PROGRAMME

ONLINE FORUM

COMPOSITES AND

SUSTAINABILITY

29 JUNE–1 JULY 2021

BY COMPOSITES UNITED

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COMPOSITES UNITED | SWITZERLAND

ABOUT

WELCOME!

During the three-day online forum **'Composites and Sustainability',** we will host a total of 5 keynotes and 25 presentations by speakers from a total of 10 European countries, as well as a top-class panel discussion.

In addition, you will have the opportunity to talk to the speakers personally in a small group after each presentation and to network with other participants in the B2B matchmaking.

All keynotes and presentations will take place on the 'Main Stage'. The keynotes will last 35 minutes. The presentations will last 15 minutes each. Please refer to the programme for a complete overview.

To ensure that all questions can be asked and answered, the speakers will be available to answer questions in a separate virtual meeting room after their respective presentations. Here, questions can be answered without time pressure and lively discussions can be held.

Parallel to the lectures and the 'meet-the-speaker' sessions, all participants can arrange to meet each other for confidential 20-minute sessions throughout the entire duration of the event as part of the B2B matchmaking.

The programme will be rounded off on Thursday afternoon with a moderated panel discussion with international representatives from industry, research, associations and authorities entitled **'Reaching the next level on the way to a holistic approach for composites recycling'.** Following this discussion, the panellists will be available to all participants in an open question and answer session.

We look forward to a lively, international attended event and to welcoming you online. Please feel free to contact us at any time for further information.

Theo-Josef Sandu
T +41 (0)52 520 7407 or
theo.sandu@composites-united.com
www.composites-united.ch

Stève Mérillat
T +41 (0)52 520 7404 or
steve.merillat@composites-united.com
www.composites-united.ch

In cooperation with the Composites United-Strategic Circle 'Sustainability' as well as the working groups 'rCF Applications' and 'Yarns & Textiles'

OVERVIEW

B2B MATCHMAKING, MAIN STAGE & BREAKOUT SESSIONS

YOU HAVE THE CHOICE!

