NanoItalTex:

Nanotechnology for the Italian Textile

Palazzo delle Stelline,
Corso Magenta 61, Milano
July 12th, 2005

Endorsed by:
- Italian Ministry of Education, University and Research (MIUR)
- Milan Chamber of Commerce

M.I.U.R

Conference Aim

It is a widely shared opinion that nanotechnology will be one of the driving forces dictating the technological development in the first part of this XXI Century, with potential revolutionary effects practically in all the most important industrial sectors. The Conference, jointly organised by **AIRI/Nanotec IT e TexClubTec**, aims to illustrate how nanotechnology could have a profound impact also in the textile sector and which are the capabilities to rely on for R&D in this sector existing in Italy.

The use of nanotechnology for the preparation and treatment of fibres, polymers and fabrics can open new and attractive perspectives for the whole textile world. Fabrics with new and better hydrophobic features, antistatic, flame retardants, with antibacteric properties or stain resistant, with specific optical, photo-thermo chromatic behaviour, are only a few examples of the possibilities offered by nanotechnology to the textile sectors.

Italy is one of the main players of the European textile sector: 24% of the turnover and about 30% of the workers of this sector in Europe (2003) are referring to Italy where, in turn, the textile represents roughly 10% of the workers as well as of the turnover of the manufacturing sector.

The Textile European Technological Platform pin points the development of highly innovative products as one of the key factors necessary to operate with chances of success in a market ever more global and competitive. Nanotechnology could be one of the weapons for this competition and failing to face the challenge it poses could have serious consequences, both economically and socially.

The objective of the conference is to raise the interest and promote the activity with this emerging technology within the textile industry in Italy and put the base for an action that will involve the national industry and research community with the aim to strengthen the Italian system as a whole in this field.

Who should attend

The conference will indicate how nanotechnology can affect the textile sector so giving the various **players of the textile sector**, including the producers of the textile equipments and designers, how nanotechnology can affect their activity, the **researchers** from academia and industry (large and SMEs) the possibility of forging or strengthening links for research and learning about new frontiers to focus on, the **planners** (publics and privates) and the **financial community** the opportunity to gain indications useful to start actions necessary to keep the pace of these emerging technologies and exploit their potentialities.

Scientific Committee

- **Roberto Cingolani**
  University of Lecce; CNR (INFM) - National nanotechnology laboratory, Lecce
- **Giorgio Mazzucchetti**
  CNR Institute for Macromolecular Studies (ISMAC), Biella
- **Claudio Migliaresi**
  University of Trento, Material Engineering and Industrial Technologies department (DIMTI)
- **Solitario Nesti**
  Tecnotessile, Prato
- **Luigi Nicolais**
  University "Federico II" of Napoli, Department of Materials and Production Engineering
- **Federico Pellegata**
  ACIMIT, Association of Italian Machinery Manufacturers, Milano
- **Elvio Mantovani**
  AIRI/Nanotec IT. Roma
- **Aldo Tempesti**
  TexClubTec, Milan

Programme

9.30 **Registration**

Welcome coffee

10.30 **Opening Address**– *Andrea Parodi – President TexClubTec*

10.40 – 13.00 **Morning Session**

Chair: Elvio Mantovani *(AIRI/Nanotec IT)*

10.40 **Nanomaterials in fibers and textiles**
Cosimo Carfagna, University of Naples "Federico II"

11.05 **Technical textile coating with nanoproducts at IFTH**
Pascal Rumeau, Institute Français Textile-Habillement (IFTH)

11.30 **Contribute of nanoformulations to functionality improvement in the clothing sector**
Pierantonio Mariani, CIBA Specialty Chemicals S.p.A. (Italia)

11.55 **Potential and application of electrospinned nanofibers for textile innovation**
Alessio Montarsolo, Institute for Macromolecular Studies (ISMAC, *Biella)*

12.20 **Functionalisation of cellulosic fibers by addition of nanodispersed inorganic charges**
Elisa Mantero, Center for the Plastic Engineering (Torino)

Lunch

14.00-16.05 **Afternoon Session**

Chair: Aldo Tempesti *(TexClubTec)*

14.00 **Low pressure plasma surface treatments**
Paolo *Canonico, M & H s.r.l. (Varese)*

14.25 **The process of continuous coating by electrodeposition and its applications**
Massimo Dotti, Solianiemc S.r.l. (Como)

14.50 **Atmospheric pressure plasma for continuous coating processes: research and results for the textile sector**
Francesco Parisi, Grinp S.r.l. (Padova)

15.15 **Nanotechnology and electronics to wear: an opportunity for the future of textiles**
Marinella Catellani, Institute for Macromolecular Studies (ISMAC, Milano)

15.40 **Nanotechnology industrial apllications: textiles with antibacterial, UV protective, conductive and magnetic properties**
Solitario Nesti, Tecnotessile (Prato)

16.05 - 17.45 **Round Table:**

Strategies and tools for nanotechnology application in the textile industry

The day will end with a round table: for a first comment of the indications emerged, a comparison with the initiatives under way or planned in Germany and France to promote nanotechnology (and innovation) in the textile industry, a survey of the instruments, including the financial ones, or the initiatives to put in place to support R&D projects in this sector in Italy.

Moderator: Elvio Mantovani

- **Paolo Milani**, *Interdisciplinary Centre for Structural and Functional Properties of Nanostructured Systems (Milano)*
- **Yvette Kaminorz**, *VDI/VDE-IT (Technologiezentrum Informationstechnik, Germany)*
- **Bruno Marcandalli,** *Stazione Sperimentale per la Seta (Milano)*
  Pascal Rumeau, *Institute Français Textile-Habillement (IFTH, France)*
- **Aldo Tempesti,** *TexClubTec (Milano)*

To Register

Delegates fees (*):

Full	250 €
TexClubTec/ Nanotec IT-Airi Members	130 €
University / PhD students	130 €
University Students	50 €

(*) Shown prices do not include taxes (20% VAT must be added).

Delegates fee includes conference documentation and lunch.

Continuously updated information about the conference and the agenda will be available on

http://www.nanotec.it/eventi/nanoitaltex.html

http://www.texclubtec.it/scheda_evento.asp?id=153

Information and Registration:

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