

NEWSLETTER



THE EUROPEAN ADVANCED
TEXTILE MATERIALS WORLD CLASS CLUSTER

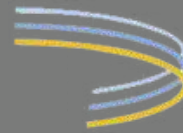
**Strengthening the competitiveness of European advanced
textiles' companies**

IN THIS ISSUE

ABOUT EU-TEXTILE2030

SUCCESS STORIES
Smart textiles





WHAT IS EU-TEXTILE2030?

EU-TEXTILE2030 is a European Economic Interest Grouping created in November 2019 as a result of more than seven years of cooperation between seven European clusters on advanced textile materials.

VISION

To increase the competitiveness of European SMEs in the advanced textiles' materials sector

MISSION

To gather the European SMEs and other organizations related to the advanced textiles' materials sector, through clusters, with the development of specific actions and support services, mainly in 3 axes: collaborative projects in the areas of R&D&I, internationalization and fundraising.



European Economic Interest Grouping based in Brussels



Network of clusters



Representing the EU advanced textile materials' sector
680 SMEs
90 Research organizations

MEMBERS

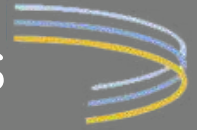


CONTACT

info@eu-textile2030.eu

Member of:





TEXCOOL: ACTIVE COOLING TEXTILE SYSTEM TO PREVENT HEAT-STRESS IN OUTDOOR WORKERS



Member of:



E.CIMA is a leading European knitting company from Spain, with vast expertise in the manufacturing (from warping to finishing) of 3D fabrics, spacer fabrics, airmesh and microfibers. These products cover different markets such as automotive, footwear and apparel clothing, industrial, protection, office upholstery, medical upholstery and decoration.

E.CIMA currently employs 110 workers and has 2 plants (knitting, and dyeing / finishing).

The company is responsible for the packaging and distribution of the fabrics anywhere in the world, exporting more than 70% of their production, with 57% directly to EU countries (Germany, France, Italy, UK, Portugal).

E.CIMA long-term vision is driven by the commitment to the development of smart textiles and digitalization, as part of a corporate agenda to boost in-house production, while meeting customer demand (for high-quality products) and EU sustainability goals.

E.CIMA has recently co-developed with German partner ITP GmbH a novel smart textile solution: TEXCOOL.

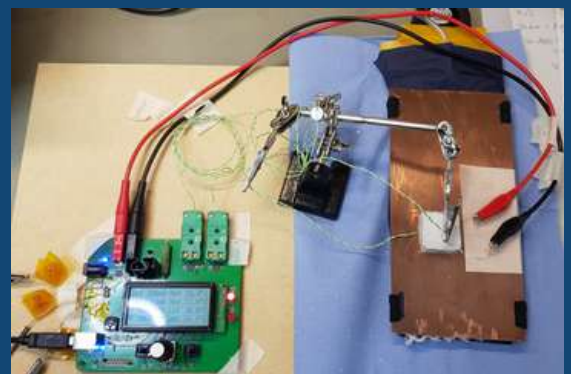
This innovative solution comprises a cooler vest integrating 3D spacer fabrics and thermoelectric coolers based on Peltier elements.

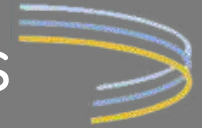
The cooling system developed combines the advantages of the regularly used Peltier elements, which are the high potential for autonomy and a low energy consumption among others, with the properties of textiles like low density and higher flexibility.

TEXCOOL would be extremely useful for outdoor workers and Protech industry workers that need to keep the body cool during warm and hot seasons preventing them from suffering from heat-stress.

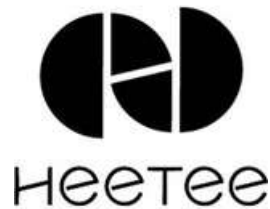
The TEXCOOL project received funding by ACCIÓ-Catalan Agency for Business Competitiveness and, at a second stage, by GALACTICA project.

