The Bioeconomy Consultants

NNFCC

BIOBASED PRODUCTS

Each month we review the latest news and select key announcements and commentary from across the biobased chemicals and materials sector.

April 2025



Your Partners for Business Insight and Market Intelligence

Providing clients with a strategic view of feedstock, technology, policy and marketing opportunity across the bioeconomy.



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Foreword

Welcome readers, to this month's Biobased Products News Review.

As we move further into 2025, Europe stands at a pivotal moment in its transition towards a more sustainable and circular economic model. The EU Bioeconomy Strategy, first published in 2012 and updated in 2018, aims to accelerate the deployment of a sustainable European bioeconomy, to contribute towards the Sustainable Development Goals (SDGs), and to help fulfilling the goals of the Paris Agreement. Recognizing the evolving landscape and the urgency of these challenges, the European Commission's recent launch of a public consultation, seeking input to update the EU Bioeconomy Strategy underscores the dynamic nature of this field. This input is intended to inform the new strategy and potentially facilitate alignment with key EU initiatives, such as the Competitiveness Compass and the Clean Industrial Deal, the upcoming Life Science Strategy, the Ocean Pact and the Biotech Act, among others.

However, translating high-level policy ambitions into tangible, everyday practice presents its own set of intricate challenges. The journey towards integrating bio-based solutions is far from straightforward, as exemplified by the complexities surrounding the selection and implementation of biobased plastics. The Netherlands Organisation for Applied Scientific Research (i.e., TNO) has developed a new framework to guide companies in selecting the best route to a sustainable alternative for nine common fossil-based plastics. The 3-step framework considers both the sustainability impact and economic feasibility of different options, providing a structured approach to choosing bio-based plastics.

The transition to biobased solutions is on-going and a prime example from the consumer goods sector is that of Unilever's recent strategic acquisition of 'Wild', a UK-based personal care brand celebrated for its natural ingredients and pioneering approach to refillable packaging systems. More specifically, Wild has already successfully retailed sustainable premium deodorants, lip balms, bodywashes and handwashes and sold these in a direct-to-consumer format as well. Announced in early 2025, this move highlights the growing market appetite for products that minimize environmental impact through both formulation and packaging.

This transition is not limited to consumer-facing brands; fundamental industrial processes are also undergoing transformation. The formation of a joint venture between Kemira, a global chemicals company with strong European roots, and IFF (International Flavors & Fragrances), announced recently, marks a significant step towards producing biobased materials at scale. This venture aims to fruitfully employ Designed Enzymatic Biomaterial™(DEB) technology platform within a new manufacturing facility to transform nearly 48.5ktpa of plant sugars to bioproducts, including high-performance biopolymers, for use in various industries.

Dutch Vioneo aspires to use Honeywell's methanol-to-olefin (MTO) conversion technology to produce plastics using green methanol at a €1.5 billion facility in Antwerp, Belgium. If successful, the manufacturing plant will commence operations in 2028 aiming to replace coal and crude oil with biogenic carbon dioxide, reducing carbon emissions associated with fossil fuel-derived plastic. The plant hopes to utilise renewable energy-based hydrogen and re-use of byproducts by deploying Honeywell's light olefins recovery process (LORP) and olefins cracking process (OCP).

Read on for the latest news



Policy

Commission launches public consultation on upcoming EU Bioeconomy Strategy



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The Commission has launched a public consultation on the upcoming EU Bioeconomy strategy. It marks a significant step forward in harnessing the opportunities of the bioeconomy to support European businesses and drive progress towards the EU's environmental, climate and competitiveness objectives.

The new Bioeconomy Strategy, due for adoption by the end of 2025, aims to advance innovation and maintain the EU's leadership in the bioeconomy. It will propose actions to unlock the potential of bioeconomy innovations, so that they can reach the market, generating green jobs and growth. The strategy will also focus on reinforcing circularity and sustainability, while contributing to the decarbonisation of the EU economy. It will set the framework conditions to enable bioeconomy startups, entrepreneurs and new business models to thrive...

Click here for more information.

Bridging the bio-based policy gap: from bioeconomy vision to action

(Opinion article by Katarina Molin from Braskem)

The work on bioeconomy at EU level started in 2007 with the release of the *En Route to the Knowledge-Based Bio-Economy* at a conference hosted by the German EU presidency. The paper was the first document to assist policymakers in identifying priorities and adopting measures to establish a "bioeconomy" within twenty years.