B2B MATCHMAKING

CONFIDENTIAL 20-MINUTE SESSIONS
– POSSIBLE AT ANY TIME DURING THE EVENT –

How to book your private FACE-TO-FACE TALK

MAIN STAGE

> Keynotes: 35 minutes each
> Presentations: 15 minutes each

MEET THE SPEAKER 'KEYNOTE'
Directly after the keynote
– OPEN END –

MEET THE SPEAKER 'PRES. 1'
Directly after the presentation
– OPEN END –

MEET THE SPEAKER 'PRES. 2'
Directly after the presentation
– OPEN END –

MEET THE SPEAKER 'PRES. 3'
Directly after the presentation
– OPEN END –

MEET THE SPEAKER 'PRES. 4'
Directly after the presentation
– OPEN END –

MEET THE SPEAKER 'PRES. 5'
Directly after the presentation
– OPEN END –

PROGRAMME

29 JUNE 2021 // DAY 1, MORNING 'SUSTAINABILITY & RECYCLING'

FROM–TO (CET Time)	COUNTRY	SPEAKER	TITLE/ABSTRACT
9:00 - 9:10			**– OPENING, CU SWITZERLAND –**
9:10 - 9:45	Switzerland	Albin Kälin EPEA Switzerland GmbH	**KEYNOTE:** **Cradle to Cradle Design Innovations – Rethinking the way we make things** Cradle to Cradle® Design Innovations define and develop cyclable products. In regard to differentiation to conventional recycling the quality level of the raw materials remains throughout multiple product lifecycles and only purely 'assessed safe chemicals' are used. The products are developed according the model to maintain the quality of raw materials over multiple life cycles taking the production processes, the use and the reutilization into account. This means: No waste, all ingredients are considered as nutrients. The right materials are integrated in defined cycles (metabolism) at the right time and place. Cradle to Cradle Certified™ Product Standard.
9:45 - 10:00	Spain	Andrés Luengo Baranguán AIMPLAS - Chemical Recycling Group	**Circular economy in composites: from the wind and aeronautical sectors to the ceramic industry and transport** The main objective of the EROS project is the implementation of a real circular economy system, which starts from the recycling of wind blades and waste from the aeronautical sector to close the cycle in its application in other sectors such as the ceramic industry, including supports, frits, enamels and inks, and in the transport sector itself. In detail, a mechanical recycling will be first conducted, followed by a combination of solvolysis and pyrolysis in order to obtain carbon fibers, glass fibers, and glycols. The consortium is formed by RECICLALIA, KERABEN, FRITTA, SOFITEC and AIMPLAS and ITC-AICE as technological centers.
10:00 - 10:15	Switzerland	Amaël Cohades CompPair Technologies Ltd.	**Novel pre-impregnated textiles enabling healable and sustainable composites** Composite structures face challenges regarding damage sensitivity, maintenance costs and sustainability. Inspired by nature, CompPair Technologies Ltd. provides innovative pre-impregnated textiles to build composite parts with intrinsic healing functionalities and efficient end-of-life management, enabling cost and time reduction of maintenance activities, extending product lifetime and improving global sustainability. This presentation will cover the benefits of using CompPair products to build structural composites with the capacity to repair themselves in 1 minute, while keeping benchmark mechanical properties. Extending the life-time of composites, along with efficient end-of-life management brings, with CompPair, the first steps towards a circular economy for composites.
10:15 - 10:30	Netherlands	Patrick Teuffel Eindhoven University of Technology	**Smart Circular Bridges using bio-based composite materials** The construction industry needs to make a shift in material use. However, reliable alternative solutions for improving material efficiency and natural resource use are lacking. The EU's action plan Bio-Economy Strategy stresses the need for a shift towards natural materials. Despite an increasing market demand, construction industry remains hesitant to implement new natural material applications, because their unknown material properties. Smart Circular Bridge will design and build two bridges in the Netherlands and one in Germany. Smart Circular Bridge will actively promote the development of composite materials in the construction industry.
10:30 - 10:45	Germany	Felix Krug Tenowo GmbH	**Sustainable nonwoven composite solutions** Carbon fiber recycling has been a challenging topic for years. The Tenowo GmbH located in Hof, Germany, processes recycled carbon fibers (rCF) into nonwovens. The idea is to return waste materials and cuttings back into production. The rCF used as raw materials for the production of nonwovens come from woven and non-crimp fabric production or from 'end of life' parts.
10:45 - 11:00	Austria	Andrea Todorovic Montanuniversität Leoben	**HIGH-PERFORMANCE COMPOSITE with a bio-based carbon content of 100%** The interest in high-performance composites based on renewable resources is growing vigorously. By combining natural fibers and bio-based matrix materials, so-called green composites are obtained. Recently, the authors presented a fully bio-based epoxy resin produced from epoxidized linseed oil (ELSO) and pure crystalline citric acid (CA). The main objective of the present study is now to produce a fully bio-based composite based on the novel ELSO/CA resin matrix and flax fibers, which exhibits a high stiffness and strength. By RTM a novel, highperformance composite with a bio-based carbon fraction of 100 % was produced, which is uncritical in terms of environmental and safety issues.
11:00 - 13:00			**– PAUSE –**

