CELLULOSE FIBRES CONFERENCE 2025

12–13 March
Cologne (Germany)

New with Biosynthetics

Conference Journal

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Free WiFi

Network ID nova-Conference
Password #2025CFC

#2025CFC

#2025CFC

Meet some other Speakers & Participants at an **Original Cologne Brewery**

11 March 2025, 19:00 (CET)
On the Eve of the Conference

Meeting Point for a Social Evening Gathering

Kölsch Brewery
Schreckenskammer
Ursulagartenstraße 11–15, 50668 Köln (Cologne)
(10 Minutes Walk from Cologne Central Station)

Join at sli.do
for real time questions and comments

All Sessions
Grand Hall

#2025CFC

Find your perfect match!
We have sent the link to nova's matchmaking platform to all on-site participants of the Cellulose Fibres Conference 2025.

All details: Please see page 10.

Program

You can look forward to the following content:

DAY 1

12 March 2025
9:30–18:10 (CET)

P. 18

9:30–11:50
Strategies in Changing Market Conditions for Cellulose Fibres

13:10–14:50
Fibre-To-Fibre Recycling from Textiles

15:20–16:40
Biosynthetics – Replacement for Traditional Synthetic Fibres

16:40–18:10
Innovation Award "Cellulose Fibre Innovation of the Year 2025"

DAY 2

13 March 2025
9:00–16:45 (CET)

P. 32

9:00–10:50
Marine Biodegradability versus Fibre Microplastic Formation

11:20–12:40
New Technologies and Applications for Fibres

14:00–15:00
Supply Chain Innovation

15:30–16:45
Technologies for Pulps, Fibres and Yarns

Conference Advisory Board

We would like to thank the experts of the conference advisory board for their great help in selecting the best submitted papers and innovations.

Rahul Bansal
Birla Cellulose (IN)

Jo-Ann Innerlohinger
Lenzing (AT)

Sascha Schriever
ITA – RWTH Aachen (DE)

Marina Crnoja-Cosic
The European Technology Platform for the Future of Textiles and Clothing (BE)

Heli Kangas
Valmet Technologies (FI)

Roland Seidl
Textilplus (CH)

Andreas Engelhardt
The Fiber Year (CH)

Alessandro Pellegrini
Bozzetto Group (IT/DE)

Michael Trinkaus
Nitto Advanced Film Solutions (DE)

Ali Harlin
VTT (FI)

Antje Potthast
University of Natural Resources and Life Sciences (AT)

Welcome to the Cellulose Fibres Conference 2025

New with Biosynthetics

Dear Participants of the Conference and Exhibition,

Welcome to the world's only conference dedicated exclusively to cellulose fibres – in textiles, hygiene products and packaging and more. Together with our sponsors and partners, we are delighted to see so many key players and innovators in Cologne, ready for the sixth conference in a row.

We look forward to discussing several emerging issues at the conference, from changes in manufacturing and traditional distribution channels, to fibre microplastic formation versus marine biodegradability, and the discussion of fibre identity and the terminology of cellulose fibres as a generic standard.

Cellulose fibre production has grown steadily over the last decades, reaching an all-time high of nearly 8 million tonnes in 2023, and is expected to grow further to 11 million tonnes in 2030. Cellulosic fibres are the only bio-based and biodegradable fibres that cover a wider range of properties and applications and can rapidly increase their capacity. Raw materials can include virgin wood as well as all types of cellulosic waste streams from forestry, agriculture, cotton processing waste, textile waste and paper waste. Increasing the share of cellulosic fibres will therefore play a crucial role in solving the sustainability challenges of the textile industry.

To further reduce the share of fossil-based synthetic fibres, bio-based polymer fibres (so-called "biosynthetics") are an excellent option due to their wide range of properties – only the implementation will take decades as the current share is only below 0.5 %.

In a special session "Biosynthetics – Replacing Traditional Synthetic Fibres", experts will explore the latest advances, challenges and opportunities in this field. Discussing innovative approaches like biosynthetics is essential to drive sustainable transformation within the fashion and textile industries.

To honour bold new developments in the field of cellulose fibres, the nova-Institute, together with innovation award sponsor GIG Karasek, awards the "Cellulose Fibre Innovation of the Year". This year, for the first time, we are also offering the opportunity to recognise innovation in the field of biosynthetics with the 'Cellulose Fibre Innovation of the Year 2025' award. Six remarkable products have been nominated by the conference advisory board. Their innovations range from the incorporation of leaves into cellulose pulp and packaging, to the use of seaweed as a raw material for biosynthetic fibres, to plant-based surface materials for car interiors, to agricultural decorative and carrier materials, to cellulose aerogel textiles, to next-generation insulation materials and renewable circular fibres from agricultural waste. Find out more on page 24.

The innovations will be presented by the companies on the first day of the event. All conference participants will be able to vote for one of the six nominees, and the "top three" winners will be honoured with the "Cellulose Fibre Innovation of the Year" award.

Be curious!

We wish you a lively exchange, lots of inspiration and extensive networking. And have fun in the vibrant city of Cologne.

Yours sincerely

Michael Carus
Managing Director

Asta Partanen
Content Manager of the Conference

Your Conference Team

Michael Carus
Managing Director
michael.carus@nova-institut.de

Dominik Vogt
Conference Manager & Matchmaking
+49 151 – 19 52 47 30
dominik.vogt@nova-institut.de

Asta Partanen
Content Manager of the Conference
asta.partanen@nova-institut.de

Vanessa Kleinpeter
Contact & Registration
+49 2233 – 460 14 00 • +49 170 – 595 96 47
vanessa.kleinpeter@nova-institut.de

Guido Müller
Exhibition & Sponsoring
+49 151 – 41 42 30 19
guido.mueller@nova-institut.de

Jutta Millich
Media & Partnerships
+49 561 – 50 35 80 44
jutta.millich@nova-institut.de

Verena Kuhlmann
Zoom & Speaker Management
+49 152 – 38 86 88 76
verena.kuhlmann@nova-institut.de

Brigitte Hellwig
Representative of the nova-Institute at Booth No. 6
brigitte.hellwig@nova-institut.de

Registration

cellulose-fibres.eu/registration

Venue & Accommodation

Maternushaus
Kardinal-Frings-Str. 1–3
50668 Köln (Cologne)
Germany

Phone: +49 221 – 1631-0
frontoffice@maternushaus.de
www.maternushaus.de

Recommended Hotels
www.cellulose-fibres.eu/venue

Entrance Fee

2 Days • 12–13 March 2025
Ticket for on site (and online) attendance
incl. dinner buffet on the first day
1095 €

Day 1 • 12 March 2025
Ticket for on site (and online) attendance
incl. dinner buffet
725 €

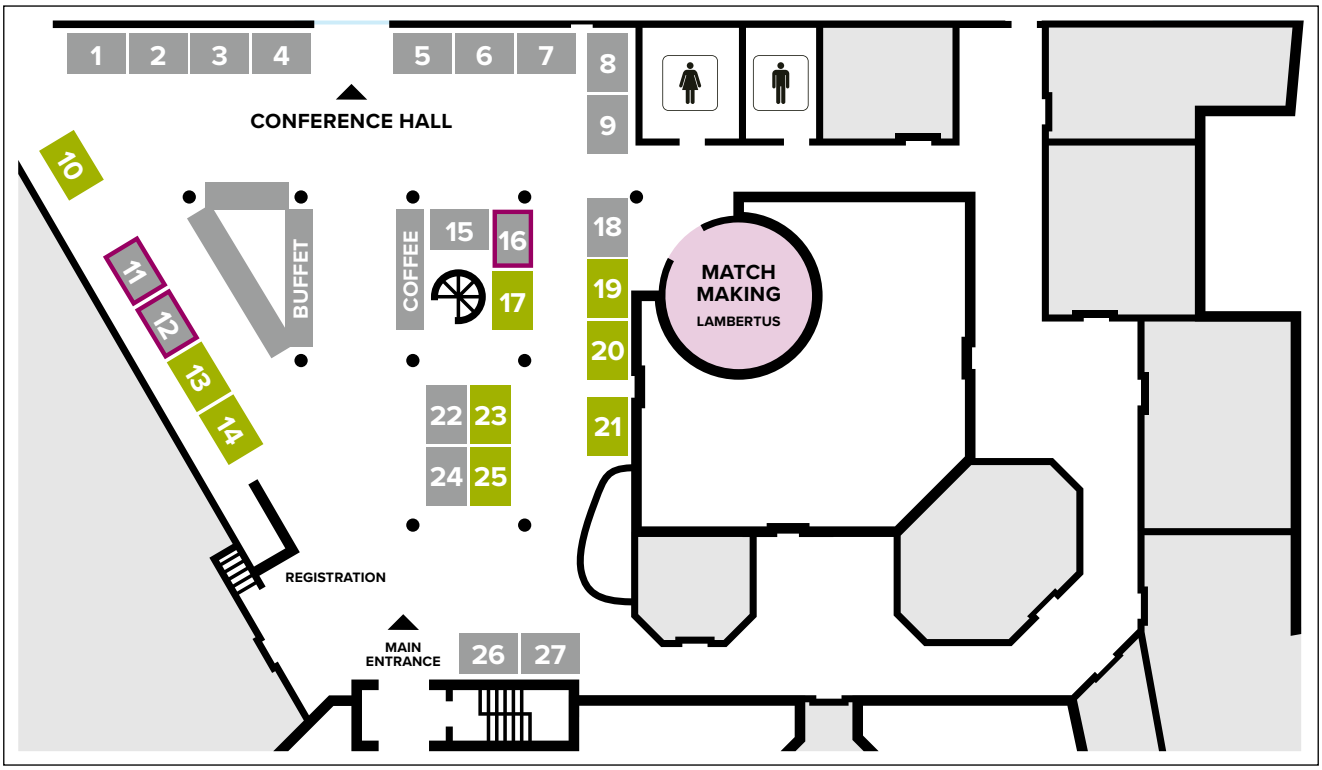
Day 2 • 13 March 2025
Ticket for on site (and online) attendance
650 €

2 Days Online Ticket • 12–13 March 2025
Ticket for virtual attendance
745 €

2 Days Student Ticket • 12–13 March 2025
Ticket for on site (and online) attendance
incl. dinner buffet on the first day
350 €

Exhibition

Free Reserved for Sponsors Booked



List of Exhibitors

01 Innovation Award “Cellulose Fibre Innovation of the Year 2025”
02 HIMSON (IN)
03 Valmet (FI)
04 GIG Karasek (AT)
05 LIST Technology (CH)
06 nova-Institute (DE)
07 Birla Purocel (IN)
08 Poster Session
09 Poster Session
15 DIENES (DE)
18 Matchmaking
22 BPC Instruments (SE)
24 Institut für Textiltechnik of RWTH Aachen University (ITA) (DE)
26 Media Table
27 Media Table

book your booth soon

Book your booth: cellulose-fibres.eu/exhibition-booking

Status: 25 February 2025
More exhibitors expected: cellulose-fibres.eu/exhibitors

Poster Session

The poster session will take place in the evening of the first conference day (18:10, 12 March) with a few minutes presentation. There is a special poster area at booths number 8 and 9 in the exhibition.

Boku University (AT),
Markus Eder
Chemical and Morphological Characterization of Coffee Beans During the Coffee-making Process

Boku University (AT),
Olga Ivanova
Lyocell Fiber Production Using Gallic Acid Amides for Spinning Dope Stabilization

CANOE – Le Centre Technologique Nouvelle Aquitaine Composites et Matériaux Avancés (FR),
Simon Jestin
Innovative Doped Cellulose Fibers as Precursors for SuperCapacitor Carbon Electrode Materials

CELLiCON (NL),
Jorrit de Jong
Single Solvent Cellulose Extraction and Fiber Spinning for Polycotton Textile-to-textile Recycling

FaserInnovationsZentrum Zerkall (FIZZ) (DE),
Mira Goßen
Innovative value chains for a sustainable fibre industry

HOGENT University of Applied Sciences and Arts (BE),
Sofie Vermeire
Hemp as a Driver of Circularity in the Textile Industry: from Field to Recycled Fibre – Hemp4Circularity

North Carolina State University and Aalto University (US),
Autumn Reynolds
Totally Chlorine-Free Upgrading of Recycled Fibers (OCC) into High-Purity Dissolving Pulp

The Hong Kong Polytechnic University (HK),
Xue Wang
Biodegradable Fabric with Efficient Thermal-Wet Management for Eco-friendly Weed Control and Water Retention

The Hong Kong Polytechnic University (HK),
Yin Shan Lau
A Novel Approach to Fabricate a Random-oriented Staple Fibre Yarn (RO-SFY) by Using a Nonwoven Spinning System

Universidad de Concepcion (CL),
Katherina Fernandez Elgueta
Development of an Innovative Superabsorbent Hydrogel with Controlled Nutrient Release

Universidade da Beira Interior (PT),
Vera Costa
CEPI Reciclability Evaluation of Two Barbier Cellulose-based Materials

University of Leeds (UK),
James King
Hybrid Biocomposites: Relating Molecular Behaviour to Material Properties in Silk Fibroin / Cellulose Films

University of Leeds (UK),
Guanyi Chen
All-cellulose composite: Which Ionic liquid should we use?