The EU bioeconomy strategy: where we stand today

Since then, the EU has developed a dedicated strategy on the bioeconomy, most recently reviewed in 2018, with another revision expected by the end of 2025. The strategy aims to pave "the way to a more innovative, resource-efficient and competitive society that reconciles food security with the sustainable use of renewable resources for industrial purposes, while ensuring environmental protection". This aim, dating back to the first bioeconomy strategy thirteen years ago, remains even more valid today. Ensuring food security, managing natural resources sustainably, reducing dependence on nonrenewable fossil resources, and mitigating climate change remain pressing challenges...

Click here for more information.

National Biobased Products Day: Building better with biology

Whether it's bottles, baby wipes, fashion, or fuel, biology can build it better. Biobased products, made from renewable natural materials, provide sustainable



alternatives to products made from fossil fuels. As biotechnology innovation enables advances in biomanufacturing, the number of beneficial biobased products grows.

National Biobased Products Day, marked annually on March 8 since 2023, calls attention to improvements in consumables through the use of biological raw materials. The day was established by the U.S. Department of Agriculture (USDA) BioPreferred Program, which has promoted biobased products since 2002...

Click here for more information.

Honeywell's Technology chosen by Vioneo for its planned European production of fossil-free plastics



Pixabay

Markets

Unilever acquires personal care brand Wild

Launched in the UK in 2020, Wild is a digitally native brand which has built a loyal consumer base through its direct-to-consumer and retail model with desirable, natural and refillable products. The brand's premium deodorants, lip balms, bodywashes and handwashes are powered by plant-based ingredients and packaged in unique plastic-free materials.

Wild's rapid growth, distinctive premium offering across personal care categories, and position as the UK's No. 1 refillable deodorant brand, make it a strategic addition to Unilever's existing portfolio of Personal Care brands...

Click here for more information.

Vioneo and Honeywell (NASDAQ: HON) announced today that Honeywell's technology will be used by Vioneo as part of its plans to produce plastics using green methanol, at a new facility to be built in Antwerp, Belgium. Vioneo will use Honeywell's advanced methanol-to-olefin (MTO) conversion technology to produce plastics without the need for traditional feedstock made from fossil fuels

Honeywell's advanced MTO technology will enable Vioneo to use green methanol, containing only biogenic carbon dioxide, in place of coal and crude oil in its plastic production processes. This can avoid the high carbon emissions associated with fossil fuelderived plastic, while still supporting the production of propylene and ethylene – essential components used in various everyday items such as medical equipment, food packaging, automotive parts, personal care products and toys.



TNO: How to choose between biobased plastics



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TNO, the Netherlands Organisation for Applied Scientific Research, has published a whitepaper to guide companies and governments on how to choose between biobased alternatives to fossil-based plastics.

The report identifies three types of renewable carbon-based that could replace fossil-based plastics. First, (novel) biobased alternative polymers: new biobased materials that replace fossil-based plastics with different structures. Second, drop-in biobased polymers: chemically identical to fossil-based plastics but derived from biomass. And finally, CO2-based polymers: plastics produced from captured carbon dioxide.

TNO designed a three-step plan to choose the best sustainable alternative for the nine most commonly used fossil-based plastics...

Click <u>here</u> for more information. Access the whitepaper <u>here</u>.

Kemira and IFF form joint venture to produce biobased materials at scale

Kemira and IFF today announced that they have taken the final investment decision and move forward in forming a joint venture manufacturing company to produce renewable biobased products on a commercial scale. Total investment is estimated at around EUR 130 million and commercial production is expected to start in late 2027. Both companies will have a 50% stake in the joint venture. Kemira and IFF have been collaborating in a strategic partnership since 2020. Designed Enzymatic Biomaterial™(DEB) technology platform is a novel and unique process technology utilizing plant-based sugars which will provide access to many different applications. Kemira holds global exclusivity for the commercialization of DEB™ biomaterial in the Paper, Board and Water Treatment markets.

New manufacturing plant will be located at IFF Biorefinery in Kotka, Finland to leverage available synergies and infrastructure as well as European biobased raw materials...

Click here for more information.

Sustainable polymer makers Danimer and Brightmark file for bankruptcy

Demonstrating that making sustainable plastics isn't necessarily a sustainable business, two prominent green plastics operations—the biobased polymer maker Danimer Scientific and Brightmark's plastics pyrolysis plant—have gone bankrupt.

