NEWS REVIEW

Alder BioInsights

June 2026

Biobased Products

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

Announcements & Commentary

Research & Development

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

FOREWORD

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

The transition to a more sustainable textile industry has often been framed as a materials' performance challenge. During the core session on "Scaling Innovation" of Global Fashion Summit (GFS) 2026 in Copenhagen pioneering voices brought forward an essential truth: if next-gen materials are going to displace legacy petroleum and resource-heavy commodities, they must win on performance, supply chain security and capacity for scaling-up; not just on a feel-good mission.

The debut of AMSilk's bioengineered silk protein yarns in Balenciaga's Spring 2026 collection represents an important milestone for the use of biobased materials in high-end luxury fashion. Produced through microbial fermentation using engineered microorganisms that replicate spider silk proteins, these 100% protein-based, fully biodegradable and microplastic-free materials have navigated the demanding aesthetic, consistency, and durability requirements of high-end luxury fashion - arguably the sector's most uncompromising performance environment. That a heritage luxury house has incorporated biotechnology-derived materials into commercially available retail garments, available in stores worldwide, provides the reference point that the broader industry has long needed: another proof that biobased materials can succeed at the most technically demanding end of the market, but still the true test of viability will come when scaling beyond high-end luxury fashion to reach mainstream high street adoption.

The Bezos Earth Fund has committed around £25 million of funding across four research institutions to advance upstream science and support commercial breakthroughs which can be scaled and applied across the full spectrum of textile applications. With materials and manufacturing responsible for an estimated 80% of fashion's environmental footprint - encompassing greenhouse gas emissions, water consumption, pollution, and waste - the grants target the most impactful intervention points. Columbia University and the Fashion Institute of Technology will develop bacterial textile fibres grown from agricultural waste; UC Berkeley will engineer biodegradable fibres modelled on spider silk; Clemson University and the University of Georgia will develop gene-edited cotton varieties; and The Cotton Foundation will strengthen cotton genetic resources for resilience and sustainability.

Ecopel's transition toward a fully biobased faux fur offering illustrates how established manufacturers are responding to both regulatory pressure and market opportunity. The French company, whose turnover rose nearly 20% in 2025, is phasing out petrochemicals in favour of biobased alternatives such as polylactic acid, a polymer produced via fermentation of plant sugars, a shift its CEO describes as eliminating one of the most persistent criticisms of synthetic faux fur. With biobased fibres target of 20-30% of production in 2026 and 50% by 2027, Ecopel's transition demonstrates that petrochemical dependency is neither technically nor commercially necessary for high-performance textile applications.

Chemicals

Croda unveils Matrixyl® Neolide™, an iconic peptide with smarter delivery

Croda International Plc ("Croda"), the company that uses smart science to create high performance ingredients and solutions that improve lives, announces the launch of Matrixyl® Neolide™, the next evolution of one of the most recognised peptide technologies in skin care. The launch underlines Croda's continued focus on driving growth through differentiated innovation across its Consumer Care portfolio, strengthening its position in high value beauty and personal care markets globally.

Since first being introduced in the 1990s, Matrixyl has become a trusted reference in advanced skin care, supporting firmer, healthier looking skin. With Matrixyl Neolide, Croda builds on this legacy by introducing a new patented encapsulation technology designed to protect the peptide within cosmetic formulations, and release it gradually once applied to the skin.

Click here for more information

Clariant secures FDA approval for bio-based Licocare™ RBW additives in rigid PVC food-contact applications

Clariant has received U.S. Food and Drug Administration (FDA) approval for its bio-based Licocare RBW wax additives for use in rigid polyvinyl chloride (PVC) food-contact applications. The authorization, effective May 7, 2026, extends the company's existing FDA approval beyond polyester materials to include rigid PVC.

The approval covers the complete Licocare RBW product range, including the RBW 100 series, RBW 300 series, and the grades Licocare RBW 360 Vita and RBW 560 Vita. The additives are authorized for use as processing aids, lubricants, release agents, and slip additives in single- and repeat-use rigid PVC applications across all food types, except for infant formula and human milk contact.

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Policy

Funding Available to Support Standardisation Research for Bio-Based Products

The European Commission is inviting grant applications to support research, innovation, and standardisation activities that strengthen industrial competitiveness and environmental sustainability within the bio-based sector. The funding aims to accelerate the development of safe, sustainable, and circular bio-based products, technologies, and value chains aligned with major European Union environmental and industrial policy goals.

The programme supports projects focused on ecodesign, decarbonisation, pollution prevention, biodiversity protection, circular bioeconomy systems, and sustainable product development. Approximately €8,000,000 is available under this topic, with around €4,000,000 expected per project.