PROGRAMME

29 JUNE 2021 // DAY 1, AFTERNOON 'SUSTAINABILITY & RECYCLING'

FROM–TO (CET Time)	COUNTRY	SPEAKER	TITLE/ABSTRACT
13:00 - 13:10			**– WELCOME –**
13:10 - 13:45	UK	Kyle Pender National Composites Centre UK	**KEYNOTE:** **Effective use of Recycled Carbon Fibre Composites** After widespread adoption in recent years, the aerospace industry has become the dominant user of carbon fibre composites (CFRP). Despite the high value of virgin counterparts, and the environmental impact associated with their production; waste CFRP is widely viewed as a liability under the current paradigm, in part due to a lack in confidence in recyclate reuse applications. This work looks to assist in transforming this waste into a value stream through demonstration of economically viable and environmentally sustainable recycling, reprocessing, and reuse of real-world aerospace CFRP waste. It is anticipated that a demonstration of route-to-market for CFRP recyclates will give confidence in these materials and encourage their uptake in second life composite applications.
13:45 - 14:00	Italy	Franco Mioni Gees Recycling	**Start and develop a circular economy project in the sector of THERMOSETTING MATRIX COMPOSITES** The Gees Recycling experience of an Italian technological and industrial project aimed at the recovery and recycling of fiber-reinforced composites and expanded thermosets. The birth of the idea, the industrial patent, the prototype line, the transformation into industry, the marketing and positioning of the products, the strategic alliances of the supply chain. The presentation will illustrate the logic that allowed a sustainable growth of our project, and the importance of marketing strategies well ahead of the provisions of environmental regulations. At the root of the project is the idea of transforming waste into a new competitive panel on a large scale and with numerous fields of application.
14:00 - 14:15	Germany	Kai Schlögel, Florian Loose RWTH Aachen University/BAM	**Enhancing the Sustainability of Carbon Fiber Reinforced Polymers (CFRP): Strategies for Effective Recycling as Precious Feedstock in Pyrometallurgy** Despite its contribution to tackling climate change by lightweight design, growing CFRP production results in high energy consumption and a global waste generation of 62 kt/a. Therefore, enhancing sustainability of carbon fibers (CF) necessitates effective recycling solutions. Herein we will give an overview of current recycling processes, discuss their limitations and present a novel approach for safe treatment of CF unsuitable for material recovery. Our project CF Pyro examines feedstock recycling in pyrometallurgical processes, focusing on CF reactivity, process stability and prevention of hazardous WHO fiber release. Besides fundamental experimental breakthroughs, their broader impact on circular economy will be presented.
14:15 - 14:30	Netherlands	Rien van den Aker Van Wees UD and Crossply Technology b.v.	**Recycling – downcycling – upcycling, from a machine builder point of view** The latest development regarding the use of residue from UD tapes and patches production will be presented. Basically with thermoplastic composites for optimum sustainability. A machine will be shown which is capable of making chips/flakes in defined dimensions. This results in the best possible use of this residual material in compression and injection molding.
14:30 - 14:45	Germany	Tim Rademacker Mitsubishi Chemical Advanced Materials	**Carbon Fiber Recycling – Well thought out** The carbon fiber market is rapidly growing worldwide. Carbon fibers (CF) are a popular choice for lightweight and high-performance applications in a wide range of industries due to their thermal and electrical conductivity, lower density combined with high strength and stiffness. At the same time, the amount of CFRP production waste generated is increasing. MCAM's waste management facility in Wischhafen focuses not only on the disposal of CFRP waste, but also on the material recovery of high-quality CF. Under the product name carboNXT®, high-quality rCF products are re-introduced to the market. Not only the costly and energy-intensive manufacturing process of virgin fibers, but also the lack of solutions for the disposal of CFRP materials make recycling of CF inevitable from an economic and ecological point of view. When CFRP components reach the end of their life cycle, they are recycled at the plant in Wischhafen. The pyrolysis plant with a capacity of around 1,000 t/a has been up and running since 2011 and received the German Raw Material Efficiency Award in the same year. Although the recycling and recovery of high-quality CF under industrial conditions has been sustainably solved for all CFRP waste, potential users and OEMs still have reservations about reusing this high-quality secondary raw material. MCAM focuses on the development of applications for rCF which, accompanied by political framework conditions, could balance economic interests and sustainable solutions.
14:45 - 15:00	Ireland	Tomas Flanagan ÉireComposites Teoranta	**Three technologies for sustainable composites** ÉireComposites is an innovative design, manufacturing and testing company, involved in lightweight, high-performance fibre-reinforced composite materials, with an international customer base in aerospace, wind energy, marine, and general automotive sectors. ÉireComposites is involved in three H2020 project relating to sustainable composite materials. The LIBRE project concerns the development of bio-based carbon fibres from lignin, AIRPOXY focuses on the development of thermoset resins with reversible bonds that enable recycling, and CRIMSON will develop a marine energy device using recycled carbon fibre. The presentation provides an overview of these projects and considers the implication for sustainable composites' manufacturing

