



EVOLUTION: PROGRESS YOU DIDN'T KNOW HAPPENED

ESTABLISHED PRODUCTS THAT HAVE BEEN REVITALIZED

Featuring Stephen Kelly

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Hologenix, Inventors of CELLIANT®

November 18, 2021





FROM MECHANICAL TO PHYSIOLOGICAL



**INNOVATION IN TEXTILES IS
TRANSITIONING FROM MATERIAL
PERFORMANCE TO HUMAN
PERFORMANCE**





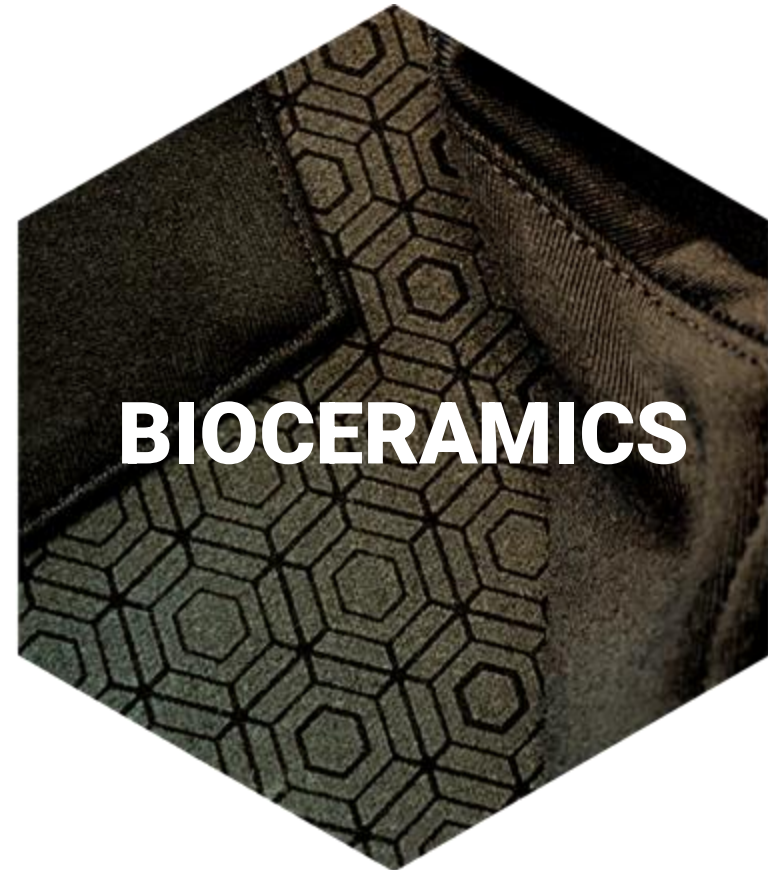
**IMAGINE THE POWER OF
HARNESSING HUMAN HEAT
TO IMPROVE PERFORMANCE,
RECOVERY AND SLEEP...**



RESPONSIVE TEXTILES IS THE NEXT EVOLUTION



RESPONSIVE TEXTILES



WHAT ARE **BIOCERAMICS?**

Bioceramics are fibers coated or embedded with minerals to reflect and generate infrared (IR) energy