University of Leeds (UK),
Sophie Fields
Regenerated Fibres from All Cellulose Composites

cellulose-fibres.eu/posters

Find your Perfect Match now!

Welcome to nova's Matchmaking System for the Cellulose Fibres Conference 2025.

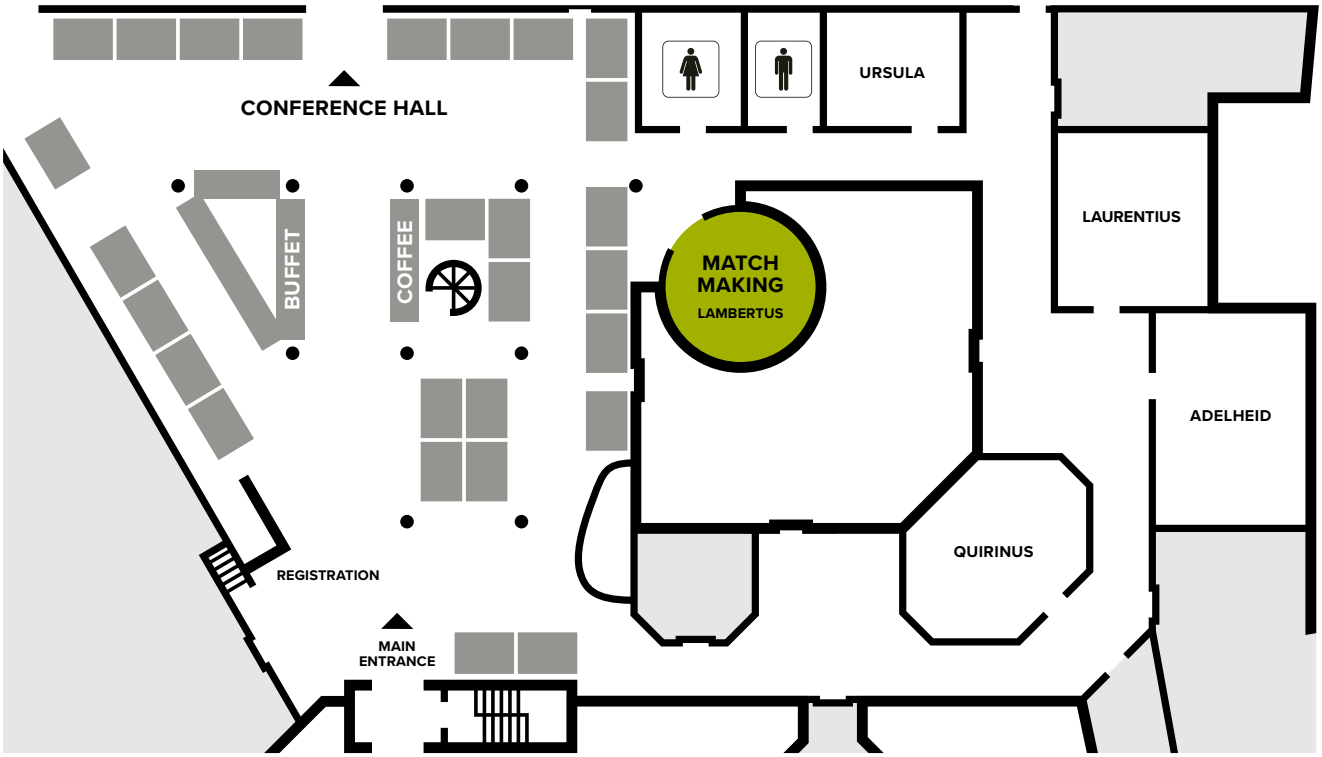
Through this Platform, you will have the Opportunity to:

- Schedule personalised 1:1 on site meetings with other attendees, speakers, and industry experts.
- Build valuable connections tailored to your professional interests and goals.
- The matchmaking system is web-based – easy access without an extra app is guaranteed.
- Save time by meeting the people who matter most to you.

Are you already registered for the matchmaking tool?
Arrange your appointments here: **cellulose-fibres.eu/matchmaking**

You are not registered yet, but want to take part in the matchmaking tool?
Please contact Mr Dominik Vogt: **dominik.vogt@nova-institut.de**

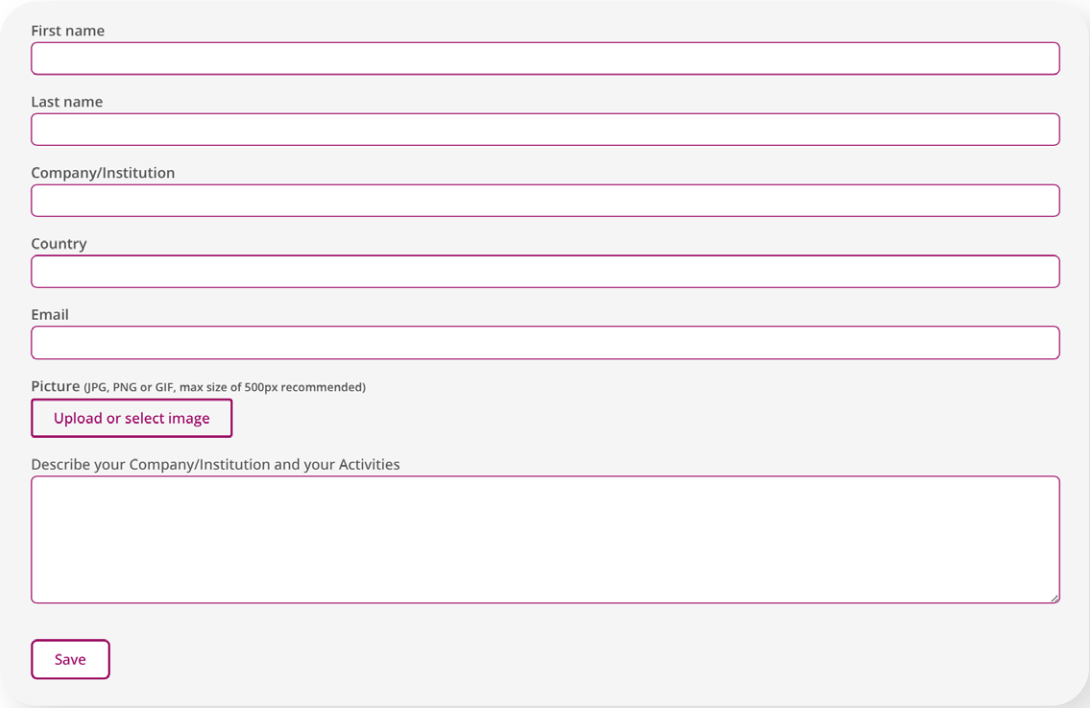
Matchmaking Room Overview



How to use the Matchmaking Tool:

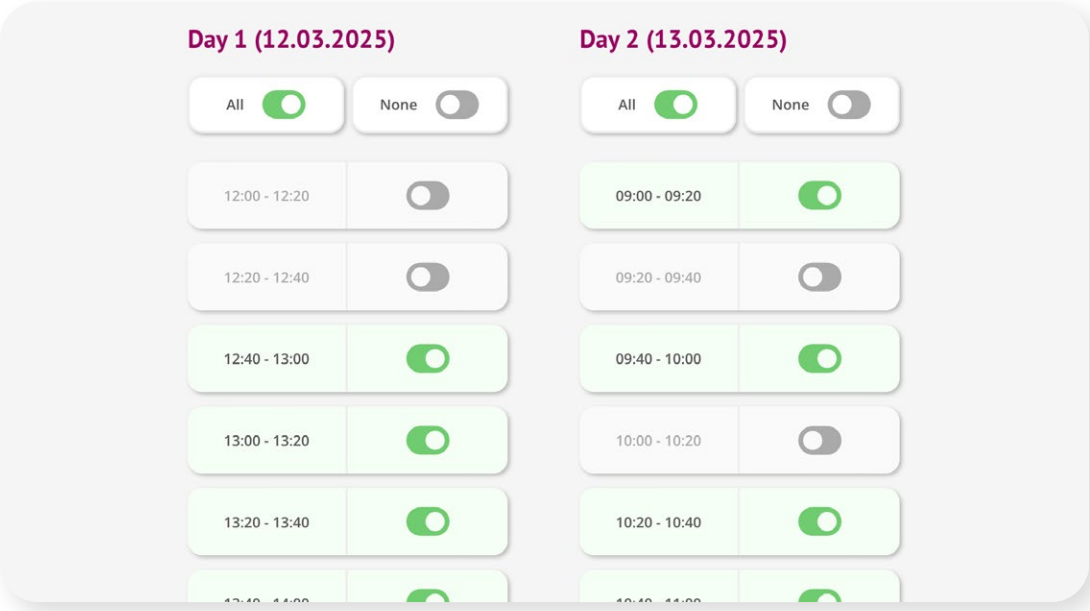
1 Your Profile

Fill out your profile as completely as possible and describe your company/institution and your activities.
Briefly describe the cooperation opportunities and project collaboration you are looking for.



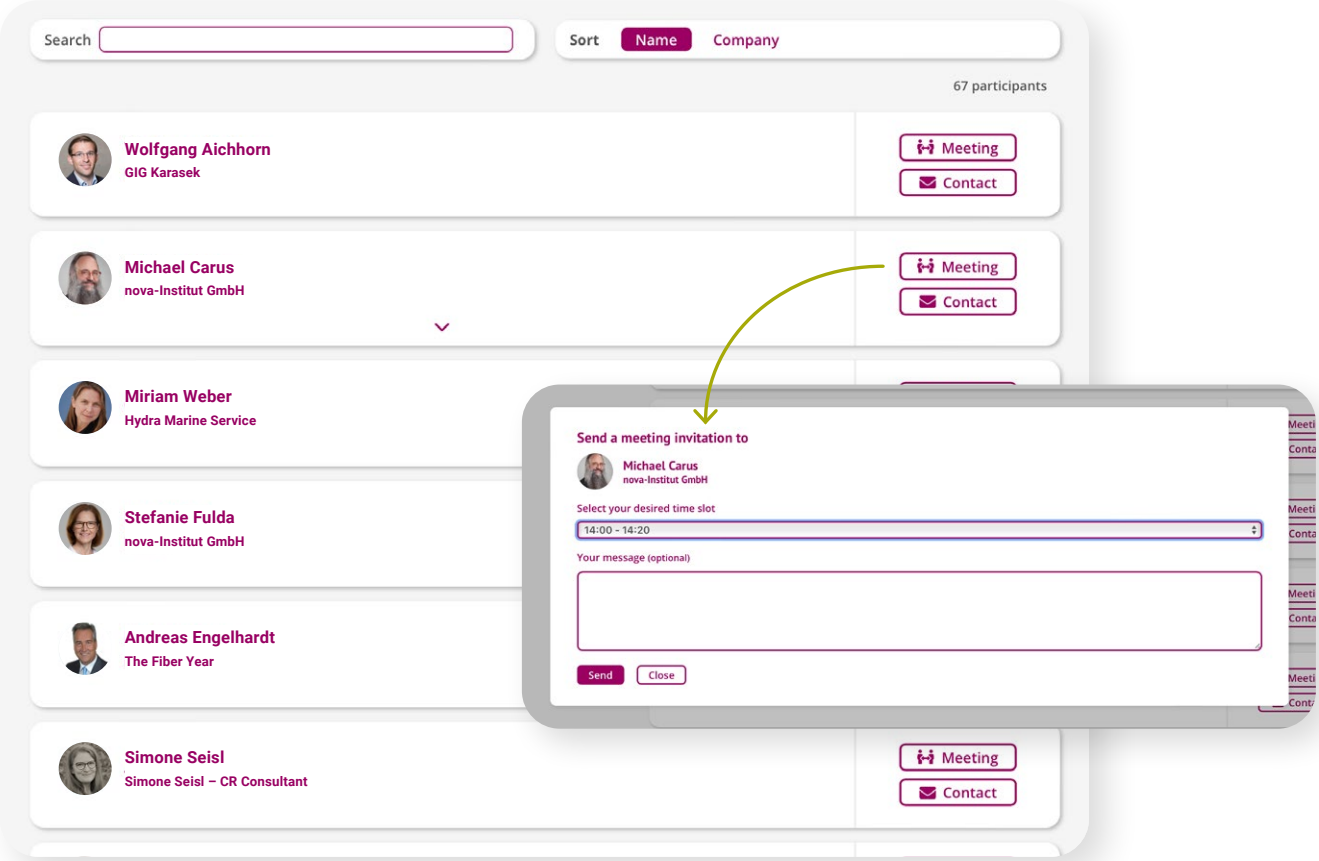
2 Your Availability

Please enter as many time slots as possible in which you could potentially have a meeting.
Please grey out the time slots that are not suitable for you.