[More information](#)





HEETEE MAYFAIR, A BABY PRAM THAT GENERATES SUSTAINABLE ENERGY TO HEAT THE SEAT



Member of:

ATEVAL

The company was founded in 2016 in Torrent Valencia and in October 2018 launched its Mayfair model to the market. The Valencian startup Heetee Baby, dedicated to bringing together the world of childcare and technological innovation, created Heetee Mayfair, a baby pram that generates sustainable energy to heat the seat, warm bottles and charge the mobile phone.

The company's mission is to provide the utmost comfort and safety for babies, while giving parents the tools they need to gain more freedom and autonomy in their day. Following this philosophy, Heetee Mayfair, the name of the pram, combines technology, safety and design to add innovation to the industry that truly adds value beyond marketing.

Heetee Mayfair is a pram that keeps your baby warm by maintaining a comfortable temperature in the stroller. In addition, other innovative features include the ability to warm a bottle or charge a mobile phone thanks to the energy generated by the pram's own movement. The heated seats, which regulate their temperature according to the outside temperature, ensure an optimal feeling for the baby at all times. In addition, the temperature can be adjusted in 4 levels.

The team of engineers and designers of Heetee Baby is very proud of achieving what, at the outset, seemed nearly impossible: Developing such an innovative technology and integrating it into an attractive design was a unique challenge.

They won the prestigious Kind+Jugend Innovations Award in Cologne, Germany for their patented, sustainable energy power system. Kind+Jugend is one of the most important trade fairs of the sector.

[More information](#)

The first pushchair

designed to help parents

Heetee makes a bit easier the complications of being parents and helps you to nurture your baby with every push.



Smart Heat
Seat



Smart Heat
bottle warmer



Bump Free
suspension



Freehand
folding

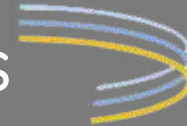


USB
Friend



Tablet
Friend





E-PRINT: PRINTING THE FUTURE OF TEXTILES



Member of:



Heliotextil is a Portuguese private owned company founded in 1964. With a modern industrial set-up covers an area of more than 10.000 sqm employing around 110 collaborators. Heliotextil creates, develops, and produces solutions related to accessories to customize, embellish, or functionalize different products from industry to aftermarket activities, namely: apparel, home wear, workwear, protective clothing, sports, footwear, automotive, packaging, and promotional, brand protection, RFID applications, or value chain traceability, among others. Along with its industrial tradition, Heliotextil has internally Design, R&D, and IT competences, focused on reinforcing innovative solutions, being relevant competences and distinctive factors on target markets.

The e-print® technology consists of printing electronic components and circuits using high precision screen printing processes. Introducing a new approach in the field of printed electronics through the production of special heat transfers that can be integrated in multiple textile products. Managing all engineering in raw materials, technology, printing, but also in electronics, both hardware and software, it is possible to achieve customizable and innovative applications.

Some applications include:

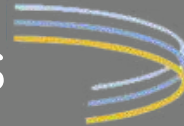
- Heating bands: printed on hot-applied transfers and managed by an adaptive smart regulation system allowing uniform heating surfaces, optimal temperature regulation and heating control, that saves battery power increasing its autonomy and longevity.
- i-touch transfer: Capacitive transfers that can be applied to gloves or other products where manipulation of touchscreens is necessary while wearing hands protection.
- Intelligent pocket: functional pocket with keyboard for controlling smartphones and other wearables and active lighting.

More recently, Heliotextil has developed, in association with a national university, an innovative adhesive that can be used to produce several electronic devices and sensors to be applied in a myriad of novel products in development.

Its commitment with sustainability and innovation has been recognized with the attribution of the status INOVADORA COTEC 2021 by COTEC Portugal, which aims to distinguish national companies with high standards of innovation, financial strength, and economic performance.

[More information](#)





AIR CLEANING TEXTILES FOR POLLUTANTS DECOMPOSITION

inoTEX®

Member of:



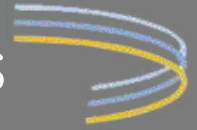
Textile finishing technology for photocatalytic self-cleaning functional textiles production was developed and optimized in frame of EUROSTARS project ECO-DWOR (E! 11894) in cooperation with two SME companies: INOTEX spol. s r.o. (Czech Republic) and COLOR-CENTER, S.A (Spain). The finishing is determined mainly for home textiles (curtains, drapes, furniture textiles, coverings) and for protective clothing (outdoor jackets, gloves).