PROGRAMME

30 JUNE 2021 // DAY 2, MORNING 'MOBILITY'

FROM–TO (CET Time)	COUNTRY	SPEAKER	TITLE/ABSTRACT
9:00 - 9:10			**– WELCOME –**
9:10 - 9:45	Germany	Marc Fette Composite Technology Center/ CTC GmbH (An AIRBUS Company)	**KEYNOTE:** **Holistic approaches to lightweight technologies as a decisive key for the green mobility of the future** Mobility will continue to be characterized by the movement of masses and by using energy. It is precisely at these points that lightweight design, materials and technologies can be the key enablers to greater efficiency, performance and, above all, ecological sustainability. Nevertheless, the types of mobility and systems differ considerably in terms of requirements, degree of use and service life. Therefore, a holistic view of the value chain and the product life cycle is necessary in order to use lightweight technologies as a decisive key to a 'green' and an ecologically sustainable mobility in the future.
9:45 - 10:00	Switzerland	Johannes Haberl Autoneum Management AG	**Developments in traction battery housing** Electrification of the automotive industry has triggered a massive reengineering of vehicle architectures. New components, as well as the redesign of existing components, trigger the introduction of innovative solutions including new application potential for composites. The presentation will highlight a novel thermoplastic battery pack lid and review the potential to produce other products related to the battery from lightweight sandwich constructions.
10:00 - 10:15	Germany	Jan Janzen Leibniz-Institut für Verbundwerkstoffe GmbH	**MarineCare – Sustainable boats and water sports equipment** To improve sustainability in the maritime sector, Leibniz-Institut für Verbundwerkstoffe is cooperating with the companies GREENBOATS GmbH and Swiss CMT AG in the research project 'MarineCare'. The aim is to develop a sustainable composite sandwich material as well as a corresponding minimal-waste manufacturing process for applications in boats or water sports equipment. The sandwich structure combines a foam core fabricated of recycled PET, obtained from disposable bottles, with face sheets made of recycled carbon fibers (rCF) impregnated with bio-based thermosetting epoxy resin (powder).
10:15 - 10:30	Germany	Gerret Kalkoffen Carbon Truck & Trailer GmbH (CarbonTT)	**Carbon Profiles – Efficiency in Production and Application** CarbonTT has developed both unique designs and proprietary process knowhow for light and durable components that improve torsional stiffness and crash properties while saving weight and reducing energy consumption. Future vehicle architectures are shifting to composites and CarbonTT is at the forefront of this sustainable development.
10:30 - 10:45	Germany	Jacopo Oddone Voith Composites	**Waste reduction through automated prepreg manufacturing** Voith has recently upgraded its direct fiber placement technology, proven in large-scale automotive production, to become the Voith Roving Applicator (VRA) NextGen. It manufactures tailored prepreg stacks that are very easy to handle and process. They are manufactured in a completely automated process and feature an optimized structural design, high drapability and an outstanding surface quality. Thanks to their JIT production and near-net shape design, they reduce waste significantly. They are well suited for both structural and visual components, offering a broad range of applications within the automotive industry. Besides carbon fibers, other materials such as glass or flax fibers can be equally processed.
10:45 - 11:00	Switzerland	Stephanie Wegmann Consortium FHNW (IKT), ETH (CMASLab) and EPFL (LPAC)	**The potential reduction of environmental footprint of automotive structures through novel thermoplastic composite manufacturing routes** Three newly developed thermoplastic impregnation processes were analyzed: compression resin transfer molding and melt-thermoplastic resin transfer molding, with both low viscosity thermoplastics, and stamp-forming of hybrid bicomponent fibers where each fiber is individually coated. These processes were compared to conventional thermoset compression resin transfer molding and to stamp forming metal processes with a cradle-to-grave life cycle analysis for the case study of a bonnet. The results show the potential of the thermoplastic impregnation processes for the production of automobile parts and highlight the role of process and materials parameters, including material waste.
11:00 - 13:00			**– PAUSE –**