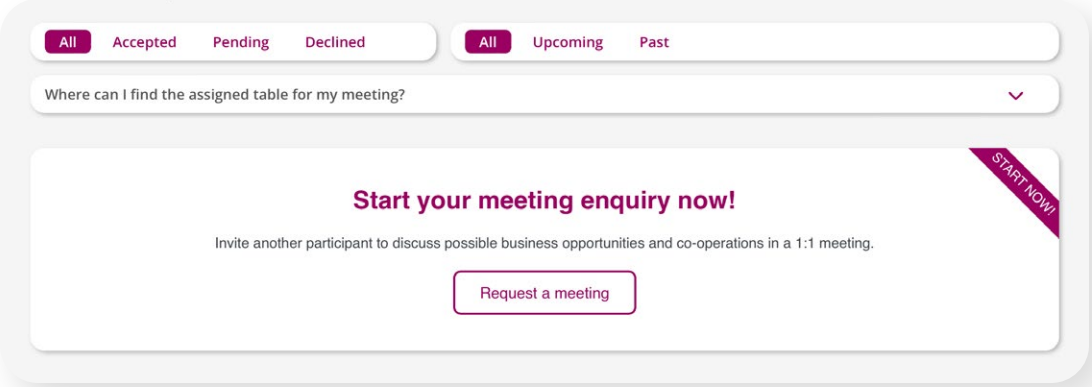
3 Request a Meeting

You can search for names, companies or keywords. The “Meeting” option will suggest time-slots you both are available. You can leave a message for the requested person in the contact field.



4 Your Meetings

All accepted, pending and cancelled meetings can be found in this overview.
Click on ‘Where can I find the assigned table for my meeting?’ to quickly find the location of the meeting room.



Don’t miss this opportunity to make meaningful connections!

Sustainable Textiles – The Way Forward

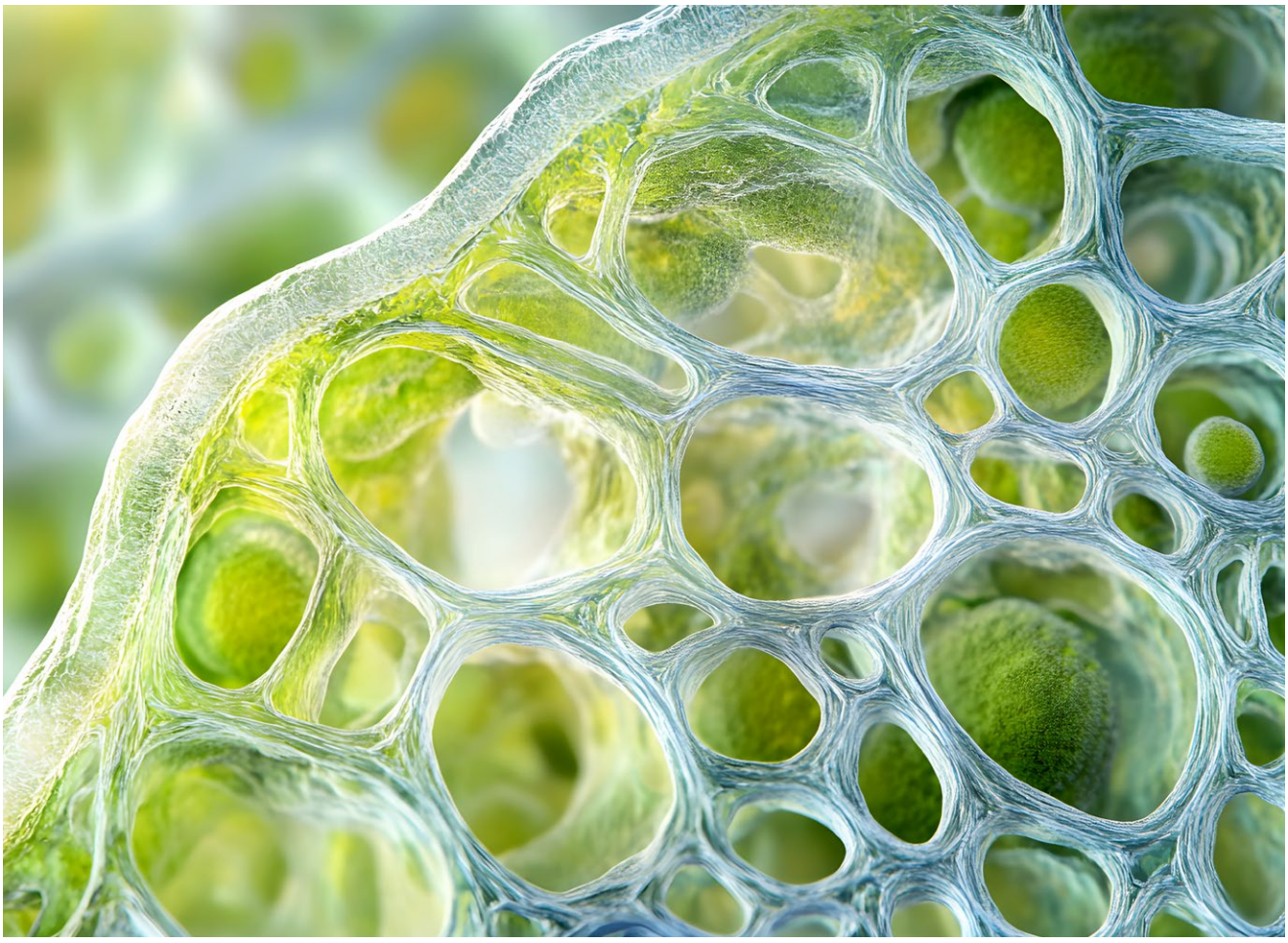
High dependence on fossil carbon, associated high carbon footprint, low recycling rates and microplastics: several solutions are emerging.

Authors:
Michael Carus and Dr. Asta Partanen
(nova-Institute, Germany)

February 2025

The evolution of the demand for textile fibres from 1960 to the present day (see figure 1 and table 1) shows how the textile industry found itself in this dilemma. In 1960, around 95 % of textile fibres were of natural origin, from bio-based carbon, and there was no problem with microplastics, all fibres were biodegradable. The explosion in demand – 460 % between 1960 and 2020 – could only be met by synthetic fibres from the chemical and plastics industries.

Their share grew from 3 % in 1960 to 68 % in 2023 and from less than 700 tonnes to 88 million tonnes/year (The Fiber Year 2024). The new fibres covered a wide range of properties, could even achieve previously unknown properties and, above all, thanks to a powerful and innovative chemical and plastics industry, production volumes could be rapidly increased and comparatively low prices realised.



Picture 1: Cellulose in plant cells, microscopic view of plant cell walls showing cellulose fibres, source: Kraiwit – stock.adobe.com

Global Major Fibre Types by Production in %

	Cotton	Bast Fibre	Wool	Cellulosics	Synthetics	Others	Total in Mio. tonnes	kg/head
2030 forecast	19	3	1	8	69 Biosynthetics: 1–2	1	143	16.8
2023	21	3	1	6	68 Biosynthetics: ca. 0.5	1	130	16.2
2020	23	3	1	6	66 Biosynthetics: < 0.5	1	113	14.6
2010	28	5	1	5	59	1	80	11.6
2000	34	6	2	5	51	2	56	9.1
1990	40	9	5	7	37	2	43	8.2
1980	40	12	4	10	31	3	35	7.9
1970	43	14	6	14	18	5	26	7.2
1960	50	21	7	13	3	5	20	6.6

Table 1: Source: Global Major Fibre Types by Production in %, Sources: The Fiber Year 2024, nova-Institute 2025 (Biosynthetics)

At the same time, sustainability has declined, the carbon footprint of the textiles has increased significantly and the issue of microplastics requires solutions. The first step would be to significantly increase the proportion of renewable fibres, as this is the only way to reduce dependence on fossil carbon, especially in the form of crude oil, and thus reduce the carbon footprint.

But how can this be done? As defined by the Renewable Carbon Initiative, renewable carbon comes from biomass, CO_2 and recycling: From carbon above ground. This addresses the core problem of climate change, which is extracting and using additional fossil carbon from the ground that will end up in the atmosphere.

What can Cotton, Bast Fibres and Wool Contribute?

Cotton fibre production can hardly be increased, it is stagnating between 20 and max. 25 million tonnes/year. Cultivated areas can hardly be expanded, and existing areas are salinized by the irrigation required. With the exception of about 1 % organic cotton, significant amounts of pesticides are used.

The market share of "preferred" cotton – defined by a list of recognised programmes – will fall from 27 % of total cotton production in 2019/20 to 24 % in 2020/21, after years of growth. (Textile Exchange, October 2022: Preferred Fiber & Materials Market Report)

Bast fibres such as jute (75 %), flax, hemp, ramie or kenaf would require a huge boost in technology development and capacity investment and will nevertheless probably remain more expensive than cotton, simply because bast fibres are much more complicated to process, e.g. separating the fibre from the stalk, which is not necessary for cotton as a fruit fibre. As a source of cellulose fibre, bast fibres will remain more expensive than wood.

Although bast fibres are more sustainable than many other fibres, there is unlikely to be a major change – unless China focuses on bast fibres as a substitute for cotton. Plans to do so have been put on hold due to technological problems.

The Importance of Man-made Cellulosic Fibres (MMCFs) or Simply Cellulose Fibres

Cellulose fibre production has been growing steadily over the last decades, reaching an all-time high of nearly 8 million tonnes in 2023, and is expected to grow further to 11 million tonnes in 2030. Cellulosic fibres are the only bio-based and biodegradable fibres that cover a wider range of properties and applications and can rapidly increase their capacity.

The raw materials can be virgin wood as well as all types of cellulosic waste streams from forestry, agriculture, cotton processing waste, textile waste and paper waste. Increasing the share of cellulosic fibres will therefore play a crucial role in solving the sustainability challenges of the textile industry.

The production of MMCFs includes viscose, lyocell, modal, acetate and cupro. The market share of FSC and/or PEFC certified MMCF increased from 55–60 % in 2020 to 60–65 % of all MMCF in 2021. The market share of "recycled MMCFs" increased to an estimated share of 0.5 %. Much research and development is underway. As a result, the volumes of recycled MMCFs are expected to increase significantly in the coming years. (Textile Exchange, October 2022: Preferred Fiber & Materials Market Report)

The CEPI study "Forest-Based Biorefineries: Innovative Bio-Based Products for a Clean Transition" (renewable-carbon.eu/publications/product/innovative-bio-based-products-for-a-clean-transition-pdf) identified 143 biorefineries in Europe, of which 126 are operational and 17 are planned. Most of them are based on chemical pulping (67 %) – the precursor of cellulose fibres. Most biorefineries are located in Sweden, Finland, Germany, Portugal and Austria. But there are already biorefineries in operation or planned in 18 different European countries.

