MAY 2021| ISSUE 2

NEWSLETTER

Advanced Textile Materials
EU-TEXTILE2030
World Class Cluster

THE EUROPEAN ADVANCED
TEXTILE MATERIALS WORLD CLASS CLUSTER

Strengthening the competitiveness of European advanced textiles' companies

IN THIS ISSUE

eu-textile2030.eu

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

AEI Tèxtils.cat · ATEVAL · po.in.tex Polo innovazione Tessile · Città Studi BIELLA · clutex cluster technical textiles · techtera · citeve TEXTILE TECHNOLOGY · PORTUGUESE TEXTILE CLUSTER · EuraMaterials

CONTACT

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Member of: ETP Fibres Textiles Clothing EUROPEAN TECHNOLOGY PLATFORM

ALPEX PROTECTION: TEST ON A TEXTILE TO OPTIMISE COMPOSTING OF WASTE

ALPEX® LAMINATED TEXTILES SOLUTIONS

Member of: techtera

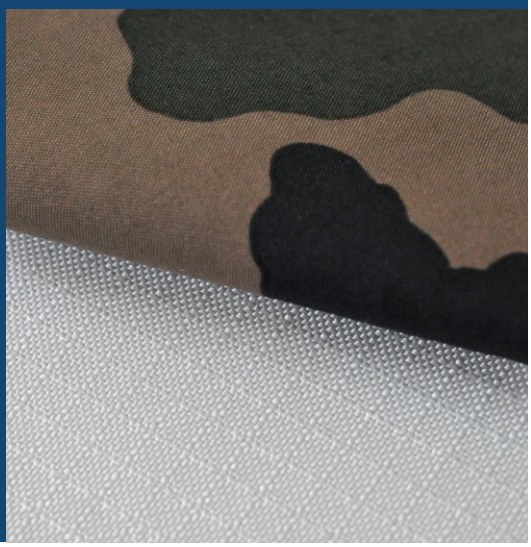
Alpex Protection, specialised in the manufacture of waterproof and breathable flexible materials, has developed a textile suitable for composting tarpaulins: COSMEEC.

This innovative multi-layer is lightweight (30% reduction compared to a standard PVC tarpaulin), tough (mechanical properties two times better than personal protective equipment), and hyper-breathable (microporous structure).

There are two particularly appreciated advantages: Thanks to optimisation of the pore size, it functions as an anti-odour barrier, and accelerates maturation of the compost (which increases the yield per m²). This new textile, with its ergonomic structure and strength, will thus make it possible to equip composting sites sustainably and ingeniously.

Alpex Protection, member of Techtera, is specialised in the manufacture of waterproof and breathable flexible materials.

More information



TEXTILES FOR THE PRODUCTION OF GREEN HYDROGEN WITH H2TEX

BROCHIER® TECHNOLOGIES

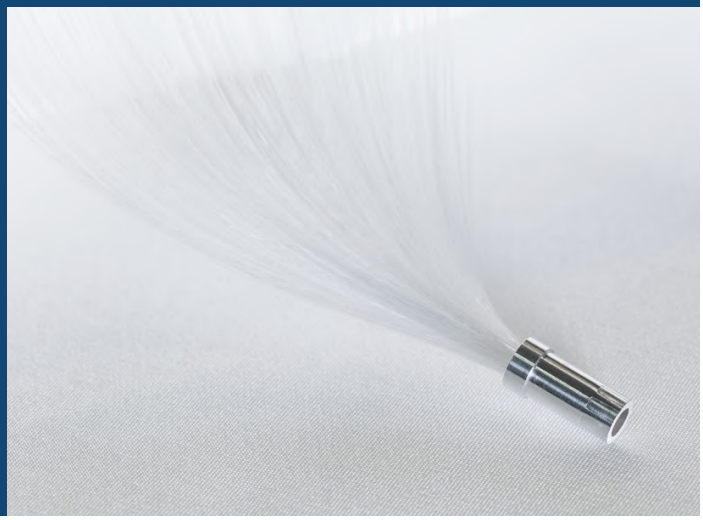
Member of: techtera

Brrochier Technologies has developed the H2TEX process. The company aims to produce green hydrogen by photocatalytic reforming using non-upgraded aqueous organic effluents. More specifically, the aim is to exploit the waste from terrestrial or marine biomass. The process is based on the association of a renewable electricity generator powering LEDs, optimally illuminating a photocatalyst supported on fibre-optic textile layers. The hydrogen produced will be a means of storing renewable energy. At the same time, the CO2 produced will be used in the production of terrestrial or marine biomass.