Danimer filed for Chapter 11 in Delaware. It is seeking approval for \$15 million in financing that will help it wind down operations and sell



its assets. Danimer opened a plant in Winchester, Kentucky, in 2020 to make polyhydroxyalkanoate (PHA) via fermentation. The company anticipated a vibrant market for the biobased and biodegradable polymer in single-use plastics applications like straws, cup lids, produce bags, and utensils...

Click here for more information.

IBM and L'Oréal to build first AI model to advance the creation of sustainable cosmetics



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IBM (NYSE: IBM) and L'Oréal, the world's leading beauty company, announced a collaboration to leverage IBM's generative artificial intelligence (GenAI) technology and expertise to uncover new insights in cosmetic formulation data, facilitating L'Oréal's use of sustainable raw materials, for energy and material waste reductions. This unique effort will develop a custom AI foundation model engineered to significantly increase the ability of L'Oréal Research & Innovation teams to reach extra performance and consumer satisfaction in every cosmetic category and every region of the world. The formulation foundation model is believed to be a first-ofits-kind in the industry, redefining AI

innovation at the intersection of beauty, chemistry and technology.

The collaboration combines L'Oréal's unparalleled expertise in cosmetic science with IBM's cutting-edge artificial intelligence technologies for scientific discoveries, to unlock a future where science and technology can inform or help prioritize solutions that are both ecologically responsible and innovative.

Click here for more information.

Research & Development

Drivers for adopting circular biobased building materials to facilitate a circular transition: a case of a developed economy

The research article, authored by Dinh Linh Le and colleagues, investigates the key factors driving the adoption of circular bio-based materials in construction, aiming to support the transition towards a circular economy. This article has been conducted during, and with the support of, the Italian inter-university PhD course in Sustainable Development and Climate change. The data collection was carried out during and after the visiting research period of Dinh Linh Le in the Building Physics and Sustainable Design Unit, Department of Civil Engineering, Ghent Technology Campus, KU Leuven, Belgium.

The abstract reads as follows: 'Employing circular bio-based building materials (CBBMs) mitigates the construction industry's climate impacts and supports its, and the broader economy's, transition to a circular model. However, CBBMs remain underutilized in Flanders, Belgium. To boost the adoption of these materials in Flanders, this study identifies 22 potential drivers for CBBM



adoption through a literature review and determines 16 main drivers using a mixedmethod approach. The top three drivers are "proven long-term quality of materials", "proven cost-effectiveness of materials", and "availability of information about materials". The results underscore the government's crucial roles in incentivizing CBBM use, collaborating with supply chain actors to innovate higher education systems and updating regulations and codes. Stakeholders should collaborate to compile and share evidence on CBBMs' quality, costeffectiveness, and other benefits. Although focused on Flanders, these findings may offer valuable insights for regions with similar socioeconomic contexts, supporting the broader adoption of CBBMs and contributing to sustainable development goals."

Click <u>here</u> for more information.

Commission launches new Biotech and Biomanufacturing Hub to support innovative companies



Pixabay

The Commission has recently launched a new Biotech and Biomanufacturing Hub to support companies – particularly start-ups and SMEs - in bringing innovative products to the EU market and increase their competitiveness. The Hub will also help companies identify the support available to them at EU level and how to access this support to help them to expand and grow.

The Biotech and Biomanufacturing Hub explains in an easy, accessible way and in all EU languages:

- The sources of EU funding available to biotech and biomanufacturing companies;
- The research infrastructures that can support biotech or biomanufacturing Research & Development;
- The resources available to help biotech or biomanufacturing businesses to scale up;
- The intellectual property protection that innovative companies are entitled to:
- The processes for authorising new biotech products, such as human and veterinary medicines or feed and food ingredients;
- The rules and requirements that companies must comply with when developing and marketing biotech products in the EU.

Click here for more information.

Synthomer partners with the University of York to develop next-generation, more sustainable biobased polymers

Synthomer today announces a new Prosperity Partnership with the University of York to pioneer its next generation of bio-based polymers, aiming to drive the decarbonisation and defossilisation of the chemical industry.



The three-year project brings together experts from industry and academia to undertake new research and has been made possible by funding from Engineering and Physical Sciences Research Council (EPSRC), Synthomer and the University of York, with a combined value of £2m...

Click here for more information.