The photocatalytic decomposition of pollutants (VOCs e.g. formaldehyde) and organic substances formed by microbial decomposition of sweat or other contaminants is based on activity of nanoTiO₂ firmly anchored on textile fibre surfaces. TEXACTIV TiO₂ is a specially designed stable nano-dispersion of TiO₂ (anatase type) combined with a protective copolymer formulation TEXPROTEC F for a reliable prevention of the finished textiles against a potential photocatalytic degradation and OBA effect (if present) damage. The protecting copolymer acts simultaneously as an effective binder of TEXACTIV TiO₂ nano-dispersion on textile fibres which results in stability of the high photocatalytic effect in minimum 15 washing cycles at 40 °C.

The finishing technology based on impregnation-drying-curing process is determined for functionalization of both natural and synthetic fibres (except polypropylene), it doesn't impact the appearance, handle and mechanical properties. The finished textiles keep their air permeability and breathability. Combination of the developed photocatalytic system with wash-permanent flameproof or water repellent (F-free) finishing has been also verified. The finishing technology TEXACTIV TiO₂ was transferred into the industrial scale and successfully commercialized for air-cleaning curtains and drapes production in cooperation with Czech and Spanish textile finishing companies producing PPE and interior textiles. The technology is available for industrial use.

[More information](#)





MONO SMART SPEED FOR CYCLISTS



Member of:

ATEVAL

MLS TEXTILES 1992, S.L. is a leader textile company in innovation and development of new fabrics. Company's origins date back to the early 1990s. The original business was focused on the manufacture of socks, in Ontinyent, Valencia. Lurbel is one of the brands of the company MLS 1992, which develops technical' sportswear. To do this, they apply the best available technology and the experience of a team with years of dedication in the development of their garments to offer maximum performance to sportsmen.

Their commitment has allowed them to implement continuous improvement. For that they count on the vision of experts and research groups from different fields with whom they work together. This daily work translates into multiple research projects, product tests and validations.

Their sports garments include heart rate sensors with multiple compatibility, such as the overall developed for cyclists. This is a sensorized garment with ergonomic design and no seams around the perimeter. Thanks to the qualities of the fibers and the weaving system the garment is characterized by its bi-directional elasticity, which allows it to adapt the garment is permanently to the cyclist, accompanying him in his movements and gives a unique sensation of freedom of movement.

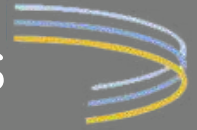
Thanks to its iDT technology, it offers optimized performance at different levels, such as its capacity to wick away perspiration, its quick drying and odour eradication as a result of the double anti-odour action of the silver mesh and the carbonized bamboo yarn.

Thermally demanding garments are specifically designed for sports with high perspiration sweating and/or high temperatures.

Their intelligent ergonomics features increased breathability zones at high perspiration sweaty spots, while pressure-free fit areas and flatlock seams and flatlock seams provide unrestricted fit and comfort.

[More information](#)





FINALIST

MARTURFOMPAK
INTERNATIONAL



The FINALIST project - Fili seNsorizzati e AutoALimentati per tessuti Sedili auTo- goal is to develop fiber-shaped sensors and supercapacitors in a wired shape with the main aim to make smart the fabric of vehicle seat.

The proposal is focused on the study of fiber-shaped piezo-resistive pressure/temperature sensors able to measure important biometric parameters (i.e. heartbeat, blood pressure, body temperature, etc.) of the vehicle occupants.

These designed fiber-shaped sensors will be applied/provided as active safety and prevention devices. Second fiber-shaped supercapacitors will be designed to provide power to the fiber-shaped sensors. For this purpose, fiber-shaped supercapacitors, which will be directly integrated into the warp and weft of the technical fabric of the seat, will work as power supply and energy device.

To sum up, the aim of the project is to develop a new and innovative spinning process that allows the manufacture on an industrial scale of two types of smart yarns: one with integrated sensors capable of quantifying pressure and / or temperature, therefore the biometric parameters of the driver, and the other with integrated supercapacitor able to store energy to be used to power sensors and other electronic components inside the passenger compartment.