PROGRAMME

30 JUNE 2021 // DAY 2, AFTERNOON 'MOBILITY'

FROM–TO (CET Time)	COUNTRY	SPEAKER	TITLE/ABSTRACT
13:00 - 13:10			**– WELCOME –**
13:10 - 13:45	Germany	Stefan Caba EDAG Engineering GmbH	**KEYNOTE:** **Reuse as the key to sustainability – CFRP makes it possible** Sustainability of Products can be provided by the 3Rs – Reduce, Recycle, Reuse. While lightweight design to reduce consumption of resources and recycling is established for numerous components, reuse is established only for very few parts. CFRP shows high durability and thus can be used to create stable and reusable structures. This concept was proven in different projects, where platforms and energy storage systems were developed. The key to reusability are specificaly developed structures including suitable joining technologies. The concepts, the obstacles and the ways to achieve reusability will be showcased. Consequently new, circular process chains and business opportunities could evolve.
13:45 - 14:00	Germany	Susanne Kroll Fraunhofer IWU	**Mobile and collaborating systems for the repair and modification of CFRP aircraft structures** CFRP components at Aircraft, which need a refurbishment or which are damaged, must be efficiently repaired or modernized. During this processes a minimum ground time has to be adhered. While the repair processes are mainly specified in the Structural Repair Manual, the modifications are usually individual projects. Together with the project partner Elbe Flugzeugwerke, an intelligent process chain was therefore developed that uses mobile and collaborative systems to repair and modify aircraft like the A350. The focus is on non-destructive testing, milling, modification assembly of a camera in conjunction with a digital workshop.
14:00 - 14:15	Germany	Stefan Seidel, Dirk Bonefeld Bond Laminates – A company of the LANXESS-Group	**Sustainability in Thermoplastic Composites** Tepex® as a thermoplastic composite is a sustainable material. Not only because of its usability within resource-saving lightweight construction, but also because the thermoplastic matrix enables material recycling. Tepex® off-cuts can be shredded and used as short fiber reinforcement in injection molding. Furthermore, fibers and polymers that have already been recycled can also be turned into Tepex® semi-finished products. And last but not least raw materials from renewable sources such as flax and PLA are feasible solutions for sustainable composites.
14:15 - 14:30	Switzerland	Régis Voillat M.Sc. Bcomp	**Natural fibre composites as circular materials in high lightweight applications** Natural fibre composites (NFRP) offer high mechanical properties at low weight thanks to the inherent properties of lignocellulosic fibres. Additional assets include high vibration damping and radio-transparency. Bcomp provides NFRP reinforcement solutions such as ampliTex™ and powerRibs™, for both thermosets and thermoplastics, that are tailored to meet the wide range of needs of the composite industry in sports and leisure, motorsports, automotive and large scale mobility, marine, aerospace and infrastructure. With Waste-to-Energy by incineration, NFRP gives value up to EoL as a partially or even fully bio-based energy source, closing the CO2 cycle and reducing our dependency on fossil resources through well-stablished waste management infrastructure.
14:30 - 14:45	Germany	Claudia Möhl DITF Denkendorf, Sascha Kilian Fraunhofer ICT	**Use of recycled carbon fibers in composite skeletons for local reinforcement of injection molded parts (3D Skeleton Winding technology – 3DSW)** As part of the reCaHit-2 project, DITF Denkendorf and Fraunhofer ICT jointly investigate on approaches for the use of recycled carbon fibers in the local reinforcement of injection molded parts. While DITF is exploring special spinning processes to produce continuous hybrid yarns with high tensile strength on the basis of recycled carbon staple fibers, ICT is developing an adapted 3DSW process for the processing of said hybrid yarns into wound reinforcement skeletons. In addition to the pursued technological approaches and corresponding test results, the presentation also highlights general aspects of carbon fiber recycling.
14:45 - 15:00	Germany	Frank Manis Fraunhofer IGCV	**Customized database for recycled carbon fibres from filament to semi-finished-product** One of the greatest challenges for the recycling of carbon fibres in terms of a successful closed-loop system for composite materials is the provision of a consistent database relating to their demanding material and processing properties. In collaboration with the software developers from Ansys, Fraunhofer IGCV is currently building a customised rCF database with this particular approach based on the widely used Granta Material Intelligence Platform. This includes a direct benchmark capability to other material databases (e.g. CAMPUS, Material Universe) along extensive evaluation tools. In addition, an interface for standard simulation and design software is currently being created to support the consideration of rCF materials in the material selection process within an industrial framework. Currently, the focus of the database is on recycled carbon fibre materials, but its modular design can be expanded to include other technical fibre materials (e.g. glass fibres, natural fibres, basalt fibres) due to future requirements.