Bio-based method creates polyurethane without toxic chemicals



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Diisocyanates are used in the preparation of all polyurethanes, ranging from the foams used in shoe soles to the thermoplastics used in cell phone cases. Aromatic diisocyanates, which give polyurethane foams their structure, are commonly prepared on the megaton scale in highly secure facilities due to the use of phosgene, a highly reactive and toxic chemical reagent.

In Angewandte Chemie International Edition, Michael Burkart's lab at UC San Diego reports the preparation of fully bio-based aromatic diisocyanates from a simple monosaccharide, D-galactose. "This method provides a new route to 100% bio-based polyurethane foams, achieving a long-standing goal for the industry," says Burkart.

This new route avoids the use of transition metals, gaseous reagents, or any high-pressure/temperature reactions. As an application, the team demonstrates the synthesis of a thermoplastic polyurethane (TPU) using these renewable diisocyanates, which show excellent material properties equivalent to petroleum-based TPUs...

Click <u>here</u> for more information. Access the publication <u>here</u>.

Bio-based polyesters for demanding long-term applications

Current bio-based <u>plastics</u> are limited to short-life applications, such as packaging, as they have insufficient long-term properties. The new project "Bio-based polyesters for demanding long-term applications" by Fraunhofer Institute for Structural Durability and System Reliability LBF aims to improve the long-term properties of <u>biopolymers</u> through tailored additivation enabling their use in technical applications. Therefore, the researchers are looking for partners along the value chain that would like to substitute petrobased plastics with bio-based solutions for durable products.

In the planned project, bio-based materials will be optimized through tailored additivation to be competitive with petrochemical plastics. Researchers from the Fraunhofer Institute for Structural Durability and System Reliability LBF have conducted research in the field of polymer additives in numerous projects in recent years and have been able to improve the long-term properties of polymers made from both fossil and renewable raw materials. The aim of the project is the sustainable



substitution of petro-based engineering plastics based on previously gained knowledge on material optimization and implementation along the entire value chain.

Click here for more information.

Stronger, greener superglue: Biodegradable polymer outperforms commercial options



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Researchers at Colorado State University and their partners have developed an adhesive polymer that is stronger than current commercially available options while also being biodegradable and reusable. The findings, described in *Science*, show how the common, naturally occurring polymer P3HB can be chemically re-engineered for use as a strong yet sustainable bonding agent.

Adhesives are commonly used in automotives, packaging, electronics, solar cells and construction, among many other areas. Together they make up a roughly \$50 billion industry that supports much of our modern life but also contributes to the mounting issue of plastic waste. The paper describes the team's work using experimental, simulation

and process modeling to develop a replacement polymer.

The project was led by University
Distinguished Professor Eugene Chen in the
Department of Chemistry. Other partners on
the paper include Gregg Beckham at the
National Renewable Energy Laboratory and
Professor Ting Xu at the University of
California, Berkeley and researchers from their
groups...

Click <u>here</u> for more information. Access the full publication <u>here</u>.

Plant-based substitute for fossil fuels developed for plastic foams

An environmentally-friendly preparation of plant material from pine could serve as a substitute for petroleum-based chemicals in polyurethane foams.

The innovation could lead to more environmentally friendly versions of foams used ubiquitously in products such as kitchen sponges, foam cushions, coatings, adhesives, packaging and insulation. The global market for polyurethane totaled more than \$75 billion in 2022.

A Washington State University-led research team used an environmentally-friendly preparation of lignin as a substitute for 20% of the fossil fuel-based chemicals in the foam. The bio-based foam was as strong and flexible as typical polyurethane foam. They report on their work in the journal, ACS Sustainable Chemistry and Engineering.

Click <u>here</u> for more information. Access the full publication <u>here</u>.



Polymers

Status and outlook: Bio-based polymers worldwide



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[Renewable Carbon News] take a closer look at the current state of bio-based polymers. [Their article] looks at the rapidly growing production capacity, the major investments currently underway in China, Europe and the Middle East, and the new political conditions in Europe that are driving demand for biodegradable polymers. But first things first.