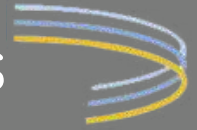
Martur Italy Srl was the project coordinator and cooperating in the project alone with project partner Simone Trabbia Srl, along with Italian Institute of Technology (Center for

Sustainable Future Technologies), the Polytechnic of Turin (Department of Applied Science and Technology - Chilab) and the company Microla Optoelectronics Srl.

Finalist was the winner of the "IR20" Piemonte Innovation and Research 2020 award, for the Green Economy sector, in the Senior Company category. The award is an initiative organized by the Piedmont Region to enhance the regional innovation and research system.

[More information](#)





SMART-HORSE-RIDING: THE NOVEL SOLUTION TOWARDS OPTIMAL HORSEBACK RIDING TRAINING AND HORSE WELFARE



Member of:



POLISILK is a family-owned business with a long-standing textile tradition of almost two centuries.

The group has state-of-the-art industrial facilities and equipment near Barcelona (Spain) for vertical textile manufacturing including yarn manufacturing and fabric manufacturing - both production and finishing, for outdoor applications.

POLISILK has a strong and developed international positioning, exporting 70% of its products to the five continents. It is the leading company in the polypropylene multifilament sector, with a current capacity of around 400 tons / month.

POLISILK is an innovative company that aims to become a market leader with strategic projects that address its long term-vision to contribute to the environmental and social needs and quality standards: the implemented in-house quality system ISO 9001: 2008 helps raise customer confidence in disruptive and high-quality products.

POLISILK has recently co-developed with SENSING TEX as technology supplier a first product demonstrator towards the equine sector, in which Marc Ponsa, CEO of POLISILK, wanted to follow its enthusiasm and prior experience and implement a smart textile solution.

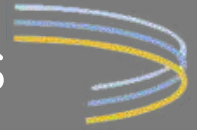
The so-called “SMART-HORSE-RIDING” is a novel smart half pad initially targeted to equestrian disciplines such as dressage. This solution integrates flexible electronics (pressure sensors and modular electronics) with a textile component: a high-quality multifilament fabric envelope. The different pressure points generated by the rider position on the horse are visualized through a custom app.

The high-resolution pressure maps generated provide key insights on real-time to optimize saddle-fitting and improve training, while minimizing pain on the back of the horse.

This project was made possible through SmartEEs (a European acceleration program co-funded by H2020) technical and financial support, and it was the first step from POLISILK into smart textiles novel solutions.

[More information](#)





NEW ECO-RESPONSIBLE AND RECYCLABLE THERMAL-STORAGE MATERIALS



Member of:

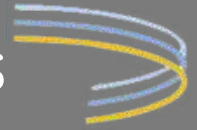


With its own research laboratory and small pre-industrial machines, POLYMAGE develops innovation programmes in the field of materials and, more particularly, adaptive materials and systems – sometimes called smart materials and systems.

For 25 years, POLYMAGE, a private organization approved by the CIR (French tax credit for research), has supported its clients in the design and improvement of products, systems and processes; thus creating value, which for some of its clients has resulted in patents.

Today, after three years of in-house research and development, POLYMAGE wishes to launch to the market new eco-responsible and recyclable thermal-storage materials. These are aimed in particular at the textile market, where POLYMAGE is looking for partners.

[More information](#)



CIGS-TYPE THIN PHOTOVOLTAIC LAYERS



**Solar
Cloth**

Member of:



techtera

Tissé en Auvergne-Rhône-Alpes
C O U A

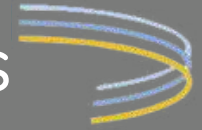
Solar Cloth System has developed an innovative process for integrating thin photovoltaic layers into a textile support. Derived from years of designing hi-tech racing sails, the company's know-how consists of a transversal application of two existing technologies: structured technical textiles and CIGS-type thin photovoltaic layers.

Solar Cloth is listed by Renault-Volvo Trucks as a factory-original equipment supplier for both of these brands.