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nova-Institute provides scientific basis for EU policy on bio-based plastic packaging under PPWR

The nova-Institute, a leading research and consultancy organization in the field of renewable carbon, has been commissioned by the European Commission to provide a comprehensive analysis on the role of bio-based feedstocks in plastic packaging under the Packaging and Packaging Waste Regulation (PPWR). The study delivers robust, science-based insights into technological development, environmental performance and policy options, supporting the European Commission in shaping future sustainability criteria and targets for bio-based plastics.

The report fills a critical gap: although plastics remain over 99% fossil-based and bio-based polymers account for only ~1% of the global market, they are technologically mature. Seventeen bio-based polymers are commercially available today, and the study finds no fundamental technical barriers to their use in packaging. At the same time, the PPWR introduces binding recycled content targets but leaves open how bio-based carbon can contribute to defossilization. The study addresses this gap by providing evidence on significant greenhouse gas reduction potentials, the availability and scalability of bio-based polymers, and the need for harmonized sustainability criteria aligned with the Renewable Energy Directive. It also highlights the importance of recognizing the complementarity between bio-based and recycled carbon, rather than treating them as competing solutions.

Advancing these approaches is essential to ensure sufficient non-fossil carbon supply for the plastics sector and to enable a climate-neutral, circular carbon economy – a transition that nova-Institute has been actively shaping for decades.

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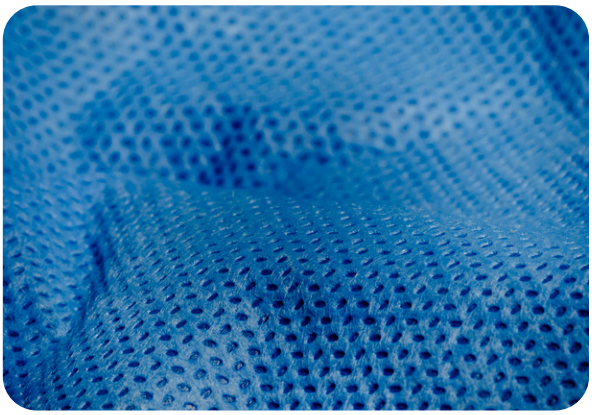
Canva.com

Polymers

Kruger Invests $333M to Enter the Wipe Nonwovens Sector



Canva.com

Kruger Inc. today announced a $333 million investment marking its entry into the nonwovens sector and advancing its long-term portfolio diversification strategy. This new division will focus on manufacturing some of the industry's most sustainable materials for a broad range of wipe applications. Central to this major project is the installation of the first production line of its kind in Canada, to be built on Île-de-la-Potherie in Trois-Rivières, adjacent to Kruger's Wayagamack paper mill, with commissioning scheduled for 2028.

This project was made possible with the support of both levels of government, including a $35 million contribution from the Government of Canada through the Strategic Response Fund (SRF), as well as a $35 million loan from Investissement Québec, acting as financial agent for the Government of Québec, along with a $5,025,000 equity investment in Kruger Pulp and Paper Limited Partnership Holding. Investissement Québec is also investing an additional $25 million from its own funds.

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Toray partners on 100% bio-based nylon 66

Toray Industries, Inc. and PTT Global Chemical Public Company Limited (Headquarters: Bangkok, Thailand, CEO: Mr. Narongsak Jivakanun hereinafter referred to as "GC") have established a first-of-a-kind series of manufacturing technologies for bio-based adipic acid (see note 1) through the fermentation of bio-muconic acid (note 2) using starch residues (note 3) and 100% bio-based nylon 66 using it.

As there is a global demand to reduce greenhouse gas emissions and reduce dependence on fossil resources, the chemical industry is attracting attention to the effective use of renewable resources such as biomass raw materials that do not compete with food. Cassava pulp (note 4) is a residue discharged in the process of producing starch from cassava, which is grown in large quantities for food applications, and is a raw material that can be expected to be stably supplied. By utilizing such unused resources, it is less likely to lead to new farmland expansion, which will lead to a reduction in the risk of indirect land use change (ILUC). To this end, the development of technology is also important to leverage unused resources converting to valued products.

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Products

Biobased magnetic sensors printed from iron and cellulose rival some commercial devices

Today, magnetic field sensors are one of the invisible mass-produced products in the electronics industry. They measure movement, positions or distances and can be found in window contacts, steering wheels, hard disks, packaging and cell phones. Billions of these components are manufactured every year.

The development of sustainable sensors is a technical challenge. While iron is easily available and biocompatible, on its own, it does not achieve the sensitivity required for many of today's magnetic field sensors.

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Ecopel embarks on its transition towards bio-based faux fur

French faux fur specialist Ecopel is embarking on a new strategic shift in its supply chain. Having established itself on the market with synthetic alternatives to fur, the company has gradually developed materials partly derived from plants, culminating last year in the launch of a 100% bio-based alternative.

