

## **INNOVATION BY THE WAY OF ITECH CHALLENGES®**

Innovation is a strong mean of creation and development in the industry.

**ITECH Challenges®** propose technical, forward-looking and innovative research topics, originating from industry, to multidisciplinary teams of students who participate in an annual competition of innovation.

**The best researches are given award every year.**

They are supported by a Scientific Committee and facilitated by technical and scientific experts, specialists coming from the industrial world, and from the institutional environment (university or research centres).

The organizers form the research-teams according to the skills required for the project: mechanics, chemistry, computers, textile, ...

ITECH Challenges® are open to all industrialists who wish to explore new processes, develop new techniques, set-up new products, conquer new applications or new markets, and make the manufacturing process safe or automated. The studies are confidential and the results remain the property of the industrialists.

**For 15 years, more than 300 research studies have been conducted along the 15 first Challenges.**

**Some examples of textile finishing topics concerning our congress:**

### **-ENVIRONMENT, RECYCLING**

“Aqueous emulsion thickeners for pigment printing”, to replace reverse emulsions by aqueous ones to reduce VOC throwing out.

“Printing and dyeing with natural dyestuffs”, optimisation of vegetable dyeing processes to build a range of colours with good fastness adapted to the use.

“New flame retardant fibrous materials adjustment”, no woven fabrics made from recycled fibres for using as building trade thermal insulation.

## **-NANOTECHNOLOGIES**

“Electrospinning of nanofibres”, prototype building, PVA and alginate nanofibres non-woven fabrics realization for medical use.

## **-SURFACE TREATMENTS**

“Formulation of a fluorine molecule to obtain by grafting a wash fastness water and oil proofed textile product”, fluorine acrylic monomers emulsion on textile treated by ionizing radiations to improve wash fastness.

## **-TEXTILE INSTRUMENTATION**

“New functional clothes for medical tele-assistance”, “textilisation” of captors to physiological parameters follow.

**This paper aims both industrials and training people, in order to develop an extended European or worldwide cooperation in the field of research and development**

## **CONTACTS**

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