4 (direction Altstetten) to Technopark (7 stops). Alternatively, take any regional S-Bahn from platforms 41/42 to Hardbrücke (1 stop). It is a short walk to the Technopark from Hardbrücke.

From **Zurich Airport (ZRH)**: Take S-Bahn S16 (direction Herrliberg-Feldmeilen) to Hardbrücke (2 stops and takes about 8 minutes). It is a short walk to the Technopark from Hardbrücke.

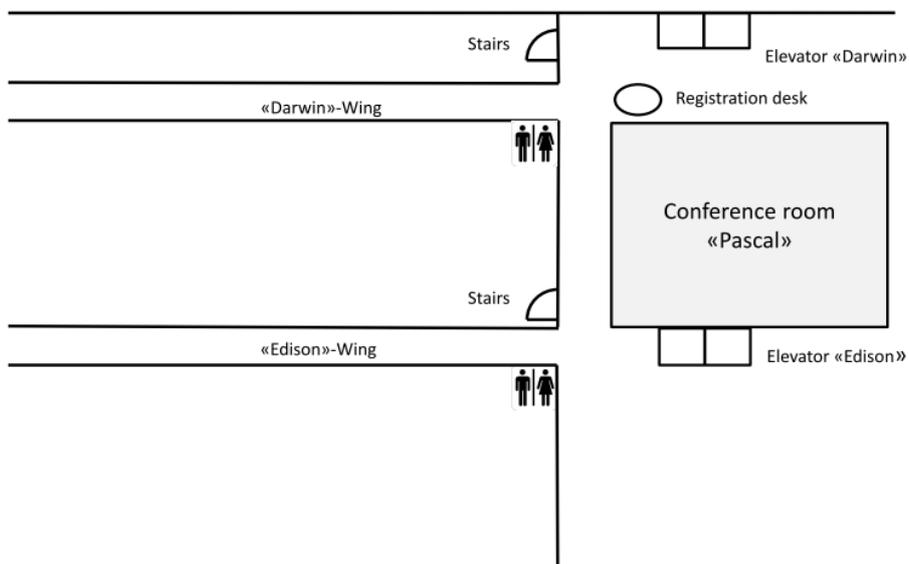
By car: Best access to the Technopark by car is via Pfingstweidstrasse. There is an underground parking garage for visitors. If you stay in the IBIS Hotel, you can also use their parking.



Inside Technopark:

Conference room "Pascal", 3rd floor "Darwin"-Wing

3rd floor



The SwissLitho's office office and lab are located in the "Edison" wing, on the 2nd floor at the end of the corridor.

2nd floor

