

Build a PLANet™ for sustainable bioplastics

Futero, Sulzer and TechnipFMC team up to simplify the manufacture of bioplastics

Three major process technology and equipment specialists, Futero, Sulzer and TechnipFMC, have formed the PLANet™ initiative in equal partnership to promote the production of sustainable plastics made of Poly-Lactic Acid (PLA). The strategic collaboration will support manufacturers interested in entering the bioplastic market by delivering integrated PLA technology packages.

PLA is a versatile bio-based and biodegradable polymer that can replace petroleum-based plastics in a wide range of applications. Different stages are required to convert sugars from crops into lactic acid, lactide and subsequently PLA.

Futero, a well-established technology provider for lactic acid and lactide production, and Sulzer Chemtech, a leading specialist in separation and mixing technologies have over 25 years of experience in lactic acid and PLA's related processes. Together they have further shown their commitment to facilitate the production of bioplastics by establishing a partnership with TechnipFMC, a leading global EPC contractor with experience in technology development and licensing with fast growing activities in bioplastics and green chemicals.

The agreement between the three parties offers to agricultural, chemical and fiber industries, a fully integrated package addressing the whole PLA value chain. In this way, customers can benefit from direct access to state-of-the-art, customizable solutions for all the aspects and stages of PLA production. PLANet™ offers the possibility of a "one-stop shop" for customers interested in PLA production by providing a single point of contact and responsibility.

In particular, PLANet™ supports the construction of plants of any size, including PLA facilities with a throughput of up to 100'000 tons per year - that permit manufacturers to save both capital expenditures (CAPEX) and operating expenses (OPEX) by providing for integrated and optimized plant section design.

Within the PLANet™ partnership, Futero's proprietary technology focuses on the production of lactic acid and raw lactide from sugar or, directly, from biomass; Sulzer contributes the process for the purification of lactide and its polymerization to obtain PLA while TechnipFMC acts as technology integrator to deliver seamless and optimized Front-End Engineering Design (FEED) packages.

The promotion of greener alternatives to traditional plastics needs to be backed by suitable technologies that enable the industry to produce high-quality bioplastics in an efficient manner. We can make this possible via the PLANet™ partnership between Futero, Sulzer and TechnipFMC by leveraging our world-leading technologies, expertise and skills for the entire PLA value chain.

Image Captions:

Image 1: The goal of the PLANet™ partnership is the promotion of Poly-Lactic Acid (PLA) bioplastic via integrated PLA technology packages for manufacturers, simplifying the shift from traditional plastics.

Image 2: Poly-Lactic Acid (PLA) is a plant-based and biodegradable polymer that offers a sustainable alternative to traditional non-recyclable plastics originating from non-renewable fossil resources.

About Sulzer:

Sulzer's core strengths are flow control and applicators. We specialize in pumping solutions and services for rotating equipment, as well as separation, mixing and application technology.

The Chemtech division is represented in all important industrial countries and sets standards in the field of mass transfer and static mixing with its advanced and innovative solutions. The product offering ranges from process components to complete separation process plants and application technologies. We are the market leader in providing monomer and polymer production technology for poly-lactic acid (PLA) and devolatilization technology for effective removal of residuals. Most of the industrial plants producing the biopolymer PLA are based on Sulzer technology and/or Sulzer process licenses.

The customer support covers engineering services for separation and reaction technology and tower field services to perform tray and packing installation, tower maintenance, welding, and plant turnaround projects. Our customers benefit from a network of over 180 production and service sites around the world.

Sulzer has been headquartered in Winterthur, Switzerland, since 1834. In 2017, we achieved sales of roughly CHF 3 billion with around 14'700 employees. Our shares are traded on the SIX Swiss Exchange (SIX: SUN). www.sulzer.com

About Futerro:

Futerro is an engineering company developing state-of-the-art technologies in the field of green chemistry.

Futerro is a subsidiary of Galactic, a leading Belgian biotechnology group, worldwide oriented in the sale of licenses of its new sustainable & innovative technologies.

The PLA (Poly Lactic Acid) - one of its flagship products, is a biopolymer that is a better alternative for conventional plastics. Being currently in growing demand, the PLA effectively reduces the carbon footprint thus minimizing the impact on the global warming. www.futerro.com

About TechnipFMC:

TechnipFMC is a global leader in subsea, onshore/offshore, and surface projects. With our proprietary technologies and production systems, integrated expertise, and comprehensive solutions, we are transforming our clients' project economics. We are uniquely positioned to deliver greater efficiency across project lifecycles from concept to project delivery and beyond.

Through innovative technologies and improved efficiencies, our offering unlocks new possibilities for our clients in developing their oil and gas resources. Each of our employees is driven by a steady commitment to clients and a culture of purposeful innovation, challenging industry conventions, and rethinking how the best results are achieved.

To learn more about us and how we are enhancing the performance of the world's energy industry, go to www.technipfmc.com and follow us on Twitter [@TechnipFMC](https://twitter.com/TechnipFMC).

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