PROGRAMME

1 JULY 2021 // DAY 3, FIRST HALF 'LIFE CYCLE ASSESMENT'

FROM–TO (CET Time)	COUNTRY	SPEAKER	TITLE/ABSTRACT
9:00 - 9:10			**– WELCOME –**
9:10 - 9:45	Germany	Andrea Hohmann, Jonas Frank Fraunhofer IGCV	**KEYNOTE:** **Environmental friendly fiber reinforced plastics (FRP) for high performance applications – assessment of the global warming potential (GWP) and related levers** At the beginning of the presentation, a general overview of the global warming potential of an FRP structure along the individual life cycle phases is given. On this basis, first possible optimization measures and corresponding challenges are discussed, which will be deepened by the presentations in the session. In the second section of the presentation, there is a more in-depth look at alternative approaches to material production. Previous studies, show that carbon fiber production including the intermediate products like acrylonitrile (ACN) as well as the matrix systems have a significant share on the environmental impacts of a CFRP structure. If renewable energy sources are applied during stabilization and carbonization, ACN production will in future be one of the largest levers to further reduce the GWP. The presentation focuses therefore on the evaluation of alternative routes for ACN production, using biomass or directly CO2-emissions as raw material. Besides that different process routes for resin production based on the same basic chemicals as the environmental friendly ACN are discussed.
9:45 - 10:00	Sweden	Cecilia Mattsson, Alann André RISE Research Institutes of Sweden	**Creating circular streams from GFRP composite waste: Re-use and chemical recycling** Glass fiber composite (GFRP) waste is a growing global environmental problem since waste from wind, boat, automotive and construction industries go to landfill or incineration. At RISE we have investigated new circular approach for reuse and recycling of End of Life waste in the wind sector i.e. wind turbine blades. Recent results from chemical recycling with solvolysis/HTL of GFRP to recycled glass fibers and chemical building blocks as well as reuse of partial or whole blades within infrastructure or construction will be presented.
10:00 - 10:15	Sweden	Frida Hermansson Chalmers University of Technology	**Assessing efforts to reduce the environmental impacts of carbon fibre composites in vehicles** This presentation will be about the life cycle assessment of different technology development routes for decreasing the environmental impacts of carbon fibre composites in vehicles. Three main routes were assessed: The use of bio-based raw materials for the fibre production, the use of microwave technology in fibre production, and the recycling of the composites and recovery of the fibres after use. The goal was to assess which of these routes that are more promising for making the environmental impacts of carbon fibre composites in vehicles environmentally competitive to glass fibre composites, what aspects that influence this comparison, and what remaining hot spots might be.
10:15 - 10:30	Switzerland	Michael Bösch University of Applied Sciences and Arts Northwestern Switzerland Institute of Bioenergy and Resource Efficiency Center for Cleantech and Sustainable Energy Systems School of Engineering	**Closing the material cycle – Life cycle assessment of glass fiber reinforced plastic recycling** Since no recycling process for glass fiber-reinforced plastic (GRP) has yet been successfully established on the market, the waste material ends up in landfills or is used as substitute fuel for the cement industry. In collaboration with the FHNW, a Swiss start-up is developing a new process to close the material loop. A life cycle assessment was conducted for the recycling process, the resulting materials and the potential applications. The results show that recycling GRP can significantly reduce the ecological footprint of both waste treatment and GRP use.
10:30 - 10:45	Netherlands	Chizoba Josphine Ogugua TU Delft/Faculty of Aerospace Engineering	**Comparative Life Cycle Assessment of Thermoplastic and Thermoset CFRP used in Aerospace Applications** CFRP have been used in aerospace industry due to its excellent specific strength and stiffness. However, challenges associated with manufacturing and recycling thermoset CFRP have raised interest in thermoplastic CFRP which are recyclable and could provide similar mechanical properties as thermoset, potentially offering more efficient manufacturing and better end of life scenarios. This work quantifies and compares the environmental impact of replacing a thermoset CFRP (CF/Epoxy) aircraft skin panel fabricated using hand layup and autoclave curing with a thermoplastic CFRP panel (CF/PPS) fabricated using hand layup and press forming. This is achieved by carrying out a cradle to gate life cycle assessment based on ISO 14040 and 14044 standards. The result obtained shows the environmental benefits and limitations of both the thermoplastic and thermoset panels from a life cycle perspective (raw material extraction, manufacturing and EOL).
10:45 - 11:00	France	Robin Sales VESO Concept	**Using life cycle assessment as reference to plan the production of green bio composites** Since 2008, the engineering company VESO has been developing bio-based and recycled composite materials. Our wish is to propose products with low environmental impact. To do this, we carry out life cycle assessment upstream from development. This methodology allows us to identify in advance the actions to be taken in order to reduce the impact of the product. Anticipatory life cycle analysis allows production to be adapted in advance. The life cycle analysis supports our ecodesign approach integrating the use and end-of-life phases, which drive the development of sustainable and recyclable composite materials.
11:00 - 13:00			**– PAUSE –**

PROGRAMME // PANEL DISCUSSION

1 JULY 2021 // DAY 3, AFTERNOON 'REACHING THE NEXT LEVEL ON THE WAY TO A HOLISTIC APPROACH FOR COMPOSITES RECYCLING'

PANELISTS

Dr. PETRA WEISSHAUPT, M.A.

Section III 1.6 Plastics and Packaging, German Environment Agency (Umweltbundesamt)

Mrs. Weißhaupt works in the function of a scientific officer and her major task is to develop a strategy for dismantling and recycling of wind turbines, including turbine blades. A general scope of her particular section at the German Environment Agency lies in plastic recycling, including new recycling strategies for fiber reinforced plastics.

BEN DROGT, MSc

Managing Director of European Composites Industry Association EuCIA

Ben Drogt has a background in Aerospace Engineering at the Delft University of Technology, Netherlands. He graduated on the topic of thermoplastic composites in 1986. He started his career at DSM, Netherlands, and held different R&D and Business leadership positions. In 2010 he started BiinC, a consultantany in the field of composites, innovation and sustainability. As from March 2021, he fulfills the position of managing director of the European Composites Industry Association.