Firstly, global capacity for bio-based polymers will grow strongly over the next five years, much faster than for fossil-based polymers. For the 14 bio-based polymers showcased at the European Bioplastics Conference (EBC December 2024 in Berlin), the expected compound annual growth rate (CAGR) between 2024 and 2029 is an impressive 18% - total capacity will increase to 5.7 million tonnes in 2029, with PLA accounting for the largest share. The data was collected by the international nova expert group on bio-based polymers. Taking into account all 17 commercially available bio-based polymers, the CAGR between 2024 and 2029 is 13%, compared to 2-3% for fossil-based polymers. This would mean that the capacity share of bio-based polymers in the total polymer

market will increase from 1% today to around 1.5% in the coming years. The low utilisation rate of some capacities, especially for PLA capacities in China, was also shown and discussed. This has already been shown in the report "Bio-based and Biodegradable Plastics Industries in China" published by the nova-Institute in May 2024...

Click <u>here</u> for more information.

The biodegradable microbeads that scrub out plastic pollution

Major consumer markets have imposed microbead bans in recent years to tackle marine pollution. For companies seeking biodegradable replacements, circular and plant-based options abound, waiting to be scaled.

The bead backlash

Plastic microbeads are among the most notorious pollutants from the cosmetics and personal care industries. These tiny grains of PE or PP plastics found inside face scrubs, body soaps, and toothpaste measure less than 5 mm in diameter but have had a huge impact on ocean environments.

According to the Plastic Soup Foundation in 2022, 87% of the products of the ten best-selling cosmetic brands in Europe contained microplastics. Small yet buoyant, they escape through most sewage treatment filters. Like other synthetic polymers, these beads are not built to biodegrade. Once eaten by fish in the open ocean, the plastics can find their way into the human food chain...



NatureWorks introduces Ingeo™ 3D300 3D printing polymer

NatureWorks, a global leader in sustainable biopolymer innovation, has announced the launch of Ingeo 3D300, the company's newest specially engineered 3D printing grade. Designed for faster printing without compromising quality, Ingeo 3D300 sets a new benchmark in additive manufacturing by offering enhanced efficiency and exceptional performance.

"By combining the trusted name of Ingeo with a material specially engineered for speed and precision, we're enabling manufacturers and designers to push the boundaries of what's possible for their 3D printing."

Ingeo 3D300 delivers faster print speeds while maintaining excellent surface finish and detail, significantly reducing print time and overall production costs. Whether used for prototyping, functional parts, or creative designs, this faster printing grade provides unparalleled consistency and accuracy, enabling users to meet demanding deadlines without sacrificing quality...

Click here for more information.

Chemicals

The new 25,000 sq ft facility, located at Marina Village in Alameda, boasts state-of-the-art production facilities equipped with AI-enabled continuous fermentation capabilities, enabling partners to achieve target production costs for competitive manufacturing...

Click here for more information.

hubergroup Chemicals introduces innovative bio-based UV oligomers at ECS 2025



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Pow.Bio unveils state-of-the-art facility in alameda, expanding biomanufacturing capabilities to support demand for continuous fermentation

Pow.Bio, a leader in innovative biomanufacturing solutions, is pleased to announce the opening of its new cutting-edge facility in Alameda, California. hubergroup Chemicals, specialist for resins and chemicals used in the coatings industry, is set to unveil its latest innovation at this year's European Coatings Show: sustainable, biobased UV oligomers for advanced coatings. These groundbreaking resins, designed for wood and plastic surfaces, offer excellent reactivity and stain resistance while containing an impressive 50% bio-based carbon.



The use of monomer acrylates is facing increasing regulatory restrictions, while demand for sustainable, bio-based raw materials in the paints and coatings industry continues to grow, as demonstrated by companies like IKEA. In response, hubergroup is utilizing sugar alcohols such as sorbitol and xylitol as building blocks...

Click here for more information.

hubergroup unveils revolutionary DYNAMICA Ink Series



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hubergroup, a global leader in printing inks and chemical solutions, is proud to announce the launch of its DYNAMICA Ink Series. This new colour intensive, fast-setting ink series is eco-friendly, cobalt and mineral oil-free, and formulated for commercial printing. The groundbreaking new ink series is tailored to meet the evolving demands of modern commercial printing.

The DYNAMICA process series is compatible with the latest high-speed printing machines and perfectly suited for a wide range of jobs across various substrates, meeting the highest ink performance demands. It stands out with a

low dot gain, high dampening tolerance, impressive versatility and excellent stackability.

It enables fast work-and-turn, quick post-print finishing and offers high fountain solution tolerance and stability, ensuring consistent performance and exceptional print quality even under varying press conditions. The DYNAMICA Ink series works on both straight and perfecting presses...

Click here for more information.

