

μBuilder event invitation

Design your own microsystem



The μBuilder project is a cooperation between two silicon MEMS, one polymer manufacturers, two research institutes and three universities which aims to increase interest in micro fluidics in Europe. The program offer easy access to the technologies and additional processes specifically designed for micro fluidics and bioMEMS.

An extensive training program is offered to enable a quick start to design in the various processes offered in the project. The training program is offered at universities, institutes and companies around Europe with highly qualified personnel from the μBuilder project.

The training program has three main modules:

- Awareness:

A half to one day introduction to the technologies available in the project which gives an overview of the possibilities and limitations.

-Technology:

A half to one day module which will teach the details of the technologies. Such details are design rules, key process technologies and other topics of key importance .

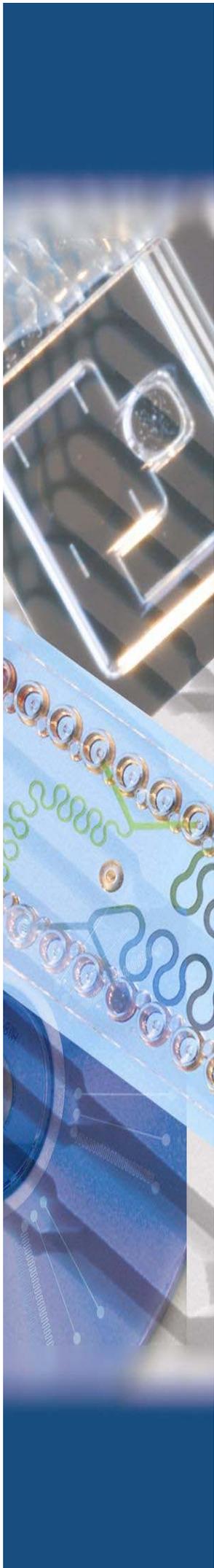
-Hands-on:

A one or two day module where the participants will learn how to design in one of the three processes using computer tools and technology templates.

Please see the next pages to find a short description of the core technologies and the agenda for this μBuilder event.

As the hands-on session has a limited number of seats, applications will be accepted until all seats are taken.

Where	IPPT PAN Warsaw/Skarbek Graduate School of Business Economics
When	6 Mar 2008
Duration	2 days
Special Focus	Thinxxs plastic technology design hands-on
Street address	ul. Swietokrzyska 21
Postal code	00-049
City	Warsaw
Country	Poland
Contact person	Steffen Jebauer, sjebauer@ippt.gov.pl
Travel recommendations	
Recommended accommodation	

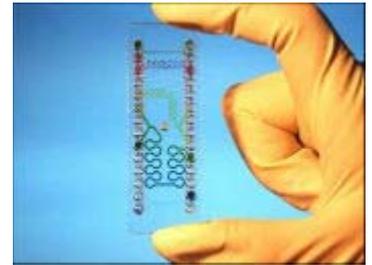
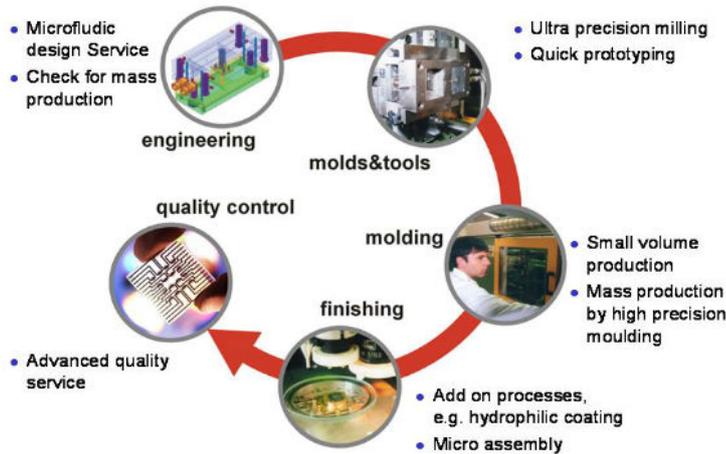