BIOCERAMIC YARN



INORGANIC COMPOUNDS
are permanently linked into the fiber



Silicon Dioxide

Aluminum
Oxide

Titanium
Dioxide



**BIOCERAMIC IR APPLICATIONS
ARE EQUIVALENT TO
20-30 MINUTES OF
INFRARED SAUNA TREATMENT**



SELF-CARE WEAR PROVIDES A CASCADE OF WELLNESS BENEFITS



**INCREASES
ENERGY**



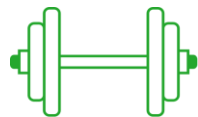
**INCREASES
THERMAL ENERGY**



**INCREASES
ENDURANCE**



**ENHANCES
SPEED**



**INCREASES
STRENGTH**



**INCREASES
STAMINA**



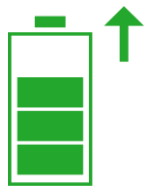
**PROMOTES
RESTFUL SLEEP**



**INCREASES
COMFORT**



**SUPPORTS
HEAT GENERATION**



**SPEEDS
RECOVERY**





INNOVATIONS IN VISCOSE

VISCOSE FROM KELHEIM

SURROUNDED BY NATURE – DEEPLY ROOTED WITHIN THE COMMUNITY

Kelheim Fibres is a mid-size company located in Southern Germany right next to the Danube River.

Fibre & Application Development Center with on-site pilot plants enables innovative and tailor-made solutions.