This "Biofur" range is now intended to make up the company's entire offering. Ecopel, which saw its turnover rise by nearly 20% in 2025, plans to phase out petrochemicals in favour of natural fibres such as PLA.

Polylactic acid (PLA) is produced by fermenting plant sugars found in maize. For the French company, the shift to this new raw material entails a complete overhaul of its procurement.

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AMSilk silk protein yarns debut in Balenciaga collection

AMSilk GmbH ("AMSilk"), a global leader in advanced biomaterials made from silk proteins, today announced that its bioengineered yarns are featured in commercially available garments within Balenciaga's Spring 2026 collection.
The designs include a sharp-collared white shirt and a black shirtdress that cinches at the waist with a ribbon tie, complete with an embroidered tone-on-tone Balenciaga logo on one gleaming-buttoned cuff. Each style is available in select Balenciaga stores worldwide and on balenciaga.com.

This launch marks a significant milestone for the luxury fashion industry, as AMSilk's bioengineered silk protein yarns move from development and pilot applications into real world, consumer facing products. It demonstrates that biotech materials can meet the demanding requirements of high end fashion, including aesthetic quality, consistency, durability and compatibility with established manufacturing processes.

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Research & Development

Avantium and Heynen Systems explore application of PEF in bedding and upholstery

Avantium N.V., a leader in renewable and circular polymer materials, announces a collaboration with Heynen Systems B.V., a Dutch technical textile knitting company and interliner automation plant, to develop and assess applications of Avantium's plant-based and circular polymer PEF, marketed under the brand name releaf®, in the bedding and upholstery industry. As part of this collaboration, Tricover® - a brand of Heynen Systems - has developed a prototype cushion incorporating releaf®. This cushion will be showcased at the Interzum Forum Italy on 4–5 June 2026 in Bergamo, Italy. The prototype serves as a demonstration to explore the potential of releaf® in comfort foam applications.

For over 40 years, Heynen Systems B.V. has provided a system solution for the comfort foam industry, serving both manufacturers and end users. Its business-to-business solutions are designed to automate the encapsulation process and reduce production costs. For end users, its technology helps prevent abrasion between comfort foam and outer covers, extending product lifetime. Heynen Systems' solutions are used by leading international brands such as IKEA and Tempur.

The collaboration between Avantium and Tricover focuses on prototyping and exploration. The partners are assessing how releaf® can be applied in automated foam encapsulation, enhancing both performance and sustainability.

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Scientists Create "Living Plastic" That Self-Destructs in Just Six Days

In a study published in ACS Applied Polymer Materials, a team used two cooperating bacterial strains to fully degrade the plastic in only six days without producing microplastics.

Zhuojun Dai, a corresponding author on the paper, explains that "the realization that traditional plastics persist for centuries, while many applications, like packaging, are short-lived, led us to ask: Could we build degradation directly into the material's life cycle?"

Some microbes make enzymes that can cut long polymer chains into smaller fragments. Since plastics are polymers, researchers can potentially place those enzymes, or the microbes that produce them, directly into living plastic materials.

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traceless® opens first industrial production facility for nature-based material innovation

Hamburg-based materials pioneer traceless® has created the world's first industrial production facilities for a next-generation natural polymer technology. The goal is to combat global plastic pollution, end dependence on fossil raw materials, and build a circular bioeconomy in Europe.

Click here for more information.

Bezos Earth Fund Teams-Up with Scientists to Reinvent What Clothes Are Made Of – Announces $34 Million in New Grants

The fashion industry is one of the most creative, dynamic and pervasive in the world — a significant part of everyday life and personal expression. That's why today, the Bezos Earth Fund announced $34 million to advance breakthrough materials for the fashion and textile industry. Working with scientists and researchers across the United States, new grants build on the Bezos Earth Fund mission to support innovative solutions that benefit the planet, people, and communities. They specifically focus on research and development of next-generation materials that look and feel like today's rayon, silk, and cotton — with cost, performance, and environmental attributes that improve upon conventional fabrics.

Click here for more information.

Events

10th - 11th June 2026
Bio Innovations Europe
The Hague, Netherlands

Click here for more information.

23rd - 25th July 2026
4th International Summit on Biopolymers and Polymer Science (ISBPS2026)
Prague, Czech Republic

Click here for more information.

6th - 9th September 2026
International Symposium on Biopolymers (ISBP 2026)
Dublin, Ireland

Click here for more information.

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

Biocentre, York Science Park, Innovation Way, Heslington, York YO10 5NY

+44 (0) 1904 217 182 | enquiries@alderbioinsights.co.uk

alderbioinsights.co.uk