
Abstract – Renewable Materials Conference 2025

Alternatives to fossil-based chemistry and plastics: the potential of lactic-acid-based chemicals and polymers such as polylactic acid (PLA) for sustainability, circularity, and innovative applications

In recent years, lactic acid-based chemistry and polymers, such as polylactic acid (PLA), have gained popularity as a sustainable alternative to traditional fossil-based plastics. With increasing awareness about environmental sustainability and a growing demand for eco-friendly products, the market for bio-based solutions has been expanding rapidly.

As the only company in the world to have complete control over the entire lactic acid, lactide and PLA production chain, and planning to implement the first fully integrated, sustainable, and circular biorefinery in Europe by 2028 related to those products, Futerro will explain the potential of lactic acid and its derivatives for sustainability and circularity, presenting notably the upcoming PLA recycling unit of our future biorefinery with both chemical and mechanical recycling capabilities.

As the second largest PLA producer, Futerro will also be able to provide insight into key market trends in existing markets for PLA (food packaging, textile fibers, agricultural films, 3D printing, etc.) as well as into new application sectors currently under development (automotive, electronics, construction, etc.).

Attendees will gain insights on how lactic acid-based materials, derived from renewable resources, reduce reliance on fossil feedstock and generate fewer greenhouse gases compared to conventional chemicals and plastics. The versatility and potential for innovation of these materials and products suggest a robust future and an opportunity to lead the way in the global shift towards a circular economy using renewable feedstocks.

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