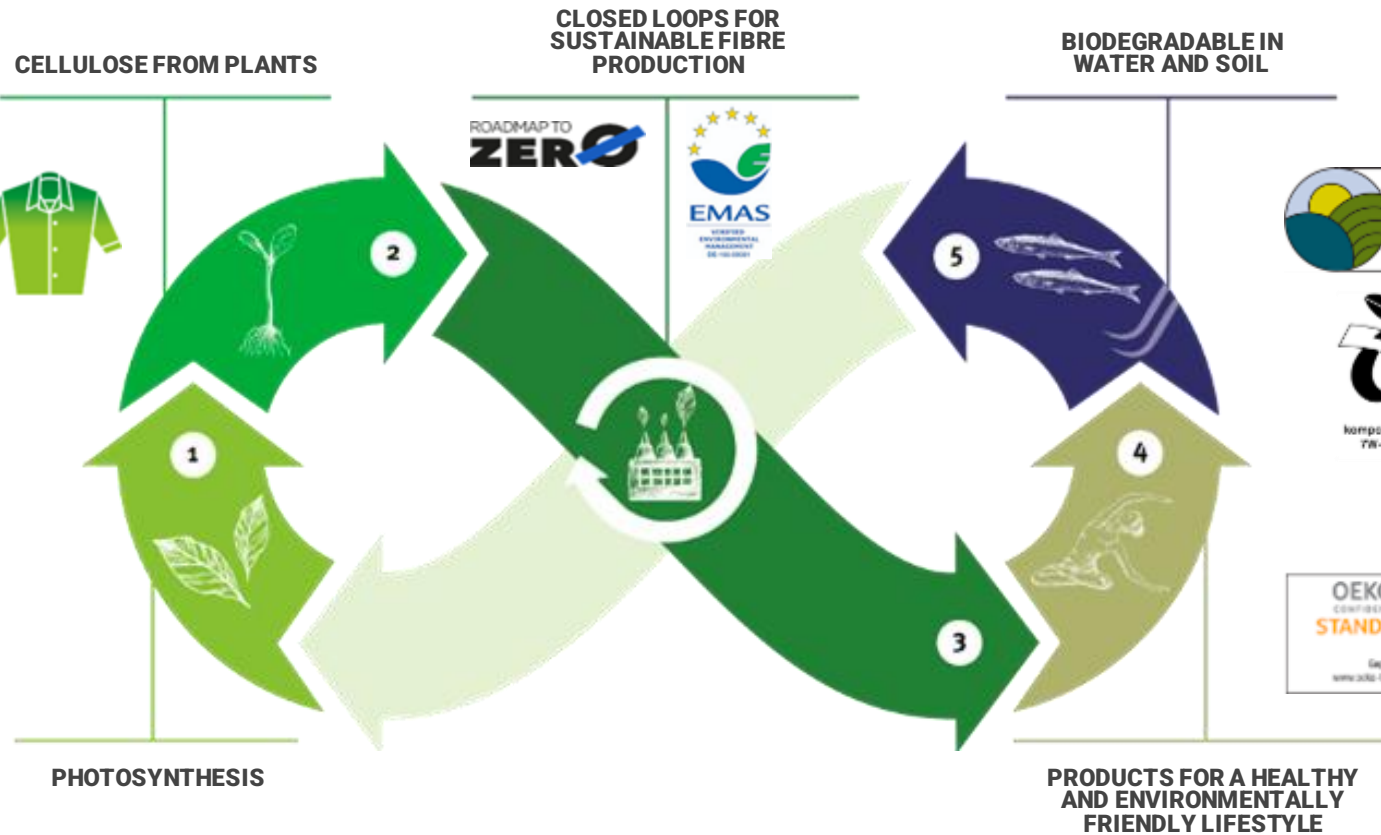
VISCOSE FROM KELHEIM

CONSERVING RESOURCES – PROTECTING THE ENVIRONMENT

Cellulose is the most common biopolymer found in nature. Our Cellulose-based fibres are made from the renewable raw material wood from sustainably managed woodlands. It is grown without use of genetic modification, pesticides and agricultural land. We take responsibility for our environment by continually evaluating and implementing highest environmental standards. We are proud to be the first viscose fibre producer worldwide certified by EMAS*/ISO14001.



BIO-BASED AND RENEWABLE RAW MATERIALS



Carboxy Dioxide Evolution Test
OECD 301 B
readily biodegradable



kompostierbar
 RN-D105



CERTIFIED SUSTAINABILITY

Nature-based CELLIANT Viscose is certified by FSC® or PEFC™, which guarantees the origin in sustainably managed farms. In addition, our partner Kelheim Fibres was awarded a green shirt in Canopy's 2020 Hot Button Ranking. This indicates a leadership role in raw material sourcing.



A REVOLUTIONARY TEXTILE INNOVATION

CELLIANT Viscose is the first in-fiber sustainable viscose infrared (IR) solution.

CELLIANT Viscose was chosen as a finalist in the Fibers and Insulations category for ISPO Textrends Munich 2021 awards.