The global report "Is there enough biomass to defossilise the Chemicals and Derived Materials Sector by 2050?" (renewable-carbon.eu/publications/product/is-there-enough-biomass-to-defossilise-the-chemicals-and-derived-materials-sector-by-2050-a-joint-bic-and-rci-scientific-background-report) shows particularly high growth in dissolving/chemical pulp (from 9 in 2020 to 44 million tonnes in 2050; growth of 406 %), cellulose fibres (from 7 in 2020 to 38 million tonnes in 2050; growth of 447 %) and cellulose derivatives (from 2 in 2020 to 6 million tonnes in 2050; growth of 190 %).

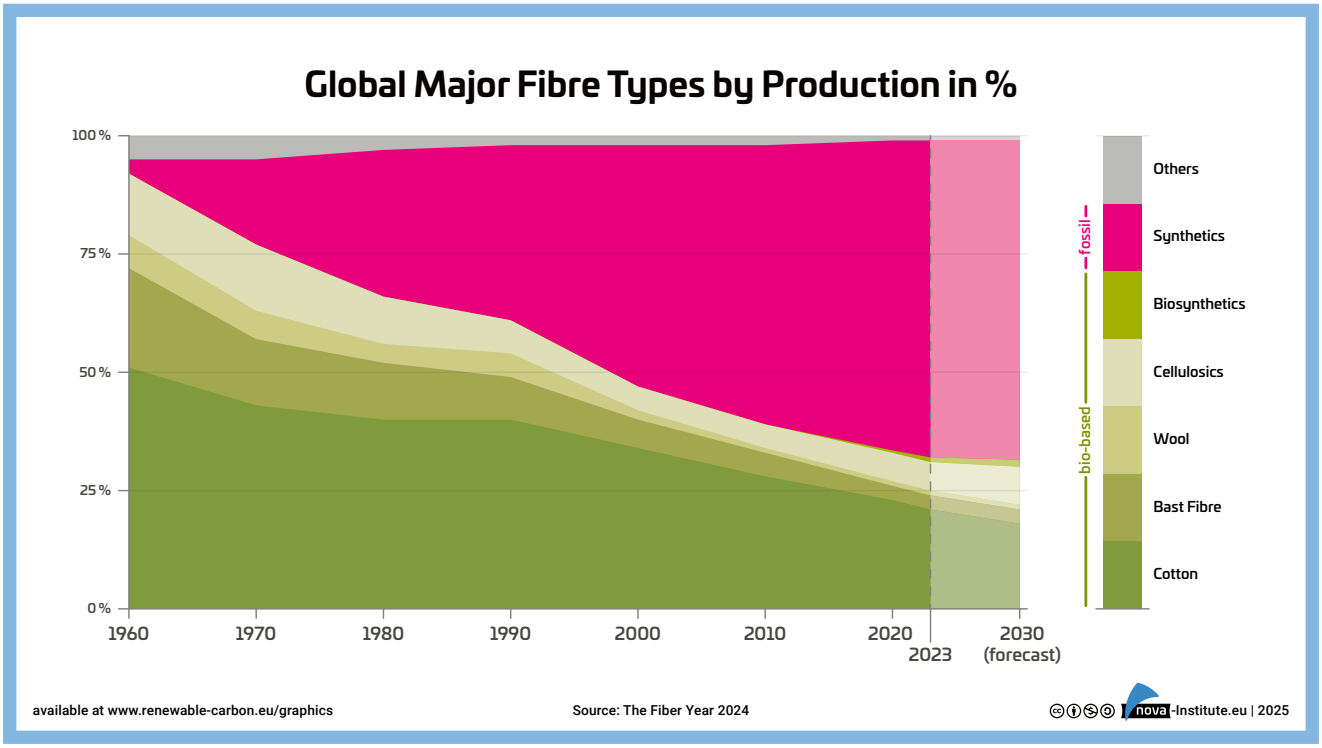


Figure 1: Global Major Fibre Types by Production in %, Sources: The Fiber Year 2024, nova-Institute 2025 (Biosynthetics)

Biosynthetics – Bio-based and CO_2-based Synthetic Fibres

To further reduce the share of fossil-based synthetic fibres, bio-based polymer fibres (also called "biosynthetics") are an excellent option because of their wide range of properties – only the implementation will take decades as the share today is only below 0.5 %. There are many options, such as polyester fibres (PLA, PTT, PEF, PHA), polyolefin fibres (PE/PP), bio-based PA fibres from castor oil. PTT, for example, is well established in the US carpet market and PLA in the hygiene market. They are all bio-based, but only a few are also biodegradable (PLA, PHA).

Biosynthetics are one of many applications of bio-based polymers. In general, 17 bio-based polymers are currently commercially available with an installed capacity of over 4 million tonnes in 2023. Ten of these bio-based polymers are used as biosynthetics, resulting in the production of over one million tonnes of biosynthetics (nova report: Bio-based Building Blocks and Polymers – Global Capacities, Production and Trends 2023–2028, renewable-carbon.eu/publications/product/bio-based-buildingblocks-and-polymers-global-capacities-production-and-trends-2023-2028-short-version).

In principle, many fibres can also be made from CO_2, but here the technology and capacity needs to be developed, perhaps in parallel with the production of sustainable aviation fuels from CO_2, which will become mandatory.

Circular Economy – Recycling of Textile Waste & Fibre-to-Fibre Recycling

The textile industry is at a pivotal moment, where sustainability is no longer an option but a necessity. As the environmental impact of textile production and disposal becomes increasingly clear, the pressure to adopt circular economy principles is growing.

One promising solution is fibre-to-fibre recycling, a process that converts used textiles into new, highquality fibres, effectively closing the waste loop. While significant progress has been made in the European Union, challenges remain, particularly in scaling up technologies, lack of collection systems and handling of mixed fibre textiles. Europe currently generates approximately 6.95 (1.25 + 5.7) million tonnes of textile waste per year, of which only 1.95 million tonnes is collected separately and 1.02 million tonnes is treated by recycling or backfilling (Figure 3).

The recycling of textiles reduces the demand for virgin fibres and the textile footprint. The share of recycled fibres increased slightly from 8.4 % in 2020 to 8.9 % in 2021, mainly due to an increase in bottlebased PET fibres. However, in 2021, less than 1 % of the global fibre market will come from pre- and post-consumer recycled textiles (Textile Exchange, October 2022: Preferred Fiber & Materials Market Report). New regulations from Brussels for closed-loop recycling, especially bottle-to-bottle recycling, could threaten the use of bottle-based PET fibres in the textile industry.

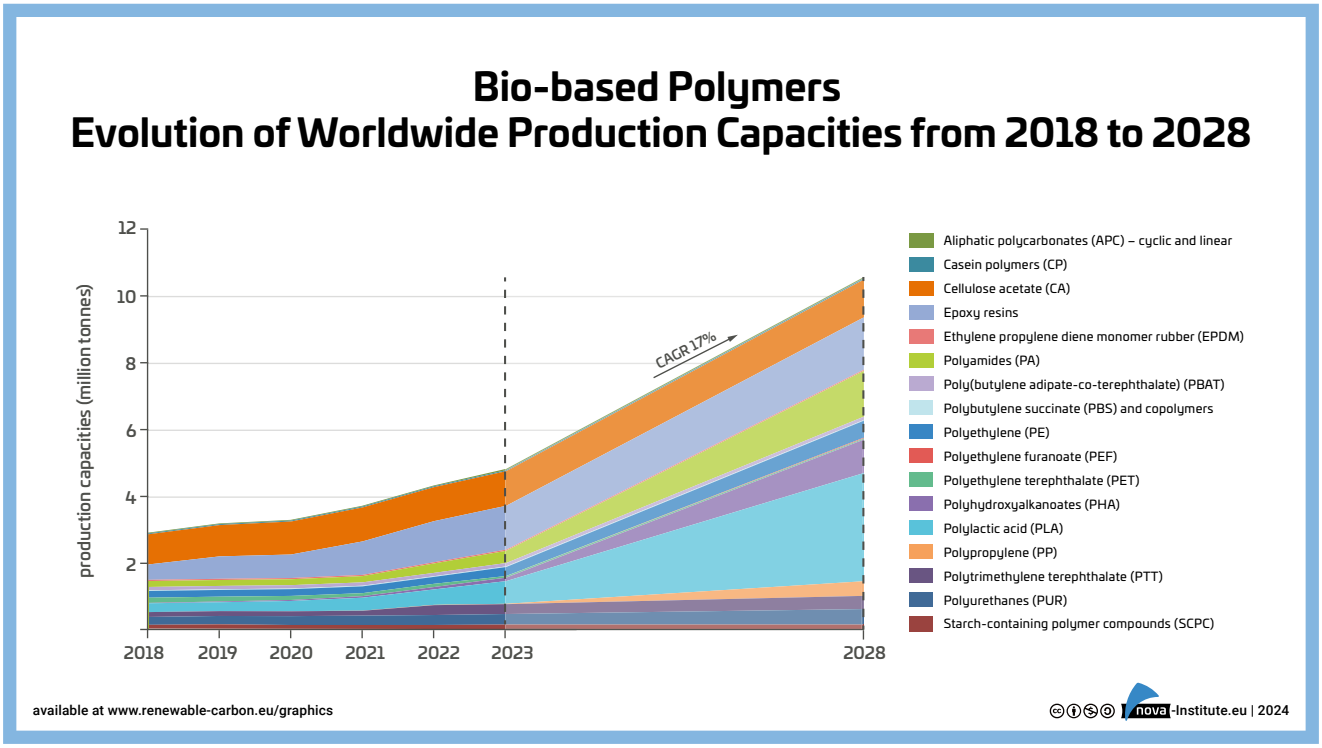


Figure 2: Bio-based Polymers Evolution of Worldwide Production Capacities from 2018 to 2028, source: nova-Institute 2024 (renewable-carbon.eu/publications/product/bio-based-building-blocks-and-polymers-global-capacities-production-and-trends-2023-2028-short-version)

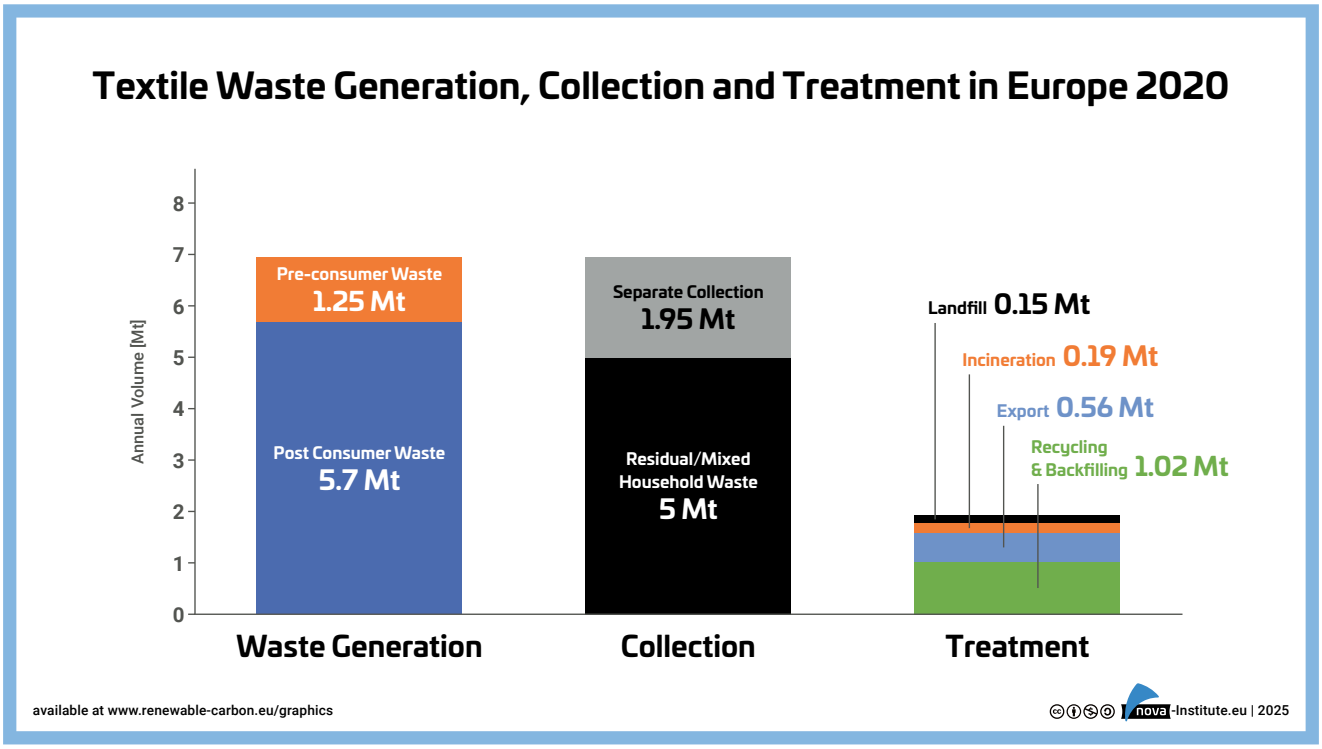


Figure 3: Textile waste generation, collection and treatment in Europe 2020 (Modified from European Environment Agency (EEA) 2024: Management of used and waste textiles in Europe's circular economy. European Environment Agency (EEA)), Denmark, 2024-05-21. (www.eea.europa.eu/ds_resolveuid/eb67d586e6fe4c9f819f03d22ac2b8b0)

This would mean a reduction in recycling rates in the textile industry until the logistics and technologies are in place to recycle textiles on a large scale. This will be necessary to contribute to the circular economy. Several research projects are underway to find solutions and first pilot implementations are available.

