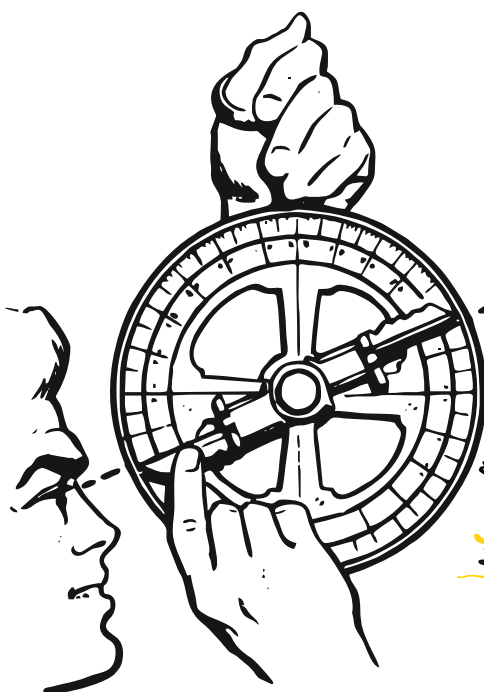




Łukasiewicz
Institute of Heavy
Organic Synthesis
BLACHOWNIA



HORIZON
europe

TOPIC ID:
HORIZON-JU-CBE-2025-IA-05

SSbD Bio-based polymers/copolymers unlocking new market applications

PLA-Based Composites with Renewable Plasticizers and Biofillers

Type of project: IA

Call opening date: 4 April 2025

Call deadline: 17 September 2025

ABOUT US

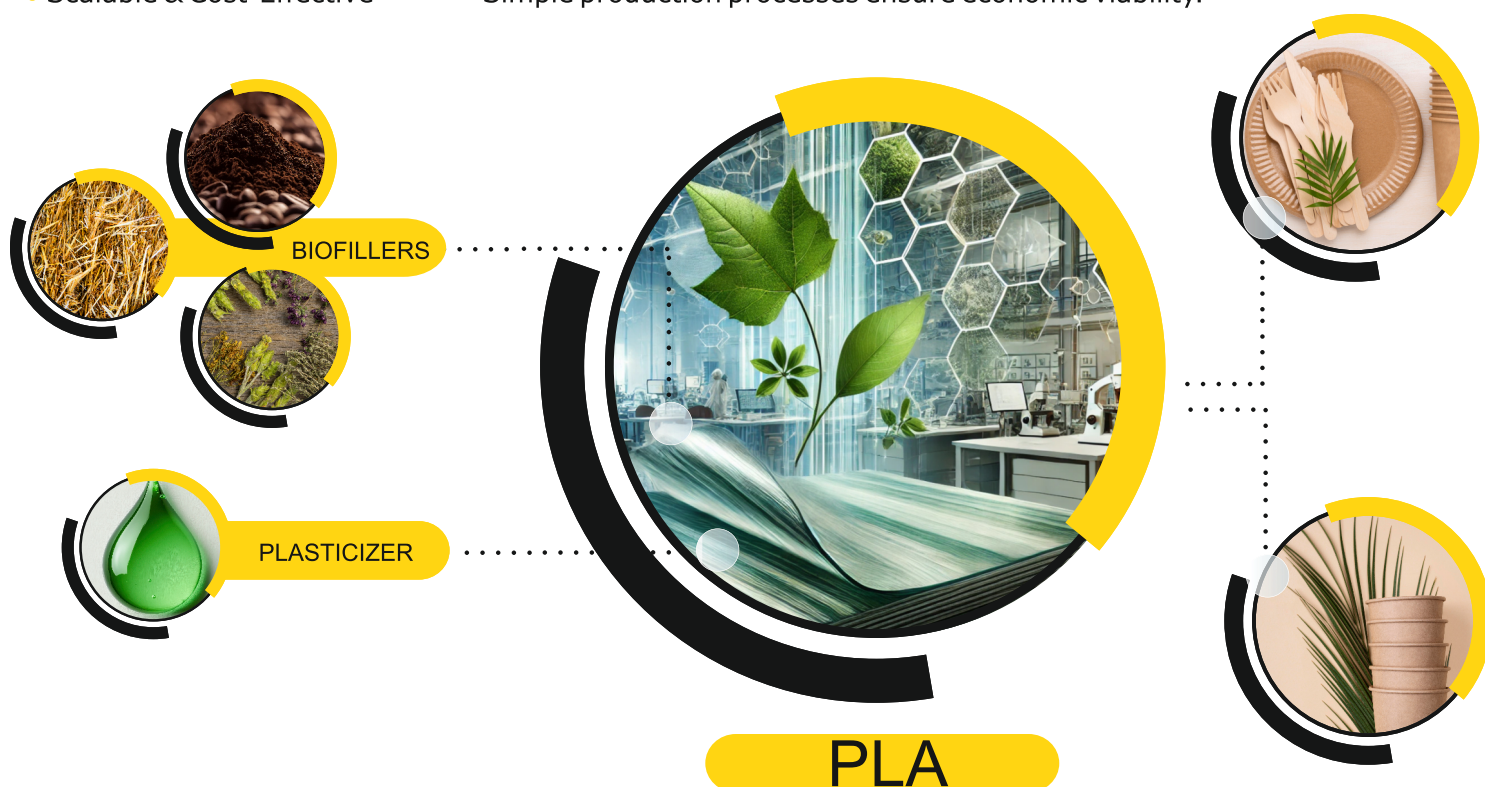
In the realm of organic chemistry, our focus lies in the development and commercialization of chemical processes. Equipped with state-of-the-art facilities and staffed by experienced professionals, our research group offers comprehensive research and advisory services. We actively collaborate with industry partners, engage in R&D consortia, and provide expertise in various domains. Our extensive experience encompasses the analysis and chemical modification of renewable raw materials, resulting in the creation of valuable products such as plasticizers, lubricants, biofuels, and bio-based chemicals. We also focus on the modification and processing of materials based on thermoplastic polymers such as polyolefins or PVC, as well as biopolymers such as PLA, PHB and polysaccharides.

OUR IDEA

Within the thematic scope of the Call, We propose innovative **PLA composites** enhanced with **renewable plasticizers** derived from plant-based or waste resources to improve flexibility and durability, and **biofillers** such as coffee grounds, straws, herbal plants fibers, and other organic residues to reduce costs, enhance performance, and provide unique aesthetics. These versatile materials are ideal for eco-friendly packaging like trays, films, and containers; biodegradable agricultural products such as films and plant pots.

Key Advantages:

- Sustainable → Uses renewable and waste-based materials, reducing environmental impact.
- Biodegradable → Fully decomposable under industrial composting conditions.
- Versatile Applications → Suitable for packaging, agriculture, consumer goods.
- Customizable → Properties can be tailored to specific needs through additive selection.
- Scalable & Cost-Effective → Simple production processes ensure economic viability.



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