TASSILO WITTE, DIPL. WIRT.-ING.

Cluster Leader Cabin Technologies, Composites Technology Center / CTC GmbH (An Airbus Company)

Tassilo Witte has been working for Airbus on the development of recycling technologies for carbon composite materials since 2012. With the first recycled cabin sidewall presented in 2015 and the first prepreg-reuse process implemented into serial production in 2017, the challenges of sustainability in such a challenging industry are well known. Currently, TW is in the final weeks of his doctoral thesis on direct reuse processes for uncured prepregs – thereby bringing practical as well as academic discussions to the table.

MAGDALENA SVANSTRÖM, PhD

Full Professor at Chalmers University of Technology, Dept. Of Technology Management and Economics, Division of Environmental System Analysis

Magdalena Svanström is a Professor of Sustainability Studies in the Environmental Systems Analysis division. Her research focuses on the development and application of methodology for environmental and sustainability assessment for products and processes, mostly life cycle assessment, and often with the purpose of providing guidance in early stages of development. Major fields of application include wastewater and sludge management, wood-based products and batteries.

RON DENOO

Chief Strategy Officer/Chief Technology Officer at Mitsubishi Chemical Advanced Materials

Mr. Denoo has spent the past 28 years in various roles in the engineering plastics and composites business ranging from Research Manager to CEO. He is currently focused on developing the future strategy for Mitsubishi Chemical's Advanced Materials business (MCAM) which has recently acquired both an integrated carbon fiber recycling company (CFK Valley Stade Recycling GmbH and Co. KG™ and carboNXT® GmbH) and an engineering plastics recycling company (Minger Kunststofftechnik AG). MCAM is developing circular economy solutions that are aligned with Mitsubishi Chemical's 'KAITEKI' philosophy.

JOSEF WAGNER, DIPL. ING. (FH)

Head of Department Lightweight/ Body in White, EDAG Engineering GmbH

Josef Wagner has been working in automotive development for the last 17 years. Starting his career as a design engineer in CFRP development at RÜCKER AG in 2004, he was involved in various CFRP projects in pre and series development for several OEMs in the automotive industry. He is currently in charge of a group of lightweight and technology specialists at EDAG in Munich. The EDAG Lightweight Department successfully finished several R&D Projects like MAI Hiras & Handle, MAI HybCar and FiberEUse, as well as major development projects for series cars for customers like BMW and McLaren Automotive Ltd. during the last years.

13:00 – 14:00 PANEL DISCUSSION >> 14:00 - 15:00 Q & A PANEL DISCUSSION

Dr. BARBARA GÜTTLER

Manager Material Cycles, Leibniz-Institut für Verbundwerkstoffe GmbH

Barbara Güttler has a background in biotechnology from the University of Applied Sciences (TFH) in Berlin (Germany) and a PhD in Chemical Engineering from the University of Waterloo (ON, Canada). During her PhD studies she worked in the Ontario Biocar Initiative, a partnership between the automotive industry and the public sector, and researched biocomposites for automotive applications. In 2014, Dr. Güttler started working at the now called Leibniz-Institut für Verbundwerkstoffe in Kaiserslautern (Germany) in the program area of material science. As manager of the group Material Cycles she is doing research in the fields of recycling and biocomposites with an emphasis on carbon fibers and natural fibers.

Dr. BASTIAN BRENKEN

General Manager Composites United Northern Germany & Contact Sustainability CU

Bastian Brenken did his Bachelors and Master's degree in Aerospace Engineering at Technical University Braunschweig with studies abroad in Sweden and USA. In 2014, he started a PhD at Purdue University in Indiana, USA, on the topic of 3D printing with composites. After his graduation in 2017, he started to work a Technical Director for CFK Valley e. V. Since November 2020, he acts as Managing Director of CU Nord and has also the role as sustainability and recycling expert within Composites United.

HOSTS

SHORT LIST MATCHMAKING

WHAT DO YOU GET?

FACE-TO-FACE TALKS ▸ 20 minutes each

GET STARTED

1. REGISTER (green button 'register now')
2. Add contact and organisation details
3. Select your network/your keywords
4. Add company profile

THE MORE DETAILS YOU ADD, THE MORE YOU WILL BENEFIT!

PLEASE NOTE, YOUR PROFILE IS THE FIRST IMPRESSION AND ACTS AS AN ONLINE BUSINESS CARD!