FLEXIBLE FIBRE TECHNOLOGY

FIBRE TYPES

Textile
1,7 dtex/40 mm

Nonwovens
1,7 dtex/40 mm

Wool
2,5 dtex/Variable Cut

Filling/Nonwovens
6,7 dtex/60 mm

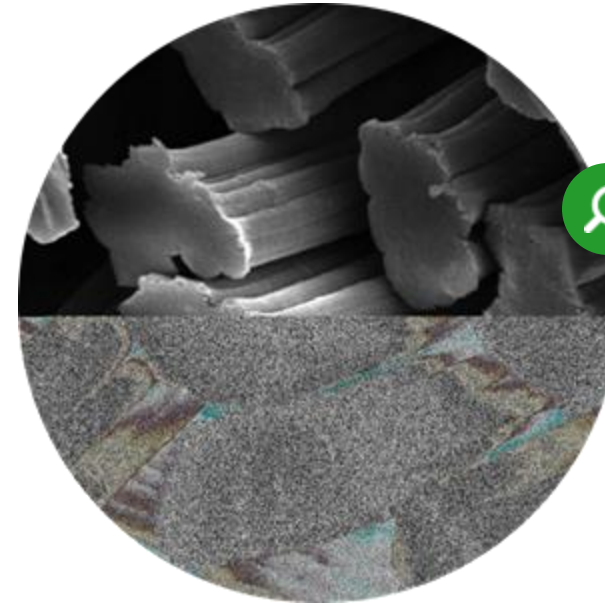
CELLIANT VISCOSE: CROSS SECTION

Optical Microscope
Magnification at 500X
© Dominik Mayer,
Kelheim Fibres GmbH



CELLIANT VISCOSE: CROSS SECTION

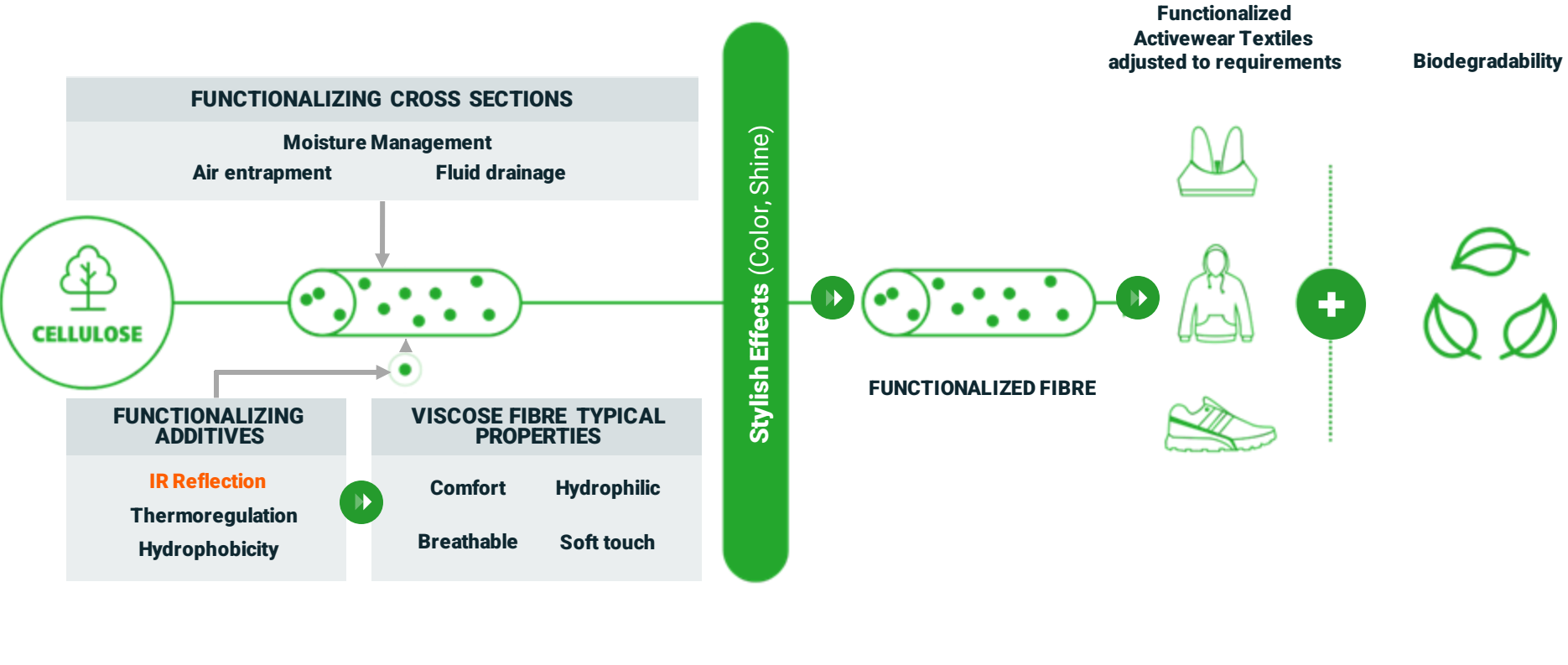
SEM Magnification at
3000X © Dominik Mayer,
Kelheim Fibres GmbH



FUNCTIONALIZED FIBRES FOR HIGH PERFORMANCE TEXTILES

ACTIVEWEAR REQUIREMENTS

- Sweat Absorption
- Temperature Regulation
- Physical Regeneration Support
- Comfort
- Individualization
- Style



INIFINITE POSSIBILITIES



**KELHEIM
CELLIANT
VISCOSE FIBER**



**OTHER BLENDED FIBERS:
COTTON, WOOL MODALS,
POLYESTERS**



**SPINNER FOR TEXTILE
YARN OR NON WOVEN
MANUFACTURER**



FABRIC



**FINAL
PRODUCT**



THANK YOU



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HOLOGENIX