The Future of Sustainable Textiles

The sustainable textile industry of the future will be built on a foundation of cotton fibres and fast-growing cellulose fibres, later strongly supported by bio- and CO_2-based synthetic fibres ("biosynthetics"), and high recycling rates for all types of fibres. This combination can eventually replace most fossil-based synthetic fibres by 2050.

DAY 1

12 March 2025, 9:30–18:10 (CET)

9:30 **Michael Carus**
nova-Institute (DE)
Conference Opening

9:30 – 11:50

Strategies in Changing Market Conditions for Cellulose Fibres

Grand Hall

Chairpersons: Asta Partanen & Michael Carus, nova-Institute

9:30

Michael Carus
nova-Institute (DE)
Fossil-free Textiles a Long Way to Go

9:45

Anna Palmberg
IKEA (SE)
Democratic Design for IKEA Home Furnishing Textiles

10:05

Dieter Eichinger
CIRFS (BE)
Streamlining Fibre Identity: 'Cellulose' as the New Unified Standard

10:25

Andreas Engelhardt
The Fiber Year (CH)
Impact of Slow Demand Growth on Manufacturing and Traditional Sales Channels

10:45

Simone Seisl
Simone Seisl – CR Consultant (DE)
The Lyocell Market – a Bright Future?

11:05

Marina Crnoja-Cosic
The European Technology Platform for the Future of Textiles and Clothing (Textile ETP) (BE)
Textile ETP the Largest European Open Expert Network for Textile Research and Innovation

11:25
Panel Discussion with all Session Speakers

11:50
Lunch Break & Networking

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13:10 – 14:50

Fibre-To-Fibre Recycling from Textiles

Grand Hall

Chairpersons: Lars Krause & Kristijan Mrsic, nova-Institute

13:10

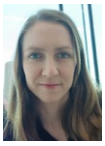
Shirin Asaadi
Valmet (SE)

Navigating the Complexities of Textile Recycling: Industrial Scale-Up Challenges and Solutions

13:30

Sari Asikainen & Virpi Rämö
Kemira (FI)

Decolorization of Waste Textiles – Comparison of Bleaching Chemistries



13:50

Miguel Sanchis-Sebastiá
ShareTex (SE)

Project: REGATEX-Project Scaling up a Chemical Recycling Process for Textile Waste

14:10

Roland Luchte
LIST Technology (CH)

Technology for Recycling of (Poly)cotton and Enabling Polyester-free Textiles

14:30

Panel Discussion with all Session Speakers

14:50
Coffee Break & Networking

SILVER SPONSOR

Enabling Cellulosic Fiber Innovations for Tomorrow

The cellulosic fiber market will diversify and remain very dynamic. Lyocell's potential has not fully been reached yet - and this provides great opportunities for innovators: Pioneering fibers from 100% agro-waste, trendy fibers from 100% bacterial cellulose, high-tenacity fibers from 100% recycled cotton textiles, low-cost fibers from paper pulp, world scale fiber capacities from integrated pulp-fiber plants, fiber tenacities like polyester fibers, fully closed loops with textiles from 100% recycled textiles, etc. - Lyocell will drive many innovations required to survive in the fiber market of tomorrow.

Are you ready for Lyocell 2.0?

LIST provides the Proven Dissolving Technology Platform for any kind of fiber innovation:

- all cellulose sources
- all cellulose concentrations
- all water concentrations
- all solvents
- all process regimes
- all scales - lab to industrial

LIST Technology - preparing you for the future dynamics of the cellulosic fiber market.

LIST
Kneading - Mixing - Drying

JAKOB MÜLLER HOLDING AG

www.list-lyocell.com

15:20 – 16:40

Biosynthetics – Replacement for Traditional Synthetic Fibres

Grand Hall

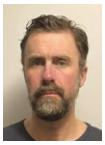
Chairpersons: Pia Skoczinski & Stefanie Fulda, nova-Institute

15:20

Constance Issbruecker
Gesamtverband der deutschen Textil- und Modeindustrie e.V. (DE)
Biosynthetics – Alternatives for Traditional Synthetic Fibres

15:40

David Löf
Primient Covation (US)
Bio-based PDO as Building-Block for Different Biosynthetics



16:00

Luna Aslan
NOOSA (BE)
PLA Fibre for Textiles – Implementing a Recycling Technology for a Bio-based PLA Fibre

16:20

Panel Discussion with all Session Speakers

16:40 – 18:10

Innovation Award "Cellulose Fibre Innovation of the Year 2025"

Grand Hall

16:40


Michael Carus & Asta Partanen
nova-Institute (DE)
Introduction for the Cellulose Fibre Innovation of the Year 2025

16:50

Philipp Mair-Zelenka
Gig Karassek (AT)
Technical Centers and their Important Role in Innovation

17:00

Leticia Labriola
Fibers365 (DE)
Hemp365 – Agriculture Decorative and Carrier Material

17:10

Valentyn Frechka
Releaf Paper France (FR)
Releaf Fiber – Eco-Friendly Paper from urban Fallen Leaves

17:20

Jens Hofer
SA-Dynamics (DE)
Cellulose Aerogel Textiles – Next-Generation Insulation Materials

17:30

Oliver Shafaat
Sci-Lume Labs (US)
Bylon® – Renewable Circular Fibres from Agricultural Waste

17:40

Aureliano Fertuzinhos
TMG Automotive (PT)
REFIBER – Innovative Plant-based Automotive Leather

17:50

Julia Reisser
Uluu (AU)
Replacing Plastic in Textiles with Natural, Seaweed-derived Materials

18:00
Award Voting

18:10
Beer on Tap & Poster Session

20:00
Gala Dinner

Innovation Award “Cellulose Fibre Innovation of the Year 2025”

The use of leaves for cellulose pulp and packaging, seaweed as a feedstock for biosynthetic fibres, plant-based surface material for car interiors and much more – The award nominees are as diverse as the thematic spectrum of the Cellulose Fibres Conference 2025 in Cologne.

It is getting exciting again for the cellulose fibres industry. Six new products have been nominated for the popular innovation award. The jury has selected six outstanding nominees that want to shape the future more sustainable with their pioneering products.

Every year, the conference organisator nova-Institute together with award sponsor GIG Karasek honours companies that impress with their creativity, technological progress and ecological impact.

The aim of the award is not only to recognise the winners’ innovative products, but also to set an example for the courage to innovate.

The nominees’ presentations, the voting and the winner ceremony will take place on 12 March at the Cellulose Fibres Conference 2025. Participants of the conference can vote live for the three winners. More than 220 people are expected to attend.

AWARD SPONSOR

Concentrating the Essentials

GIG KARASEK
A Member of Dr. Aichhorn Group

Sustainable Solvent Recovery

Advanced MVR Technology by GIG Karasek

Amid global efforts toward decarbonization, we are strengthening our commitment to sustainable industrial processes. As experts in plant engineering, we have developed an advanced MVR-based solvent recovery solution that provides significant benefits over conventional Multi-Effect Evaporation (MEE):

- Tailor-made for the Lyocell industry
- Lower CO_2 footprint with renewable energy
- High potential for OPEX savings and reduction of primary energy demand
- Gentle evaporation minimizing fouling
- Less cooling water needed
- Compact plant design

Let's shape a greener future together!

LEARN MORE

Nominees of the Innovation Award

Organiser

Award Sponsor

1

Fibers365 (DE)

Hemp365 – Agricultural Decorative and Carrier Material

The solution “hemp365” is characterised by the development of a cost-effective, plant-based decorative and carrier material through the chemical-free processing of a regional agricultural fibre and the use of resulting short fibres in a wet-laid process, allowing for a massive reduction in the amount of fossil based binders required for strength and functionality. The non fibre content is less than 7 % and is also made from biogenic and biodegradable material. Hemp365 is 100 % natural and vegan. It has been designed for consumer (fashion) and industrial applications in cooperation with an automotive OEM.

More information: www.fibers365.com

2

Releaf Paper France (FR)

Releaf Fiber – Eco-Friendly Paper from Urban Fallen Leaves

Releaf Paper France transforms urban fallen leaves into sustainable cellulose fibres, offering an eco-friendly alternative to traditional hardwood pulp. Using proprietary low-temperature extraction, high-quality fibres with excellent paper-forming properties are isolated. With a cellulose content of 32–48 % and properties similar to hardwood, RELEAF fibres are ideal for packaging materials like corrugated paper, boxes, and bags. This innovative process, which requires minimal water and non-aggressive solvents, aligns with circular economy principles, repurposing millions of tons of urban leaf waste annually and supporting global brands in achieving sustainable packaging solutions.

More information: www.releaf-paper.com

3

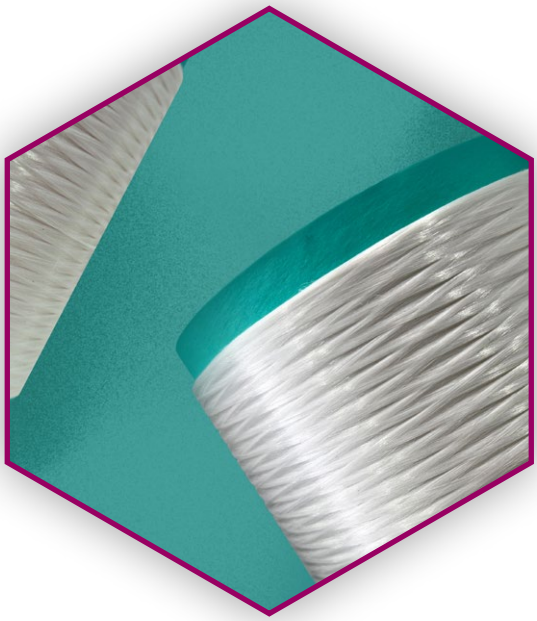
SA-Dynamics (DE)
Cellulose Aerogel Textiles – Next-Generation Insulation Materials

Cellulose Aerogel Textiles are revolutionary insulation materials made from 100 % biodegradable cellulose aerogel fibres. These combine the flexibility and ease of processing of traditional fabrics with the superior thermal insulation properties of aerogels by utilising a novel aerogel fibre process. Lightweight, highly efficient, and compatible with conventional textile machinery, they provide a sustainable alternative to fossil-based and animal-derived insulation materials. Fully recyclable and free from microplastic emissions, Cellulose Aerogel Textiles set a new benchmark for circular economy solutions in the textile and construction industries. Initial functional demonstrators were developed through two projects, funded by Biotexfuture and RWTH Innovation, respectively.