Consumer Products

EEKE: How the BioReCer project builds consumer trust in bio-based products

Apostolos Raftopoulos, President of the Union of Working Consumers of Greece (EEKE), discusses how the BioReCer project strengthens certifications to enhance consumer trust in bio-based products.

The European bioeconomy is rapidly evolving, with bio-based products playing a crucial role in promoting sustainability and reducing environmental impact. However, consumer trust remains a significant challenge due to unclear environmental claims and inconsistent certification schemes...



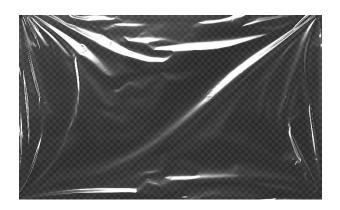
Mondi expands packaging portfolio and capacity by completing acquisition of Schumacher Packaging's Western Europe operations

Mondi, a global leader in the production of sustainable packaging and paper, has completed the acquisition of the Western Europe assets of Schumacher Packaging, expanding the product range, capacity and innovation available to customers demanding high-performance, sustainable packaging at scale.

For existing Mondi customers, the expanded product range and enhanced production flexibility supports the growing demand for sustainable packaging solutions. Customers joining from Schumacher Packaging gain full access to Mondi's comprehensive product portfolio and services, industry-leading sustainability credentials, reliable delivery systems and strengthened security of supply...

Click <u>here</u> for more information.

lululemon announces new collaboration with ZymoChem to advance and scale bio-based nylon



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lululemon has announced a multi-year collaboration with San Leandro, CA based biotechnology pioneer ZymoChem to help expand the company's use of bio-based nylon and advance its leadership in sustainable innovation. Together, lululemon and ZymoChem will sustainably transform a key building block of nylon 6,6 – a foundational material used in many of lululemon's iconic products including its Align and Wunder Train leggings.

lululemon's work with ZymoChem began last year with an initial investment to support innovative technologies used to create a biobased version of adipic acid – one of the key chemical building blocks of nylon 6,6 traditionally produced from petroleum. The next phase of this partnership will focus on scaling ZymoChem's technologies to support the commercialization of this bio-based alternative...



Events

CHEMUK2025, NEC Birmingham, 21st to 22nd May 2025

Conference

Exhibition

CHEMUK2025 is the UK's leading trade show supporting the development, manufacture, and management of chemicals and formulated products.

The expo will present 600+ specialist exhibitors and 100+ expert speaker sessions, split between five focused show zones:

- Chemicals Supply Show Zone
- Chemicals Management Show Zone
- Process & Chemical Engineering Show Zone
- Chemical Laboratory Show Zone
- NEW FOR 2025: Formulated Product Manufacturer Show

Click <u>here</u> for more information. Register <u>here</u>.

Feedstocks and Processes for Sustainable Manufacturing of Chemicals and Materials (GRC), Newry NH (USA), 1st to 6th June 2025

Conference

The Biomass to Biobased Chemicals and Materials GRC is a premier, international scientific conference focused on advancing the frontiers of science through the presentation of cutting-edge and unpublished research, prioritizing time for discussion after each talk and fostering informal interactions among scientists of all career stages. The conference program includes a diverse range of speakers and discussion leaders from institutions and organizations worldwide, concentrating on the

latest developments in the field. The conference is five days long and held in a remote location to increase the sense of camaraderie and create scientific communities, with lasting collaborations and friendships. In addition to premier talks, the conference has designated time for poster sessions from individuals of all career stages, and afternoon free time and communal meals allow for informal networking opportunities with leaders in the field...

Click here for more information.

21st International Conference on Renewable Resources and Biorefineries, Turku (Finland), 2nd to 4th June 2025

Conference

The conference will include sessions related to the following topics:

Algal biorefineries; Biobased chemicals and biodegradable materials; Biocatalysis and novel fermentation processes; Bioenergy and thermochemical transformation; Biorefining; Carbon capture & utilization; Catalysis for renewables and kinetics; Downstream processing; Marine bio-economy; Polysaccharides; Pretreatment and transformation of lignocellulose; Sustainability and circular economy; Synthetic biology and biofoundries; Valorisation of food residues and; Wood chemistry and engineering

<u>Sign up</u> to the RRB 2025 newsletter to get updates on the event.

Click <u>here</u> for more information. Submit an abstract here.



