Media release

Materials Science & Technology

Duebendorf, St. Gallen, Thun, 1st July 2012

Fiber Society Meeting at Empa

Researching tomorrow's innovative textiles

Around 200 textile research professionals met at the end of May in St Gallen at the international Fiber Society Spring Conference to keep abreast of current trends in research and development in this field. The host organization was Empa, where intensive work is being carried out on fiber and textile innovations.

Although textiles have a tradition extending back thousands of years into antiquity, there still remains room for innovation today, and the aim of this year's Fiber Society conference was to sound out the opportunities on offer in this regard. The society was founded in 1941 to encourage and support scientific progress in the field of fibers and fiber products, and the conference motto, "Fiber Research for Tomorrow's Applications", was therefore entirely appropriate. The aim is to emphasize the message that "Textiles have an unbroken potential," as Rudolf Hufenus, of Empa's Advanced Fibers Laboratory and one of the conference organizers, put it in his welcoming address.

Innovation in this field generally takes place as a result of partnerships between groups drawn from various scientific disciplines. Just as important is the intensive cooperation between research institutes and industry, in Hufenus' opinion. The Fiber Society Spring Conference, which took place from the 23rd to 25th of May, represented the ideal platform for the exchange of ideas and know-how necessary to initiate and plan collaborative projects. The conference was held at Empa's St Gallen site, which has traditionally been heavily involved in innovative work in the textile field.

There was enormous interest in the event, and the organizers received about twice as many suggestions for expert presentations as they were able to consider. Altogether over 200 scientists from 20 countries attended the event. "The conference deals with the practical applications of today's fiber research," explained Hufenus, whose own work involves developing novel fibers with his team. One such example is a fiber for making protective jackets which, although acting like armor to shield the wearer from heavy blows, is still pliant and supple so that the jacket is comfortable to wear.

The symposium showed that there is a general trend for textiles to find use in new areas of application with high added value, for example in the medical field where implants made of textiles are being used to replace blood vessels or heart valves. The latest developments in conductive fibers are leading to a fusion of

electronics and textile technology, with an appropriately large potential for the monitoring of bodily functions and applications in telemedicine.

Empa is itself working intensively on a range of solutions in this very promising area; in all eight Empa staff members presented the latest results of their work during the conference, one being in the area of electrospinning – a process by which fibers of both polymer and purely inorganic material, as well as composites of both, can be manufactured with diameters in the nanometer range. This makes it possible for example to create novel nonwoven textile-based materials for applications in medical and filter technologies, and in catalytic processes.

Further information

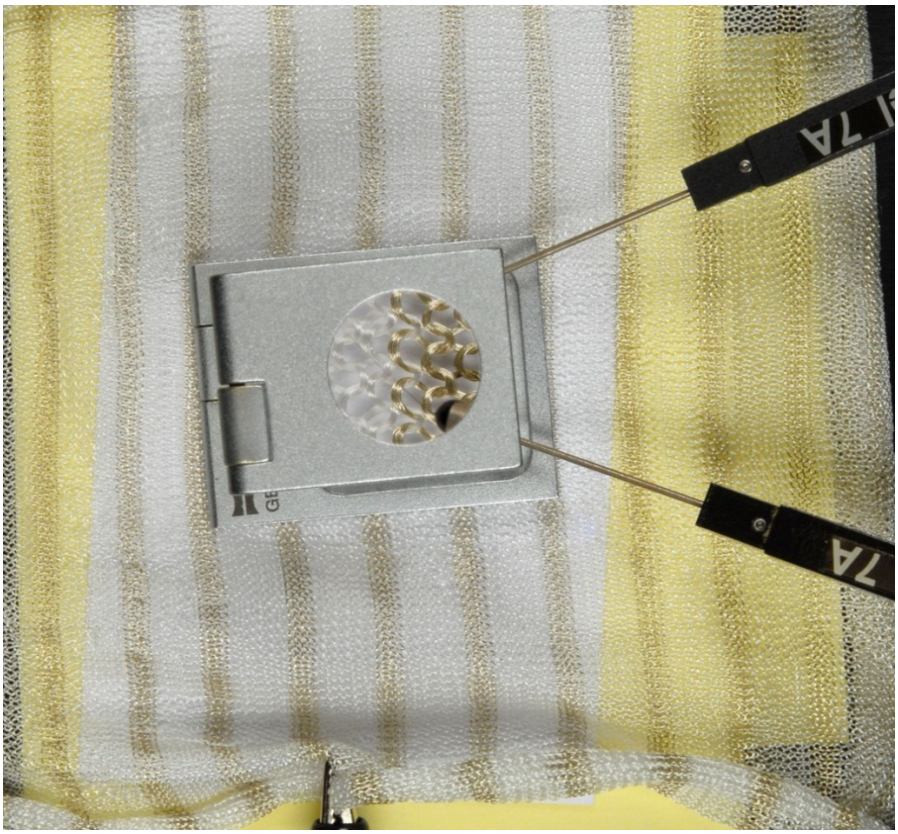
Dr. Rudolf Hufenus, Advanced Fibers, Phone +41 58 765 73 41, rudolf.hufenus@empa.ch

Dr. René Rossi, Protection and Physiology, Phone +41 58 765 77 65, rene.rossi@empa.ch

Editor / Media contact

Rémy Nideroest, Communications, Tel. +41 58 765 45 98, redaktion@empa.ch

Fiber developments for medical applications: illuminated textiles for the photodynamic treatment of tumors.



Empa develops a new technology: a basis for novel functional textiles. A nanometer-thin conductive metal layer on textile fibers makes no compromise on the processability, haptics or washfastness.

A large number of specialists travelled to Empa in St Gallen to take part in the Fiber Society Spring Conference

Text and images are available electronic form at: redaktion@empa.ch