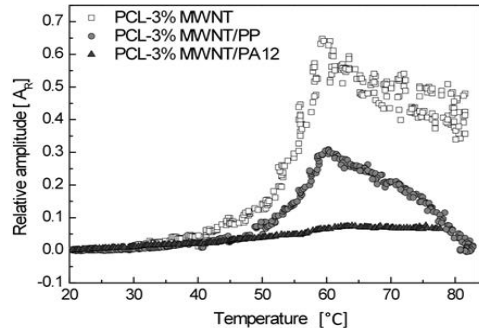
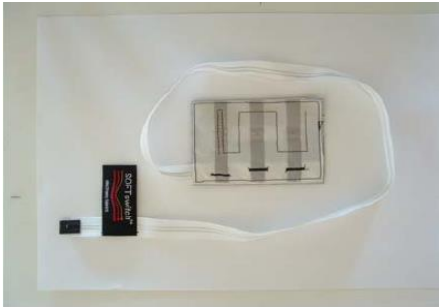


## TECHNOLOGY OFFER

### COMPOSITE TEXTILE FIBRES WHICH CAN DETECT TEMPERATURE



#### AN INNOVATIVE OFFER

This technology is about a smart textile material which is able to detect a temperature threshold by dropping its electrical conductivity at this critical temperature.

This technology is based on the use of Conductive Polymer Composites (CPC), in filament form, suitable to provide a woven textile structure.

CPCs are obtained by a dispersion of conductive particles inside a polymeric non conductive matrix, which will provide enough mechanical properties for a long lasting usage.

Temperature detection threshold is adjustable by working on the formulation. For instance, one can fine tune a formation with a temperature threshold set at 55°C. Hence, fibre will automatically detect every single temperature reaching 55°C or more.

Based on one formulation, the full textile chain had been investigated: formulation of CPC and its extrusion, spinning, weaving and detection proof.

#### POTENTIAL APPLICATION AREAS

- Main application seems to be working protection clothes for firemen or workers in heavy industry, in order to detect temperature hazard threshold.
- Other fields as medical or military could, as well, feel an interest in this technology.

#### INTELLECTUAL PROPERTY

- European Patent : WO 2011/069743 A1

#### TARGETTED PARTNER

- Industrial company specialized in smart textile and/or protective working clothes.

#### TECHNOLOGY ADVANTAGES

- With CPCs, one can, by using a non conductive polymer with a specific glass transition temperature, adjust accurately temperature threshold detection.
- Unlike most existing technologies, this invention allows to integrate these smart fibres in stuffs or clothes

#### RESEARCHERS INVOLVED

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