This new process, unique in the world, has been patented by Brochier Technologies in partnership with the CNRS (French National Centre for Scientific Research). This innovation, marketed since September 2020, is one of the many possibilities offered by this new generation of smart ribbons.

Brochier technologies, member of Techtera, specialists in the weaving of luminous textiles with Lightex optical fiber technology.

More information



INITIATIVES TOWARDS SUSTAINABLE TEXTILE PRODUCTION

CONFETIL

Member of:

citeve TEXTILE TECHNOLOGY

PORTUGUESE TEXTILE CLUSTER

Confetil, S.A., located in Oporto, Portugal, is specialized in ready-made garments, developing textiles of excellence using solid processes anchored in almost 50 years of experience, innovation and a flexible production system. Always focused on sustained growth, the company is lined up with one of the main drivers of textile sector – sustainability and circular economy.

One of the initiatives was to integrate the concept of Design for Disassembly in the development of garments. Using single colour recycled fabrics and no accessories, Confetil developed a garment that at the end of life could be easily dismantled, by colour and fiber, in order to increase the degree of recyclability of the piece. This last aspect was the most challenging from the design point of view, since it was needed to design a system for fitting the different materials, which after use would allow easy dismantling of the piece.
This initiative was widely accepted by its customers and since then other projects have been carried out based on this concept.

Another of the company's projects, in order to reduce the use of resources, was the adoption of 3D technology in the development of samples. This change from a traditional modelling and development process to a digitalized process, allowed a reduction in production time, but also a considerable reduction in the consumption of raw materials, since the various physical prototypes that were usually needed until the final concept don't exist anymore.

So, introducing the sustainability issue in the design phase, digitalization of development process and also selecting less environmental impact materials (recycled and biodegradable fabrics) and technologies (mineral dyeing and less water styles) are some of the steps taken by Confetil towards a more sustainable production.

The company is also STeP (Sustainable Textile Production) by OEKO-TEX® certified.

More information

THE DEVELOPMENT OF RAYTENT® THROUGH THE APPLICATION OF THE ECOTEC® PROCESS

MARCHI & FILDI

Member of:

po.in.tex Polo Innovazione Tessile

Città Studi BIELLA

Marchi&Fildi is an international spinning Group with the brands Marchi & Fildi and Filidea.The production includes yarns from flat and circular knitting, weaving, hosiery to furnishing and technical uses.

ECOTEC® is a trademark technology, developed by the Company during the last 20 years. ECOTEC® allows the creation of new upcycled yarns using pre-consumer textile clippings from knitting and weaving companies, used clothes and plastic bottles. ECOTEC® has been a pioneer example of circular economy. Its products guarantee the highest standards combined with the added value of sustainability.

The process is totally certified and traceable and reduces the impact on the environment (data based on LCA Study made by ICEA):

- Energy savings up to 46,9%
- Reduction on greenhouse effect up to 46,6%
- Water consumption throughout the complete process up to 61,6%

Thanks to the ECOTEC® technology, Marchi & Fildi developed the project Raytent® for Giovanardi, an Italian company specialized in fabrics for solar tents, furnishing and many special uses.

Giovanardi had a precise need: they wanted to reintroduce in their production process the textile leftovers generated through the production of solar tents. The R&D department of Marchi & Fildi developed the project after 2 years of trials and testings with ECOTEC® technology, side by side with Giovanardi technicians.

The final result is Raytent®, an innovative yarn made with 50% of virgin acrylic fibers and 50% of recycled acrylic pre-consumer wastes from solar tents.