More information: www.sa-dynamics.com

4

Sci-Lume Labs (US)
Bylon® – Renewable Circular Fibres from Agricultural Waste



Sci-Lume Labs makes Bylon®, a scalable, circular, biosynthetic fibre. Using highly efficient chemistries to valorise agricultural waste, Bylon® seamlessly integrates into every step of the global value chain – from raw material production through textile manufacturing. Bylon® is distinct from incumbent and next-gen materials because it is simultaneously bio-based; waste-derived; degradable; recyclable; downstream-compatible; and melt-spinnable. Bylon® also offers a unique performance profile by combining the mechanical properties and tunability of traditional synthetics with the moisture properties and circularity of natural fibres. By not requiring changes to the supply chain, Bylon® empowers the industry to reduce its environmental impact – without compromising on quality, performance, or cost.

More information: www.sci-lumelabs.com

5

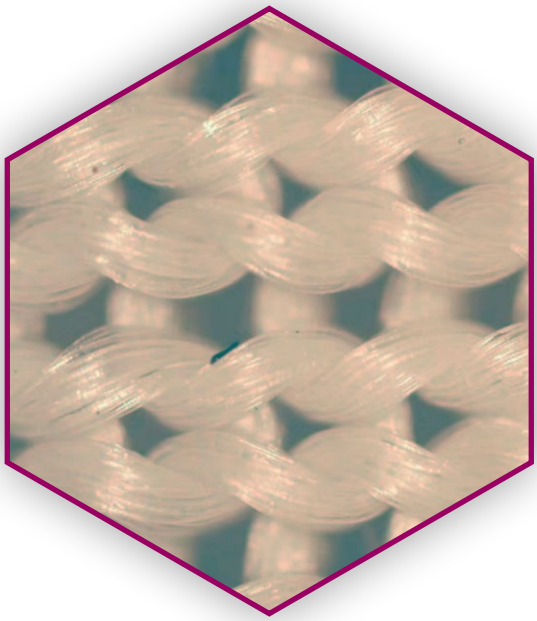
TMG Automotive (PT)
REFIBER – Sustainable Automotive Surface Material

Textile-based composite solutions are a growing trend in the automotive sector, especially for decorative and functional interior applications. Innovative plant-based leather demonstrates this trend, combining sustainability with advanced performance. Developed from a biopolymer matrix combined with cellulose waste, this material transforms waste into a premium, eco-friendly solution. Its textile backing and non-woven laminate backing are also made entirely from cellulose fibres, creating a fully integrated bio-based composite. Designed for car interiors and more, this lightweight, durable and aesthetically versatile material sets a new standard for sustainable design, while satisfying the industry's growing demand for circular and renewable alternatives.

More information: www.tmgautomotive.pt

6

Uluu (AU)
Natural, Seaweed-derived Materials – Replacing Plastic in Textiles



Uluu is an Australian start-up set to replace plastics with natural polymers called PHAs. Uluu materials are made from a regenerative feedstock: farmed seaweed, thus ending reliance on fossil fuels and land crops. Uluu, in partnership with Deakin University, is developing textiles that perform like synthetic polyester but are truly biodegradable and biocompatible, thus eliminating persistent microplastic pollution in fashion. Importantly, Uluu materials are reusable, recyclable, and most importantly, compostable. They are naturally produced through a unique fermentation process that uses seaweed, saltwater microbes and seawater. Uluu pellets can be directly substituted for plastic (e.g., polyester, nylon) in existing melt spinning equipment, creating yarns that can be knitted or woven into textiles. In addition to fibre-grade pellets, Uluu is also producing other grades of pellets to replace plastics used in e.g., buttons, sunglasses, hair clips and packaging.

More information: www.uluu.com.au

“Cellulose Fibre Innovation of the Year 2024”

Winners of the Innovation Award

The Straw Flexi-Dress: Design Meets Sustainability
DITF & VRETENA (DE)

HONEXT® Board FR-B (B-s1, d0) – Flame-retardant Board Made from Upcycled Fibre Waste
Honext Material (ES)

A New Generation of Bio-based and Resource-efficient Fibre
TreeToTextile (SE)

SILVER SPONSOR

Your partner in new era of textiles

Textiles are an essential part of our everyday life. The downside is that the production chain causes ecological challenges, and most textile products end up as waste. Consumers all over the world are demanding more sustainable textiles.

At Valmet, we put your needs at the heart of our mission to drive a sustainable transformation in the textile industry. Whether you're piloting new concepts or scaling up to full-scale recycling of textile fibers or production of man-made cellulosic fiber, our comprehensive product and service offering and project management expertise ensure efficiency, reliability, and long-term value across the entire textile value chain.

With decades of expertise in fiber treatment solutions, project management, and large-scale production, we deliver cutting-edge solutions tailored to drive your business growth.

Explore **valmet.com/more-industries/textiles**

Valmet FORWARD

DAY 2

13 March 2025, 9:00–16:45 (CET)

9:00 **Michael Carus**
nova-Institute (DE)
Conference Opening

9:10 – 10:50

Marine Biodegradability versus Fibre Microplastic Formation

Grand Hall

Chairpersons: Jo-Ann Innerlohinger, Lenzing (AT) & Mika Plum, nova-Institute

9:10

Olivia Skilbeck
University of Leeds (UK)
The Effect of Preparation, Dyeing and Finishing Treatments on the Biodegradation of Cellulosic Microfibres

9:30

Bruno De Wilde
Normec OWS (BE)
Bio-end of Life Options for Cellulose Fibres

9:50

Christian Lott
HYDRA Marine Sciences (DE)
Key Findings from a Meta-study on the Environmental Fate, Microplastic Formation and Potential Toxicity of PLA – and Implications for Other Biodegradable Plastic Polymers

10:10

Miriam Weber
HYDRA Marine Sciences (DE)
Environmental Biodegradation Performance of PHA Polymers in the Open Environment & Options for LCA

10:30
Panel Discussion with all Session Speakers

10:50
Coffee Break & Networking

11:20 – 12:40

New Technologies and Applications for Fibres

Grand Hall

Chairpersons: Narendar Poranki & Kristijan Mrsic, nova-Institute

11:20

Michael Hummel
Aalto University (FI)
Carbon Fibres from Lyocell Filaments – Understanding and Overcoming the Limitations of Cellulose as Precursor

11:35

José Miguel Matos
CeNTI – Center for Nanotechnology and Advanced Materials (PT)
Lignin: An All-in-one Bio-based Solution?

11:50

Sascha Schriever
ITA – RWTH Aachen (DE)
Maximilian Mohr
SA-Dynamics (DE)

Cellulose Aerogel Fibre Based Lightweight Super-insulating Non-woven for Sportswear

12:05

Cindy Oettel
Volkswagen (DE)
Fabrication of Leather-like Biomaterial Derived from Bacterial Nanocellulose by Using an Optimized Casting Process

12:20
Panel Discussion with all Session Speakers

12:40
Lunch Break & Networking

14:00 – 15:00

Supply Chain Innovation

Grand Hall

Chairpersons: Rahul Bansal, Birla Cellulose (IN) & Stefanie Fulda, nova-Institute

14:00

Ali Tarhini
Aalto University (FI)
Nonwovens with Improved Performance: Learning from Nature

14:15

Nikolas Sandmann
Nitto Advanced Film Gronau (DE)
Defying Gravity – Next Level Absorbent Products Performance

14:30

Lasse Holopainen
Spinnova (FI)
Replacing Cotton with Spinnova's Advanced Clean and Mechanical Fibre Production Technology

14:45

Panel Discussion with all Session Speakers

15:00
Coffee Break & Networking

15:30 – 16:45

Technologies for Pulps, Fibres and Yarns

Grand Hall

Chairpersons: Marina Crnoja-Cosic, Textile ETP (BE) & Kaj Seeger, nova-Institute

15:30

Inge Schlapp-Hackl
Aalto University (FI)
Make-over of Pulping Strategies for the Production of High Performance Lyocell-type Recycled Fibres

15:45

Marcus Elmer
Lixea Sweden (SE)
Unlocking the Full Potential of Biomass in the Production of MMCF Using the Revolutionary Lixea Dendronic® Process

16:00

Jörg Schreiber
DIENES Apparatebau (DE)
Modular Platform Approach for Developing and Upscaling Technologies for Spinning Bio-based and Recycled Raw Materials

16:15

Divya Dharshini Uma Shankar
The Novo Nordisk Center for Biosustainability (DK)
Harnessing Ocean Water for Sustainable Cellulose Biomanufacturing

16:30
Panel Discussion with all Session Speakers

16:45
Closing Remarks

Bio?
Synthetic?
Well, which is it?

We admit, the term “biosynthetic” is somehow contradictory. Let’s dispel some myths about biosynthetics!

Figure 1: Biosynthetic Fibres © nova-Institute 2024

Since the 2000s, the term “biosynthetics” has been used to describe synthetic fibers of biological origin. To defossilise the textile industry, the globally high share of synthetic fibers must shift from fossil-based to biologically sourced materials – from synthetics to biosynthetics. There are many misconceptions surrounding this term, with people often confusing biosynthetics or assuming that all bio-based materials are automatically sustainable.

The following text addresses five key misconceptions.

① “Synthetic” always means non-natural origin.

Wrong. “Biosynthetics” is a general term for bio-based polymer fibres, one of many applications for polymers. Alongside cellulose fibres, they are an excellent option for reducing the use of fossil fibres in textiles. They are derived wholly or partly from natural, renewable sources like sugar beet, sugar cane or wood. Biosynthetics offer a powerful alternative to traditional synthetic, fossil-based fibres – with both performance and technical properties that make them drop-in, smart drop-in and dedicated replacements.

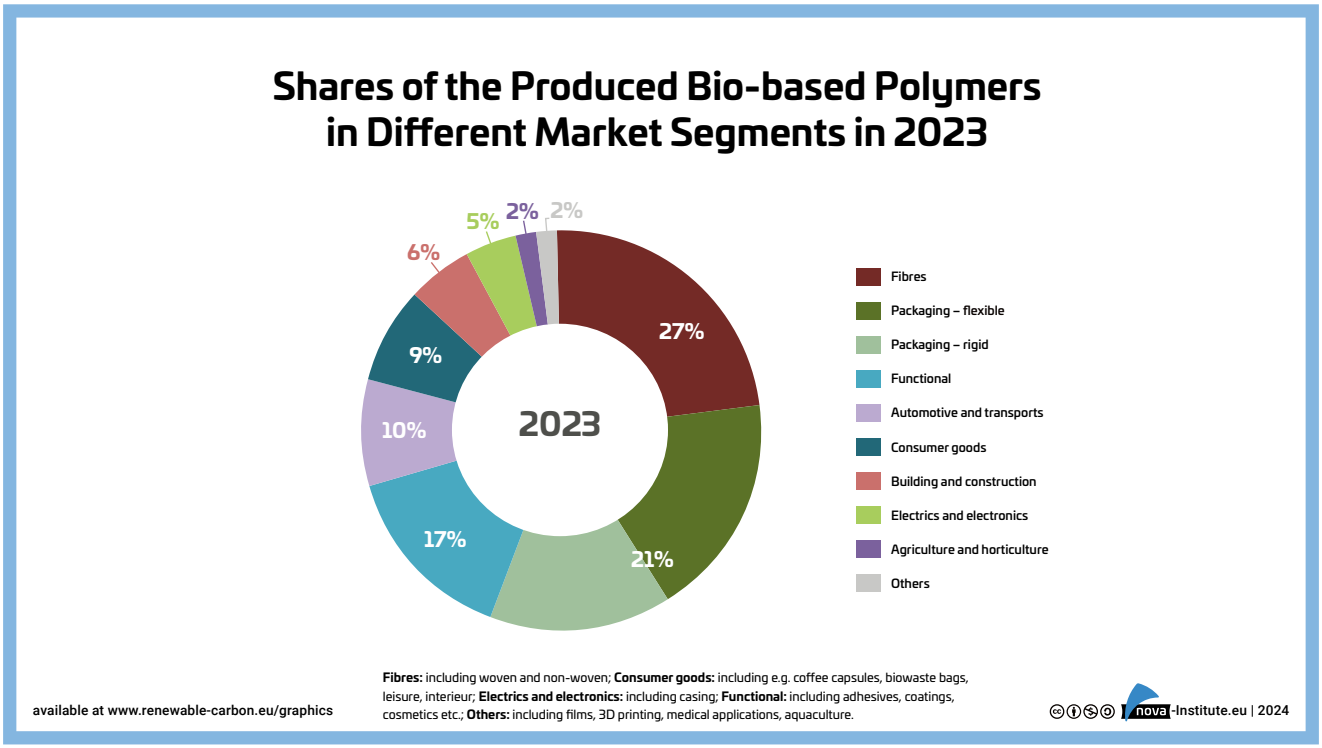


Figure 2: Shares of the Produced Bio-based Polymers in Different Market Segments in 2023, source: nova-Institute 2024 (renewable-carbon.eu/publications/product/bio-based-building-blocks-and-polymers-global-capacities-production-and-trends-2023-2028-short-version)

2

Biosynthetics can be made from recycled plastic bottles.