Polymer manufacturing and mixed technologies



Polymer manufacturing at thinXXS

Through microBUILDER the customers get access to state-of-the-art polymer technology at thinXXS. The company produces and develops customized micro structured devices and microfluidic platforms made from plastics for a wide variety of applications. Active microfluidic devices such as micro pumps off the shelf or customized passive microfluidic solutions such as lab-on-chip systems are available. The offered polymer technology is a full service from design and construction, mould and tool fabrication via micro moulding in high volume to finishing and assembly.



Mixed Technology

Packaging processes, patterned gold-layers, electrodes, hydrophobic patterned surfaces, surface activation for protein attachment, and piezoelectric films are examples of mixed technology or add-on processes that can enhance the functionality of microsystem devices. The portfolio of possible applications for the microBUILDER technology is further increased as more processes are developed depending on customers' requests and requirements. All available add-on processes are qualified and documented in the master design handbook. This enables clients to make use of the add-on processes and to combine them with other microBUILDER processes or own technologies.

microBUILDER currently develop qualified processes for:

- electronic readout for a piezoresistive sensor
- hydrophobic/hydrophilic patterning
- gold pattern on silicon or glass
- biofunctional surfaces
- piezoelectric layers
- DRIE as add-on to MPW

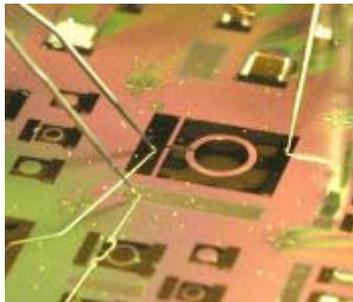


Photo: SINTEF



Photo: SINTEF/Stanford

Agenda



Session starts	Day 1	Day 2
09:00	Introduction	thinXXS technology presentation
	10 min break	10 min break
	MultiMEMS services and process	thinXXS design tutorial
12:00	Lunch	Lunch
13:00	Tronics services and process	thinXXS design tutorial cont.
	10 min break	10 min break
	Mixed technologies and device examples	thinXXS design tutorial
16:00	End	End

All awareness courses are free, while technology and hands-on training is only free for academic personnel. Non-academics are charged 50 Euro for each of the modules 'Technology' and 'Hands-on'. Payment is done to the local organizer, cash only.

μBuilder will issue course certificates to all participants that complete training in the 'Technology' and 'Hands-on' modules.

To register for this μBuilder training event, please download the registration form from the 'Training' website under www.microbuilder.org and submit it as described

thinXXS hands-on training



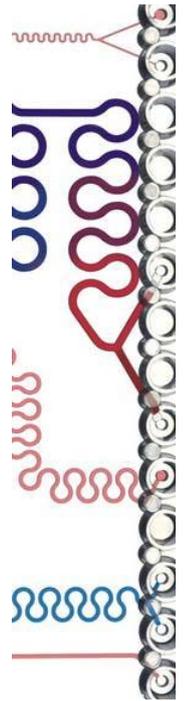
The **thinXXS** technology is based on injection moulding of polymers and is very well suited for making systems for handling minute amounts of liquid, enabling efficient processing of chemicals and biological substances.

In the training session offered by μ Builder, you will get an introduction to the production process, material choices, sealing technologies as well as how to integrate the other technologies of the project.

In the hands-on training session components of the **thinXXS** slides offered as part of the construction kit, will be reviewed and redesigned. At the end of the session, the redesigned fluidic system will be accessible and demonstrated.

At the end of the session, participants

- Should understand the possibilities and limitations of the technology
- Know how to use the design handbook.
- Know and understand the key design guidelines
- Be able to start designing devices in the **thinXXS** technology



The **thinXXS** construction kit as demonstrated at the end of the hands-on design session.

Prerequisite:

General knowledge in undergraduate physics.