Raytent® is an example of upcycled yarn with important features: it maintains an excellent colour fastness to UV rays and guarantees the same level of performances in comparison to the same material produced with virgin acrylic.

Raytent® offers the customization of yarn count and gives to the final apparel a unique texture with a soft and natural touch and feeling. It is now used by Giovanardi for a range of tends, furniture and accessories for outdoor with the same brand Raytent®.

ECOTEC®
ENDLESS REBIRTH

More information

UPCYCLING OUTDOOR FABRIC LEFTOVERS INTO BABY PLAYMATS

Member of:

Etisilk belongs to the Polisilk Group, a group with strong textile tradition of almost 200 years.

Etisilk flagship product is TEXSILK® Outdoor Fabrics. Those are used for garden furniture, cushions and parasols, hospitality and restaurants which are supplied to countries in Europe, America, Africa, Asia and Oceania.

Etisilk has state of the art equipment for the development and manufacturing of high fastness colors required for outdoors, yarn production, fabrics preparation, weaving, finishing and packaging of all the products of the range.

Etisilk is strongly committed towards sustainability by implementing environmental and energy savings measures in its manufacturing plant. As major highlight, ETISILK has 200kW solar panel installed in the manufacturing plant that produces more than a third of the total electricity.

In 2019, Etisilk started a project aiming to use its generated fabric waste and other discarded waste to produce baby products, specifically playmats.

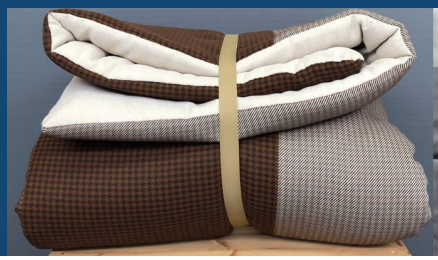
This project was co-funded by the program Promoting Circular Economy of the Catalan Waste Agency.

During more than one year, the company has worked on the design, prototyping and validation of the new products. The materials used are the fabric leftovers from the weaving process and yarn leftovers from the warping (used as padding).

Etisilk partnered with EcoPràctica, a company specialized in creating practical products by using materials with a low environmental impact and has launched to the market a new portfolio of baby playmats.

With this upcycling process, Etisilk prevents landfilling of around 33% of fabrics leftovers and 25% of yarn leftovers.

More information



SPECIAL COATING LINE FOR CAR INTERIOR FOILS PROCESSING BY HOTMELT METHOD

GF MACHINERY BRNO

Member of:

clutex
cluster technical textiles

Coating Line is special line for production of interior car foils (front panel, inside part of door). Line is typical textile line with additional improvements designed special for automotive industry.

Line consists of unwinding unit, accumulators, coating process (by hotmelt method, using of special slot nozzle unit for exact continual adhesive coating on foil) and winding.

There is implemented not only precise coating amount of glue but also implementation of industry 4.0=bar code scanning of input foil for automatic setting of process in PLC + printing of bare code temple for traceability foil in next process.

Moreover we will save about 30% of input raw material (special hotmelt adhesives) by using this special designed software program. It is not only cost savings in production but also environment friendly (lowering energy consumption).

Line was delivered to such important car producer like eg. Tesla, VW, Volvo, Ford and many others.

More information

RECYCLED AND SUSTAINABLE YARNS

HILATURAS ARNAU

Member of: AEI Textils.cat

Hilaturas Arnau is a spinning mill founded in 1947 with a strong commitment in circular economy projects as strategy for differentiation and value creation.

In the early 2000s, the 3rd generation of Arnau family took over the management of the company continuing the activity with important developments. The company introduced recycled technical fibers such as para-aramids, from disused bulletproof vests, to produce high performance yarns for industrial and protective uses.