Wrong. Plastic bottles are made from PET, a polymer, specifically a polyester, which is mostly produced from fossil sources, but is also available in partially bio-based form. Besides using it for plastic bottles, PET can also be used to make fibres, fossil fibres and biosynthetics. After use plastic bottles can be recycled and processed into a spinnable yarn, that can actually be used to make textiles, biosynthetics have nothing to do with this.

Recycling in itself does not automatically make a product 'bio'. Yarn, which is made from plastic bottles, is synthetic. It is called "recycled polyester", in fact these recycled polyesters make up 14 % (https://www.globetrotter.de/magazin/rpet-den-kreis-schliessen/, accessed 6 February 2025) of the global polyesters used in the textile industry, with the majority coming from PET plastic bottles.

3

Biosynthetics are from natural origin, so they are biodegradable.

Wrong. The Biodegradability of polymers, the basis for biosynthetics is completely independent of the resource from which polymer it is made of. So being bio-based does not necessarily mean that certain polymers are biodegradable. Biodegradability depends on the end product – in this case textiles made from biosynthetics – which are not necessarily biodegradable. However, as the garment can be turned back into 100 % virgin fibre, there is a closed loop, and, in theory, nothing ends up in and harms nature.

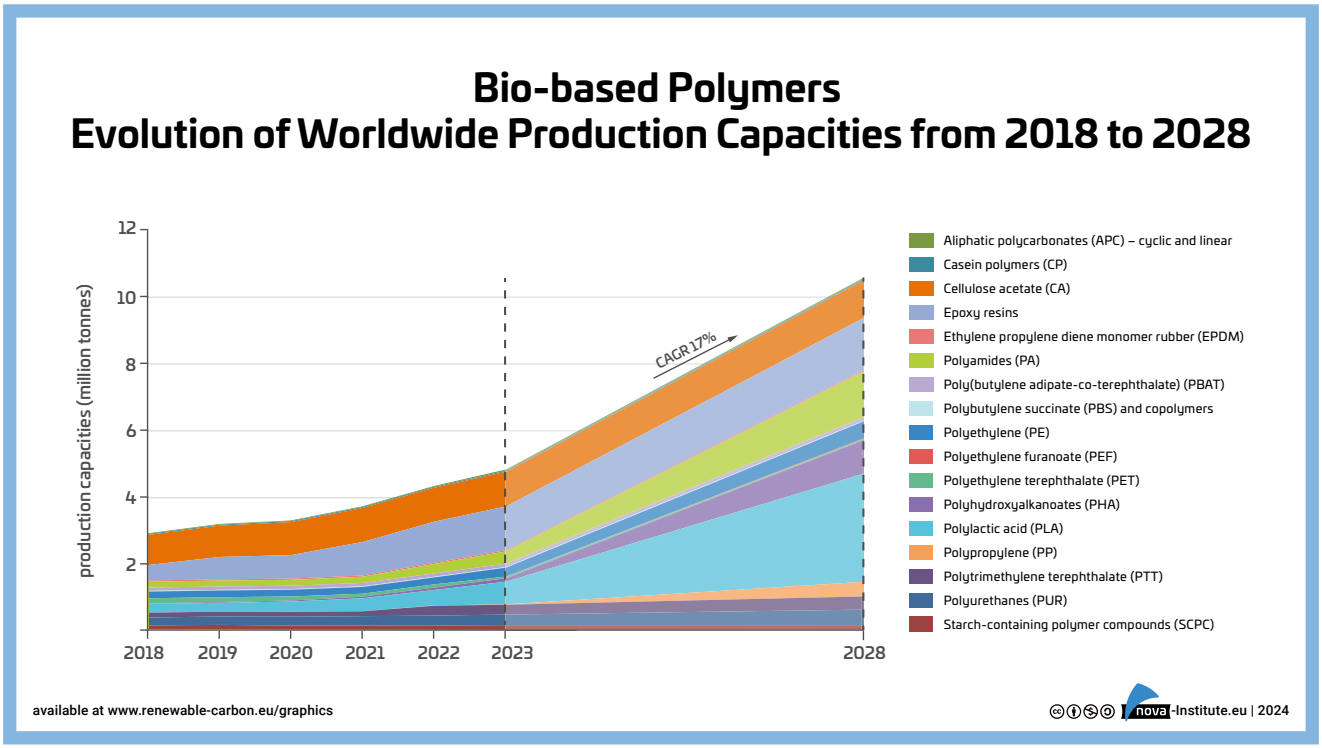


Figure 3: Bio-based Polymers Evolution of Worldwide Production Capacities from 2018 to 2028, source: nova-Institute 2024 (renewable-carbon.eu/publications/product/bio-based-building-blocks-and-polymers-global-capacities-production-and-trends-2023-2028-short-version)

4

Biosynthetics are not available in sufficient quantities.

Biosynthetics are one of many applications of bio-based polymers. In general, 17 bio-based polymers are currently commercially available with an installed capacity of over 4 million tonnes in 2023. Ten of these bio-based polymers are used as biosynthetics. resulting in the production of over one million tonnes of biosynthetics.
Biosynthetics have an easily scalable potential as part of the overall portfolio of preferred materials needed to replace the use of new virgin fossil-based polymers in textiles. To enable the responsible introduction and market uptake of biosynthetics for the textile industry, it will be necessary for different stakeholders to work together to address these challenges.

5

Biosynthetics are better than polyesters.

To some extent. Polyesters are a class of polymers, and one application of polymers, specifically polyester, is using them as fibres. Natural derived polyesters are biosynthetics that can fulfil the same properties as fossil derived polyesters. Claiming biosynthetics are generally better than a polyester is therefore wrong, but certain biosynthetic polyesters can be better than fossil-based polyesters from a sustainability point of view.

Discussing innovative approaches like biosynthetics is essential to drive sustainable change within the fashion and textile industry. In the dedicated session "Biosynthetics – Replacement for Traditional Synthetic Fibres", experts will explore the latest advances, challenges and opportunities in the field (p.22).

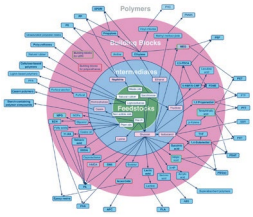
nova Market and Trend Reports on Renewable Carbon

The Best Available on Bio- and CO_2-based Polymers & Building Blocks and Chemical Recycling

MARCH 2025

Bio-based Building Blocks and Polymers

Global Capacities, Production and Trends 2024–2029



Authors: Pia Skoczinski, Michael Carus, Gillian Tweddle, Pauline Ruiz, Lara Dammer, Ann Zhang, Narendar Poranki, Lara Börger, Doris de Guzman, Rick Passenier, Tanver Ali, Harald Käb, Matthew Hartley and Achim Raschka

March 2025

This and other reports on renewable carbon are available at **www.renewable-carbon.eu/publications**

Alternative Naphtha

Replacing Fossil-Based Feedstocks in Refineries and Naphtha Crackers: Technologies and Market, Status and Outlook

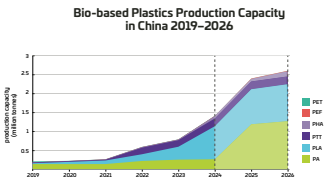
Authors: Gillian Tweddle, Lara Krause, Pauline Ruiz, Achim Raschka, Aylin Özgen, Nicolas Hark and Michael Carus

July 2024

This and other reports on renewable carbon are available at **www.renewable-carbon.eu/publications**

Bio-based and Biodegradable Plastics Industries in China

Policy Framework, Market Trends, Technologies and Outlook for PLA, PA, PHA and PBAT



Authors: Ann Zhang and Michael Carus

May 2024

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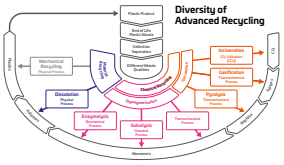
Mapping of Advanced Plastic Waste Recycling Technologies and Their Global Capacities

Providers, Technologies, Partnerships, Status and Outlook



Authors: Lara Krause, Aylin Özgen, Jasper Kern, Sreeparna Das, Michael Carus, and Achim Raschka

February 2024

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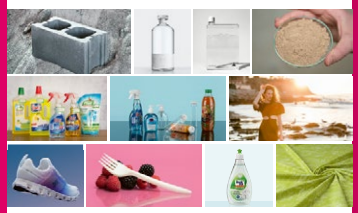
Carbon Dioxide (CO_2) as Feedstock for Chemicals, Advanced Fuels, Polymers, Proteins and Minerals

Technologies and Market, Status and Outlook, Company Profiles



Authors: Pauline Ruiz, Pia Skoczinski, Achim Raschka, Nicolas Hark, Michael Carus. With the support of: Aylin Özgen, Jasper Kern, Nico Plum

April 2023

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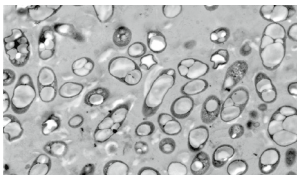
Mimicking Nature – The PHA Industry Landscape

Latest trends and 28 producer profiles



Author: Jan Ravenstijn

March 2022

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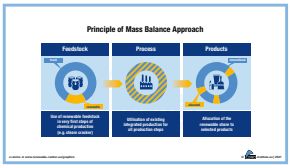
Bio-based Naphtha and Mass Balance Approach

Status & Outlook, Standards & Certification Schemes



Authors: Michael Carus, Doris de Guzman and Harald Käb

March 2021

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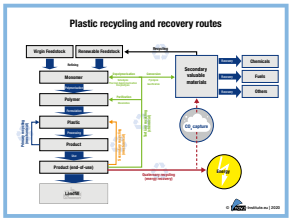
Chemical recycling – Status, Trends and Challenges

Technologies, Sustainability, Policy and Key Players



Author: Lars Krause, Florian Dietrich, Pia Skoczinski, Michael Carus, Pauline Ruiz, Lara Dammer, Achim Raschka, nova-Institut GmbH, Germany

November 2020

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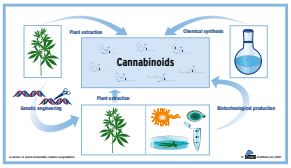
Production of Cannabinoids via Extraction, Chemical Synthesis and Especially Biotechnology

Current Technologies, Potential & Drawbacks and Future Development



Authors: Pia Skoczinski, Franjo Grotenhermen, Bernhard Beitzke, Michael Carus and Achim Raschka

January 2021

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renewable-carbon.eu/publications

RENEWABLE CARBON PUBLICATIONS

Valuable Quotes

Michael Hummel
Aalto University (FI)
"Every year, the CFC succeeds in attracting the key players in the textile fibre industry. It is a great event to hear about the latest development in this area and discuss with industry and academia."

Inge Schlapp-Hackl
Aalto University (FI)
"An information exchange helps to establish a circular economy approach for all."

Ali Tarhini
Aalto University (FI)
"The Cellulose Fibres Conference is a very unique space for academics and companies to interact and discuss the future of cellulosic fibres in textiles, hygiene products, and packaging."

José Miguel Matos
Centi (PT)
"If innovation on cellulosic fibre is what you want to see, CFC 2025 is the place to be."

Dieter Eichinger
CIRFS (BE)
"This conference is elevating awareness of cellulose fibres, which currently hold less than 10 % market share but possess significantly higher potential. My presentation, 'Streamlining Fibre Identity: 'Cellulose' as the New Unified Standard,' seeks to support this vision."