MAKE A REQUEST

1. EXPLAIN:
   - What are you looking for?
   - What do you offer?
2. SPECIFY:
   - What type of partner are you looking for exactly?
3. Published profiles will be extensively promoted by the organisers of the event

HIGH-QUALITY PROFILES ARE VISITED 50 TO 100 TIMES DURING AND AFTER THE EVENT!

PLEASE NOTE, HIGH-QUALITY PROFILES GENERATE SIGNIFICANTLY MORE MEETING REQUESTS!

BOOK YOUR MEETING

1. You will be alerted by email when the booking is opened
2. Choose your partner
3. Add a reason why you are interested
   - It will increase the acceptance rate
4. Send your request and the accepting person schedules a date and time
5. Please check every incoming request. As a matter of politeness, let the questioner know if you are interested or not.
6. It is possible that a participant is not available for a 1:1 meeting. Please note:
   - You can make yourself available via Agenda/Event agenda
   - Use the messaging functionality to exchange about common interests

COUNTDOWN TO MEETING

1. View date/time of your meetings via the menu 'Meetings' at any time
2. Download the 'b2match' mobile app (iOS/Android) here:

Link-iOS: https://apps.apple.com/de/app/b2match/id1029868635
Link Android: https://play.google.com/store/apps/details?id=com.b2match.app&hl=en

   - Get access to your meeting schedule on your mobile phone
   - Be informed about last-minute changes (bookings, cancellations)
   - Manage additional meetings during the event (send/receive/confirm requests)
   - Please make sure your internet connection and hardware/software set-up (browser, webcam, headset, etc.) work properly

TIME TO MEET

1. Please check your schedule in case of last-minute changes

2. PLEASE SHOW RESPECT AND SHOW UP ON TIME!

3. If you are not able to attend a meeting, please cancel through the platform. This way, you make sure the other participant is notified.

FOR DETAILS, PLEASE CHECK HERE!

PRICING

PRICES

MEMBERS OF COMPOSITES UNITED	€119
MEMBERS OF PARTNER ASSOCIATION	€149
OTHERS	€349

Exempt from VAT.

PLEASE NOTE

Credit card payment is required for registration.

INCLUDES

- Unrestricted participation on all three days
- The corresponding 'meet-the-speaker' sessions
- The matchmaking with all participants
- All presentations afterwards as a PDF download

PLEASE CLICK HERE TO REGISTER ONLINE

MARINE
TOXIC-FREE ENVIRONMENT NATURAL FIBRES
ENVIRONMENTAL FOOTPRINT END-OF-LIFE
RECYCLING AUTOMOTIVE GRP
DOWNCYCLING
SUSTAINABILITY
BIO-BASED CIRCULAR ECONOMY
LIFE CYCLE ASSESSMENT UPCYCLING
COMPOSITES DECARBONISATION
AVIATION CFRP WASTE REDUCTION
AEROSPACE RENEWABLE RESOURCES
PYROLYSIS REUSE WIND ENERGY

PARTNERS

INNOSUISSE – SWISS INNOVATION AGENCY

Innosuisse's role is to promote science-based innovation in the interests of industry and society in Switzerland. It especially promotes the partnership between academia and the market with innovation projects, networking, training and coaching, laying the groundwork for successful Swiss start-ups, products and services. The Innosuisse Guide helps you find the right support offer in just a few steps.

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Innosuisse – Swiss Innovation Agency

WWW.INNOSUISSE.GUIDE

DIGITAL AND INDUSTRIAL TECHNOLOGIES (NKS DIT)

NKS DIT
Nationale Kontaktstelle zum EU-Programm Horizont Europa

The National Contact Point 'Digital and Industrial Technologies' provides information about Horizon Europe, particularly concerning calls in Cluster 4 of Pillar II.

We also support all phases of a grant application – from call identification and consortia formation to proposal checks. Officially designated by the German Ministry of Education and Research (BMBF), our services are complimentary for German companies, universities and research institutions.

We look forward to discussing your project at the matchmaking event.

FURTHER INFORMATION: WWW.NKS-DIT.DE

SAVE THE DATE!

INTERESTED IN MORE SUSTAINABLE LIGHTWEIGHT SOLUTIONS?

FURTHER INFORMATION: WWW.LIGHTCON.INFO

PLEASE CLICK HERE TO REGISTER ONLINE

COMPOSITES AND

SUSTAINABILITY

29 JUNE–1 JULY 2021

BY COMPOSITES UNITED

CONTACT
Theo-Josef Sandu
T +41 (0)52 520 7407 or
theo.sandu@composites-united.com
www.composites-united.ch

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