The Solar Cloth system concerns six main industrial markets: boating, racing, mobility, agricultural greenhouses, the outdoors, and the home. Its innovations have been acknowledged by several patents and numerous awards.

[More information](#)





CONVEYOR BELTS WITH INTEGRATED MONITORING SYSTEMS



Member of:



The project STRATOS concerns the field of innovative textile with high benefit, with particular reference to the conveyor belts field. The aim of the project is the development of conveyor belt prototype equipped with a monitoring system integrated into the belt itself and based on conductive polymers.

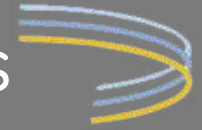
The project consortium is composed by the companies Technofabric S.p.A., Tinotex S.r.l. and Novurania S.p.A. and by the Smart Structures and Systems Laboratory of Politecnico di Torino.

The proposed technology starts from preliminary laboratory tests in controlled environment. The sensing parts made by conductive polymers used as belt coating are used to measure the system operative conditions as velocity and misalignments, and the belt conditions as tensioning, deformation and wear. Information is managed electronically to correct the working performances and to plan maintenance operations. The prototype includes the sensorized belt, the in-line motorization and electronic system for reading and transmitting signals.

The proposed solution makes it possible to improve the monitoring of the belt compared to the traditional fixed sensors used today. Furthermore, compared to traditional sensors (such as those with the Hall effect), there is an increase in the reliability of the system, the level of integration, isolation from disturbances and the transported material.

[More information](#)





SMART TEXTILES JOURNEY AND ISOFTSLEEP 4.0 AN INTELLIGENT BLANKET



Têxteis Penedo is a Portuguese home textile company specialized in jacquard weaving.

With a portfolio of innovative projects with some volume in different areas, TPenedo smart projects like Dephotex, Newlight, LedinTex and Softsleep developed knowledge in integrating electric and intelligent elements in textiles without losing the good characteristics of textiles, adding up the technologic features.

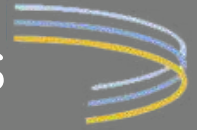
Softsleep was in 2013, a development of an electric blanket that had a very good result but couldn't achieve the commercial stage, so it was a very good candidate to SmartX project (<https://www.smartx-europe.eu>).

We succeed and iSoftSleep4.0 was one of the SmartX granted projects!

iSoftSleep4.0 is a smart heating blanket with embedded electronic components, capable of actively and autonomously controlling the temperature according to the needs of the user in three different and independent areas. This ensures the optimal compromise between thermal insulation, breathability, flexibility, and lightness of the structure.

[More information](#)





CONDUCTIVE HYBRID YARNS AND SEWING THREADS AND THEIR POTENTIAL APPLICATIONS



Member of:



Highly conductive hybrid sewing threads and CleverTex® yarns have been developed and are further improved in the framework of our application R&D projects in the field of "smart" textiles.

CleverTex® yarns are formed by a process of multiple twisting of metallic microwires with a non-conductive textile material, usually a high-tenacity Polyester. The result of this process is a relatively standard sewing thread, which can be employed in all known and used textile technological processes, i.e. it can be applied in sewing, embroidery, weaving or knitting into knitwear.

Conductive threads are characterized by high electrical conductivity, are highly resistant to mechanical stress - they can withstand up to 50 wash cycles. Compared to conductive textiles, the conductivity of which consists in the use of metallized textile fibres or in the use of litz-wires, the mentioned conductive hybrid threads CleverTex® are significantly more advantageous in terms of wear stability requirements and maintenance requirements for finished products.

CleverTex® threads are designed for the creation of fully functional conductive tracks, electrical circuits, textures, heating elements, antennas and will find application in the development and production of smart textiles and final products for various areas of human activity (home health care, protective clothing, wearable electronics, telemedicine, IoT, sport, fitness and leisure). Significant applications also include textile connecting single- and multi-track conductive elastic ribbons.

[More information](#)





Advanced Textile Materials

EU-TEXTILE2030

World Class Cluster



.....

THE EUROPEAN ADVANCED
TEXTILE MATERIALS WORLD CLASS
CLUSTER

info@eu-textile2030.eu