Jörg Schreiber
DIENES Apparatebau (DE)
"Bio-based and recycled raw materials are the keystone of a more sustainable and circular textile industry, despite challenges related to material availabilty and variability, environmental impact, and the scalability of processing technologies."

Miriam Weber
HYDRA Marine Sciences (DE)
"To prevent us from accumulating even more persistent microplastics, the 'biodegradable in the environment' property of materials is essential (and a great business opportunity) for applications that we use in the environment and can no longer collect."

Sari Asikainen
Kemira (FI)
"We succeed together – To achieve textile circularity we need a wide range of knowhow, starting from equipment design to chemistry, textile design to marketing. Cellulose Fibres Conference is connecting people with wide range of knowledge."

Marcus Elmer
Lixea (SE)
"I attended the very first Cellulose Conference in 2020, and has ever since considered it one the key venues for networking on the topic of cellulosic fibres and discussing ways of solving one of our biggest climate challenges."

Nikolas Sandmann
Nitto (DE)
"For me it's the first time and then directly with the opportunity to give a presentation, I'm really looking forward to the conference."

Luna Aslan
NOOSA Fiber (BE)
"NOOSA™ is excited to showcase its biosynthetic innovation to the world of cellulosics to create textiles of tomorrow."

Bruno De Wilde
Normec Group (BE)
"Looking forward to discuss impact of cellulose fibres on sustainability with special focus on bio-end of life."

Sascha Schriever
RWTH Aachen (DE)
"The place to meet innovators."

Miguel Sanchis-Sebastià
ShareTex (SE)
"I look forward to attending the Cellulose Fibres Conferences to reconnect with experts in the field and present ShareTex's pilot project, in which we are building our first recycling plant."

Simone Seisl
Simone Seisl – CR Consultant (DE)
"It is great to see the year-on-year progress of the CFC and I look forward to hearing how sectors can learn from each other and accelerate innovative solutions through the event."

Lasse Holopainen
SPINNOVA (FI)
"The Cellulose Fibres Conference provides a unique view into true innovation in the textile industry. I'm looking forward to connecting with like-minded people and to understand the future trends of the industry."

Dhivya Dharshini Uma Shankar
Technical University of Denmark (DK)
"Sustainable Fibres, Endless Possibilities!"

Olivia Skilbeck
University of Leeds (UK)
"I believe that the sharing of knowledge and collaboration done at this conference will allow for the cellulosic fibre industry to lead the way in sustainable materials."

Shirin Asaadi
Valmet (SE)
"The Cellulose Fibres Conference acts as a catalyst for industry collaboration, fostering connections among textile sector innovators and providing a source of forward-thinking ideas and market insight."

Cindy Oettel
Volkswagen (DE)
"Cellulose fibres can have the potential as a bio-based material to substitute artificial leather."

Save the Date

CO_2-based Fuels and Chemicals Conference

29–30 April
2025

co2-chemistry.eu

RENEWABLE MATERIALS CONFERENCE

22–24 Sep
2025

renewable-materials.eu

ADVANCED RECYCLING Conference

19–20 Nov
2025

advanced-recycling.eu

CELLULOSE FIBRES CONFERENCE

4–5 March
2026

cellulose-fibres.eu

www.fiberjournal.com

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RENEWABLE CARBON INITIATIVE

Bio-based CO_2-based Recycling

Circular Economy

Shape the Future of the Chemical and Material Industry

WHY JOIN RCI?

RCI is an organisation for all companies working in and on renewable chemicals and materials – plastics, composites, fibres and other products can be produced either from biomass, CCU or recycling. RCI members profit from a unique network of pioneers in the sustainable chemical industry, creating a common voice for the renewable carbon economy.

To officially represent the RCI in Brussels, the RCI is registered in the EU's transparency register under the number 683033243622-34.

LinkedIn:
www.linkedin.com/showcase/renewable-carbon-initiative
#RenewableCarbon

Executive Managers:
Christopher vom Berg & Michael Carus
Contact: Verena Roberts
verena.roberts@nova-institut.de

JOIN NOW

Become a part of the Renewable Carbon Initiative (RCI) and shape the future of the chemical and material industry
www.renewable-carbon-initiative.com

Find all current RCI members at:
www. renewable-carbon-initiative.com/members

MEMBERS OF THE INITIATIVE

LARGE SUPPLIERS

ADM, Alfa Laval, Arkema, BASF*, Bakelite Synthetics, Beckers, Borealis, Braskem, Cerdia, Clariant, Cosun Beet Company*, Covestro*, cropenergies, Fortum, Givaudan*, Peter Greven, H&R, IFF*, Kemira, Kuraray, Lenzing*, Lubrizol, Mane, Mercer, Neste*, PCC, PrimientCovation, SCGC, Stahl*, Stepan, Sulzer, Syensqo, Symrise, TÜV Austria, Uniper, UPM Biofore Beyond Fossils*, Verbio, Wacker

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BRANDS

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START-UPS

Aduro Clean Technologies, amynova polymers, BioBTX, Chaincraft, clariter, Colipi, dob, Dioxycle, econic, evoco, Greenlyte Carbon Technologies, Modern Meadow, Oxylus Energy, TripleW

RESEARCH INSTITUTES

Danish Technological Institute, IKT Kunststoff Technik Stuttgart, ITA RWTH Aachen University, Leibniz-Institut für Verbundwerkstoffe, NORCE

* Board Member

PARTNERS

C.A.R.M.E.N., Chemie Cluster Bayern, Circular Rubber Platform, CO_2 Value Europe, ECBF, ecp-news, EIHA, ePURE, Global CO_2 Initiative, GO!PHA, IBB, Renewable Carbon Plastics Magazine, Textile Exchange, WWF

ADMINISTRATIVE OFFICE

nova-Institute

- Initiator and scientific backbone
- Organisation, management and coordination of RCI

MEMBERS

Board

- Strategic direction
- Budget allocation
- Highly active
- Max. 20 members

General assembly

- 2–3 main representatives per member
- Identify / define priorities of RCI
- Decide on future projects

PARTNERS

- Support and promote each other
- Advise on specific topics

ACTIVITIES

- Advocacy
- Scientific background reports
- Position papers
- Networking

WORKING GROUPS - Involvement of all interested members

WG Labelling

- Development of a renewable carbon share (RCS) certificate and label

WG Policy

- Position papers
- Factsheets
- Stakeholder dialogues
- Public consultations of regulations

WG Recycling

- Chemical and mechanical recycling
- Position papers
- Strategic reports

WG Sustainability

- Deep understanding and harmonisation of sustainability assessment and reporting
- Position papers
- Strategic reports

MEMBERSHIP BENEFITS

Advocating for renewable carbon

RCI is at the forefront of advocating for the transition from fossil to renewable carbon. As a member, you'll actively contribute to shaping future policy and driving the transition, ensuring your voice is heard in the movement towards defossilisation.

Contribute to leading scientific reports and positions

RCI's publications are instrumental in advocating for renewable carbon. As a member, you contribute your knowledge and insights, shaping the discourse and decisions that are transforming our economy.

Connect with a vibrant network

Joining RCI means connecting with a diverse network spanning the entire value chain, fostering collaboration and innovation. Supported by our partners, you'll be at the heart of a growing community that drives positive change in the renewable carbon landscape.

Shape the future of the RCI

Your membership gives you the opportunity to shape the direction of RCI, by proposing new ideas, participating in ongoing projects or joining the board. Your membership funds RCI's activities, actively enabling collaboration towards a sustainable future.

Join specialised working groups

Engage in specialised working groups focused on critical aspects such as policy, labelling, recycling, and sustainability. Together, as a trusted pool of expertise, you'll tackle challenges and drive solutions forward.

Increase your visibility

As an RCI member, you'll be recognised as a leader in the transition to renewable carbon. Benefit from increased visibility through our communications activities and share your own successes to build credibility on your path to sustainability.

Enjoy exclusive discounts

Benefit from exclusive discounts on conferences and commercial market reports by nova-Institute, along with additional benefits through our partners. Your membership brings added value beyond just networking and collaboration.

Get cloud access to internal RCI documents

Gain access to the internal RCI cloud, containing draft documents, policy consultations, presentations, and factsheets. It's everything you need to stay ahead of the curve.

THE AIM

The aim of the Renewable Carbon Initiative (RCI) is to support and speed up the transition from fossil carbon to renewable carbon for all organic chemicals and materials.

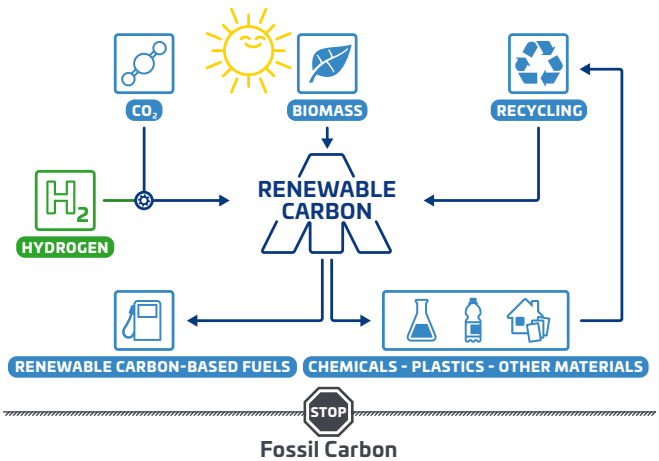
RCI addresses the core problem of climate change, which is extracting and using additional fossil carbon from the ground that will eventually end up in the atmosphere. Companies are encouraged to focus on phasing out fossil resources and to use renewable carbon instead.

The initiative wants to drive this message, initiating further actions by bringing stakeholders together, providing information and shaping policy to strive for a climate-neutral circular economy.

THE VISION

Fossil carbon shall be completely substituted by renewable carbon, which is carbon from alternative sources: biomass, CO_2 and recycling.

RENEWABLE CARBON



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for Sustainability and Innovation

Technology & Markets
Achim Raschka (achim.raschka@nova-institut.de)

- Market Research
- Market & Trend Reports
- Innovation & Technology Scouting
- Trend & Competitive Analysis
- Supply & Demand Analysis
- Feasibility & Potential Studies
- Customised Expert Workshops
- Business Plan Services

Communications
Stefanie Fulda (stefanie.fulda@nova-institut.de)

- Comprehensive Communication & Dissemination in Research Projects
- Communication & Marketing Support
- Network of 60,000 Contacts to Companies, Associations & Institutes
- Targeted Newsletters for 19 Specialty Areas of the Industry
- Conferences, Workshops & nova Sessions
- In-depth B2C & Social Acceptance Research

Sustainability
Matthias Stratmann (matthias.stratmann@nova-institut.de)

- Life Cycle Assessments (ISO 14040/44, PEF Conform)
- Carbon Footprint Studies & Customised Tools
- Initial Sustainability Screenings & Strategy Consultation
- Holistic Sustainability Assessment (incl. Social & Economic Impacts)
- GHG Accounting Following Recognised Accounting Standards
- Critical Reviews for LCA or Carbon Footprint Reports
- Sustainability Reporting & Claims (CSRD, Green Claims)

Economy & Policy
Lara Dammer (lara.dammer@nova-institut.de)

- Strategic Consulting for Industry, Policy & NGOs
- Political Framework, Measures & Instruments
- Standards, Certification & Labelling
- Micro- & Macroeconomics
- Techno-Economic Evaluation (TEE) for Low & High TRL
- Target Price Analysis for Feedstock & Products

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nova-Institute is a private and independent research institute, founded in 1994. nova offers research and consultancy with a focus on the transition of the chemical and material industry to renewable carbon.

What are future challenges, environmental benefits and successful strategies to substitute fossil carbon with biomass, direct CO_2 utilisation and recycling? What are the most promising concepts and applications? We offer our unique understanding to support the transition of your business into a climate neutral future.

Our subjects include feedstock, technologies and markets, economy and policy, sustainability, communication and strategy development. Multidisciplinary and international team of 45 scientists.

nova-Institut GmbH
Leyboldstraße 16
50354 Hürth, Germany
T +49 2233 – 460 14 00
contact@nova-institut.de
www.nova-institute.eu
www.renewable-carbon.eu
F +49 2233 – 460 14 01

CEOs: Michael Carus, Lars Börger | COO: Linda Engel

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