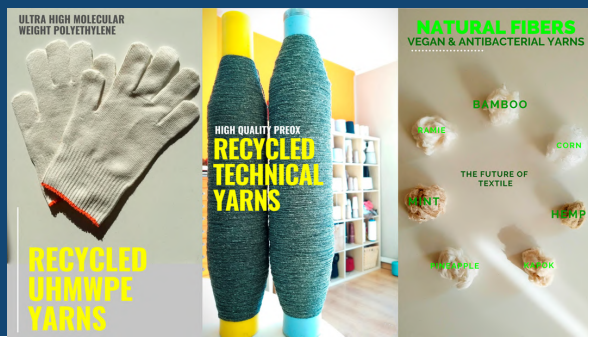
These fibers have high tenacity (anti-cut) and are mixed with other technical materials such as preox, to obtain fireproof yarns. Meta-aramid, preox, PBI, UHMWPE, Nexylon or Rhovyl are other recycled technical fibers used by the company to produce yarns.

In 2020, the company broadened its product portfolio with natural vegan yarns, mixing different natural and biodegradable fibers: bamboo, corn, hemp, kapok, tencel, etc. Natural fibers 100% vegan, sustainable and biodegradable. It works in several European markets, such as France, Portugal, Italy, UK or Germany.

With the aim to expand its market, in 2020, it started the project Circular Technical Textiles, co-funded by INNOWWIDE programme. It is a viability assessment of the adaptation needs for the recycled technical yarns in the Indian market, due to the huge and fast-growing demand of protective and industrial textile applications in the country.

Hilaturas Arnau is used to constantly carrying out new developments, to create new collections of yarns, always in line with the strategy of adding environmental value to the environment and the consumer. It has the Global Recycled Standard as a voluntary company certification.

More information



HIFESA - DRIVING CIRCULAR FASHION SINCE 1947

HILATURAS FERRE

Member of:

ATEVAL

Heir to the company Hijos de Antonio Ferre, founded in 1914, Hilaturas Ferre was launched in 1947 with the production of recycled yarn. In the beginning, the company hid the fact that it was a recycled product, because it was associated with lower quality, with the boom of sustainability in the fashion industry it became a competitive advantage.

In 2004, the company launched the Recover brand to market recycled cotton and has since then worked on various close the loop projects.

Recover, creates recycled cotton from textile waste and uses self-developed technology, works for brands such as Wrangler, H&M, Tommy Hilfiger, G-Star, The North Face, Billabong and Bonobos. Its cotton has the lowest environmental impact in the industry, according to the Higg Material Sustainability Index.

Recover allows for a closed-loop and truly sustainable fashion industry. Textiles made from Recover Fiber can flow through the recycling process for many life-cycles. Recover creates long-lasting, high-value products in each successive generation. Old garments and textile waste are deposited at collection bins for re-wear or recycling. Recover collects and sorts textile waste resources from all over the planet. Cutting and shredding what was once considered "waste" into valuable new Recover fiber.

Hilaturas Ferre has sold its spin-off Recover, specialising in recycled cotton, to the US fund Story3 Capital, led by Peter Comisar, former Goldman Sachs banker and responsible for investments in groups such as Lululemon, True Religion, Billabong and Saks Fifth Avenue. The Ferre family will keep a minority stake in Recover.Recover helps protect the planet, our only home.

More information

NEW WAYS IN FUNCTIONAL TEXTILES SUPPORTING MOVEMENT TOWARDS THE CIRCULAR ECONOMY

inoTEX®

Member of:

clutex
cluster technical textiles

Actually the EU Textile sector existentially depends on the nonEU resources (fibres, dyes etc.) These are mainly concentrated in countries with rising population where textile production has huge future consumer market potential. Local governments support final production. Some strict EC regulations multiply the problem...

Fast growing population and increasing consumption make saturation of demand un-possible. Respecting also the acute environment problems logical step leads to the fast implementation of the CE. Lets make the huge volumes of textile waste a potentially stable and efficient resource for repeated use. New regenerates and recyclates need optimized processing to be comparable and miscible with virgin fibres. Screening of emerging (bio-based, forestry biomass and/or organic waste resource and recyclates fibres is an initial stage to search for their optimum, cleaner processing. Complex waste-less utilization of European bast plants (Flax, Hemp) becomes to be also an alternative renewable resource.

MufCirc is one of collective research projects of CLUTEX - Cluster of technical textiles led by InoTEX, co-financed by CZ Ministry of Industry and Trade.