Biobased Coatings Europe 2025, Madrid, 4th to 5th June 2025

Conference

Building on the success of Biobased Coatings Europe 2024 which brought over 170 senior level attendees to Valencia last June, ACI's 6th edition of Biobased Coatings Europe taking place on 4th & 5th June 2025 in Madrid, Spain will bring together key stakeholders in the biobased materials and coatings industries. It will provide latest updates on the European and global biobased coatings markets while also reviewing EU policies and regulations that are currently holding up the industry and strategies to overcome these barriers. We will explore new emerging technologies, opportunities and challenges and other interesting topics within the biobased coatings industry.

Join us in Madrid to meet and effectively network with senior level industry leaders representing the entire biobased coatings value chain, including biobased material producers, paint and coatings specialists, pigments and additive companies etc.

Click <u>here</u> for more information.

WorldBioMarkets: Driving the commercialisation of the bioeconomy, The Hague (Netherlands), 19th to 20th June 2025

Conference

Exhibition

World Bio Markets is a two-day event connecting and generating deal flow between bio-developers and producers, global brands and buyers, investors and financiers, community enablers and suppliers through a unique "meetings first" format.

For 18 years World Bio Markets has been uniting and connecting the bioeconomy value chain from lab to market and driving change through commercially viable innovation.

Let us help you commercialise, scale your business and tap into growing markets as the world goes through the biggest transformation and re-allocation of capital and jobs in its history.

Click <u>here</u> for more information.

bio!PAC 2025 (Bioplastics and Packaging), Online event, 5th to 6th June 2025

Conference

Most plastic packaging is made from fossilbased resources, is rarely recycled, and not biodegradable. Additionally, these plastic packaging can contribute to the long-term accumulation of microplastics.

Innovative bioplastics offer a sustainable alternative. They bring new features and can have multiple end-of-life options: recyclable and/or biodegradable. Furthermore, some bioplastics can be produced and recycled with a lower energy and carbon footprint. At bio!PAC 2025, the focus will be on retail packaging based on biobased feedstock, providing genuine environmental benefits. Special attention will be paid to the criteria for these applications.

That's why Renewable Carbon Plastics, in cooperation with Green Serendipity), is organizing the 6th edition of bio!PAC—the international conference on bioplastics & packaging. Experts from all areas of bioplastics & packaging will present their latest developments or research. The conference will also cover discussions like end-of-life options,



consumer behavior issues, availability of agricultural land for material use versus food and feed etc.

The conference will be an online event that will be recorded and made available for convenient watching (video-on-demand) for at least 3 months after the event. All presentations will be made available (pdf) as well.

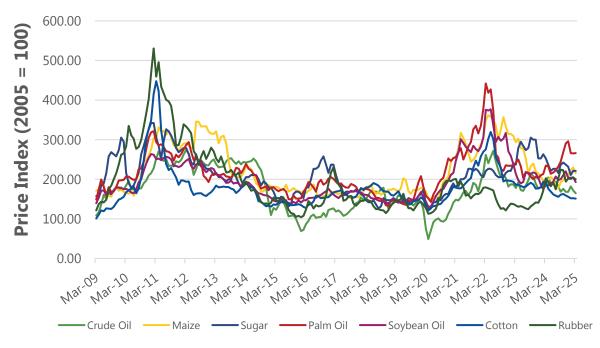
Price Information

Spot prices of feedstocks as of today and five years ago, and percentile price change. Arrows indicate rise (\uparrow), constant (–) or fall (\downarrow) from previous month.

Item	Price, US\$ (March 25')	Price, US\$ (March 20')	Price Change (%)
Crude oil (petroleum, barrel)	70.70 (\)	32.2 (↓)	119.57
Maize (corn, metric ton)	207.41 (↓)	162.42 (\)	27.70
Sugar (kilogram)	0.42 (-)	0.26 (\)	61.54
Palm oil (metric ton)	1069 (†)	635.19 (\)	68.30
Soybean oil (metric ton)	1005.7 (↓)	747.75 (↓)	34.50
Cotton (kilogram)	1.71 (↓)	1.5 (↓)	14.00
Rubber (kilogram)	2.36 (↓)	1.5 (↓)	57.33

For details on indexes please see worldbank.org/en/research/commodity-markets

Raw materials 16-year Price Indices leading up to March 2025



For details on the nature of these commodities please see worldbank.org/en/research/commodity-markets



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NNFCC is a leading international consultancy with expertise on the conversion of biomass to bioenergy, biofuels and biobased products.

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