



1st Technology Apéro NRP 62
SMART CHEMISTRY, MATERIALS & DEVICES

14 September 2011, 16:30 - 19:00 h
NH Hotels Fribourg,
Grand Places 14, Fribourg



NRP 62: an outline

The National Research Programme "Smart Materials" (NRP 62) is a cooperation programme between the Swiss National Science Foundation and the Innovation Promotion Agency CTI. Its goal is to explore the interaction of physical, chemical and biological properties of materials. In doing so, the design of systems which are able to react to changing external influences is in the foreground.

The three most important research axis of NRP 62 will refer to the following topics:

- Design and production of suitable materials and the exploration of their physical, chemical and biological properties.
- Recording, simulation and coupling of multi-dimensional answer functions of smart materials. In focus are applications in the fields of safety, environment, traffic, energy, health and bio-technology.
- Development of suitable module technologies (e.g. design, structuring and coating technologies) which can be used in view of a future realisation.

Programme

Wednesday, 14 September 2011

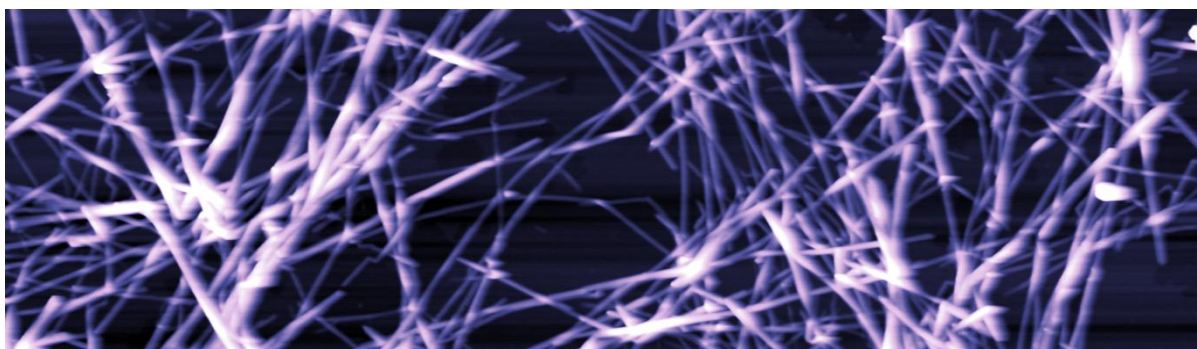
- 16:30 – 16:45 **Welcome & Introduction**
Prof. Louis Schlapbach, President Steering Committee NRP 62
Dr. Niklaus Bühler, Knowledge and Technology Transfer NRP 62
- 16:45 – 17:30 **Industrial Keynotes** (20 min each)
- Advanced Materials for Smart Information Technology
Dr. Christophe Rossel, Advanced Functional Materials
IBM Zurich Research Laboratories
- Intelligent Materials in Pharma
Dr. Andreas Schreiner, Head Science and Technology Forum
Novartis Pharma AG
- 17:30 – 18:30 **NRP 62 Highlights** (20 min each)
- Mechanically Adaptive Polymer Nanocomposites
Prof. Christoph Weder, Adolphe Merkle Institute/University of Fribourg
- Intelligent Membranes for Medical Textiles
Dr. Ana-Maria Popa, EMPA St Gallen
- Magneto-responsive Materials for Possible Use in Devices Responding to
Temperature, Magnetic Field and Mechanical Constraints
Prof. Raffaele Mezzenga, ETH Zürich
- 18:30 **Networking Apéro and Poster Show**

In our focus: Smart Chemistry, Materials and Devices

NRP 62 is based on new chemical approaches which lead to smart materials e.g. for medical applications, such as active surgery tools, mechanically active bone implants, bio-inspired mechanically active composites, intelligent drug release, novel cancer therapy, blood measurement through the skin and functional bio-mimetic surfaces:

- 1) Smart shape transformers for macroscopic use
- 2) Stimuli-responsive materials for the microscopic range
- 3) Smart drug delivery materials.

On the other hand, NRP's exploratory research for smart materials will result in innovative concepts for future electronics, lead-free electro-mechanical transducers or fibres of adaptable flexibility, to be used in applications spanning from active aerodynamics, dampening and impact protection to robotics and automotive devices.



Registration Form (no fees)

1st Technology Apéro NRP 62: Smart Chemistry, Materials and Devices

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NH Hotel, Grand Places 14, Fribourg

Title	
Name	
Company/Institution	
Position	
Address	
Postal Code / City	
e-mail	
Phone	

Please return not later than 20 August 2011 to

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For questions please contact:

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How to find the NH Hotel, Grand Places 14, Fribourg



By car

From Zurich/Berne (A12 Motorway)

Take exit 8 towards Fribourg-Nord.
Enter the next roundabout and take the first exit onto Route de Morat.
Go through two more roundabouts.
Enter the next roundabout and take the first exit onto Route des Alpes.
Enter the next roundabout and take the third exit onto Rue Saint-Pierre.
Enter the next roundabout and take the second exit onto Grand Places.

From Lausanne/Geneva (A12 Motorway)

Take exit 7 towards Fribourg-Sud.
Enter the next roundabout and take the second exit.
Enter the next roundabout and take the second exit onto Route de Villars.
Go through three more roundabouts.
Route de Villars becomes Avenue Beauregard.
Turn left onto Rue Louis D'Affry.
Enter the next roundabout and take the first exit onto Avenue de Tivoli.
Go through one roundabout.
Enter the next roundabout and take the first exit onto Grand Places.

By train

From the train station, cross the road and walk along the Fribourg Centre. After this shopping center, turn right and go through the Grand Places. It takes only three minutes walking to reach the hotel.