More information

NEW BUSINESS MODEL: ECOTRAPO, A PIONEERING FORMULA TO REDUCE TEXTILE WASTE FROM INDUSTRY

Member of:

ATEVAL

Ecotrapo has taken the circular economy and respect for the environment as a starting point to adapt to the new times.

The problem with single-use absorbent waste is that it is very difficult to manage and most of it is destined for landfill.

Ecotrapo makes reusable cleaning rags available to industry. This is an experience of purchasing services instead of purchasing consumer goods, through leasing for subsequent treatment, prepared for reuse and reintroduced into the life cycle of the product.

It is a kind of leasing in which the rags are supplied to the companies with special containers, designed and approved for this purpose. In addition, empty containers are also installed in the companies for collection and return.

Ecotrapo is aimed at all types of industries: automotive, ceramics, graphics, aeronautics, shipbuilding, railways, etc. The aim is to replace single-use consumables with reusable wipes, because the best waste is the waste that is not generated.

The initiative will have a preparation centre for reuse in the province of Castellón.

Ecotrapo recognises that the new European and national directives concerning the environment, waste management and extended producer responsibility have prompted them to take the decision to make this system a reality.

More information

TINTEX TEXTILES' BIO-BASED COATINGS AS SUITABLE LEATHER ALTERNATIVES

TINTEX NATURALLY ADVANCED

Member of:

citeve TEXTILE TECHNOLOGY

PORTUGUESE TEXTILE CLUSTER

Tintex Textiles expands the company's innovative, sustainable portfolio and offers suitable alternatives to animal leather with its unique coating solutions, catering to the Fashion, Accessories, Home Textiles and Automotive markets.

The knits dyeing and finishing specialist, a reference worldwide, aims to disrupt the textile world with the incorporation of agroforestry by-products in its coating formulations, creating a "vegan leather", similar in look and feel to real animal leather, without the latter's concerning ecological downsides. In creating these products, pine shell, cork, coffee, sawdust, peppermint and many other discarded plant constituents can be added to improve the functionality and aesthetics of the article, while bolstering circularity. The coated products can vary in thickness and weight, depending on their final application and function requisites. They can serve as an outer layer for clothes, "fake leather" for bags and shoes, upholstery for sofas, chairs and pillows, and even as wallpaper; these alternative leathers can be waterproof or breathable, malleable or stiff, even colored and texturized.

These products are a result of a mobilizing project within the textile industry (TEXBOOST), concluded at the end of 2020, in collaboration with two other companies and three Technical and Knowledge Centers.

There is an international patent pending approval for the coating of textile substrates incorporating vegetable residues, submitted by Tintex Textiles, which owns the intellectual property of the technology.

This solution is a smart, affordable, scalable and responsible substitute to animal leather, ready for everyday use.

More information

RECYCROM™: A REVOLUTIONARY SUSTAINABLE DYES FROM TEXTILE WASTE UPCYCLING

OFFICINA+39
FASHION AND SUSTAINABLE CHEMICALS

Member of:

po.in.tex Polo Innovazione Tessile
Città Studi BIELLA

Turning waste into colors; the Italian textile chemical company Officina+39 invented Recycrom™ – color powders made from 100% textile waste.

Recycrom™ is a full range of colored powders made by recycling textile fibers from used clothing and manufacturing waste. Through an innovative and patented process, these fibers are upcycled into a remarkably uniform and solid powder that can be used as a pigment dye for fabrics and garments made of cotton, wool, nylon or any natural and most artificial fibers and blends. Recycrom™ can also be applied using various methods:dyeing, printing and spray – with coating now under development.

The colors come out with a washed-out and natural look – making it very on-trend. Brands can also collaborate with Officina+39 to make custom dyes from their own scraps and textile waste.

Officina+39 is a chemical company based in Biella, Italy. As a 'workshop', the company speedily develops and executes new and sustainable ideas & technologies for dyeing, effects and finishing in the fashion industry. The company works with partners worldwide to find new innovative ways to make textiles a cleaner and greener industry.

More information

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