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EcoPlastiC

Eco conversion of lower grade PET and mixed recalcitrant PET plastic waste into high performing biopolymers.



Funded by the
European Union

European
Innovation
Council



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From plastic waste to sustainable BioPolymers

EcoPlastiC develops novel technologies that convert mixed plastic waste into high-performance biopolymers that can be perpetually recycled.

VISION

Putting mixed PET plastics into a perpetual bio-cyclable loop

The technology developed in this project will lead to the production of research-grade PHA biopolymers, which can be regenerated perpetually and used in the same or similar applications as the equivalent fossil fuel produced virgin polymer, thereby reducing the carbon footprint.

Our long-term goal is for the process to be applicable to virtually any plastic material such as multilayer packaging (including PET, PE, PP and barrier layers such as EVOH, PA, metallised films) but also flexible films that cannot be recycled cost effectively to date.

OUR MISSION

Working together towards plastics circular economy

Nature works in cycles - the output of one cycle is a resource for the next. If our economy and technology approach follows this pattern, the plastic waste of today could become the gold of tomorrow.

EcoPlastiC will:

- Develop novel technology for depolymerization of mixed plastic
- Validate via lab-scale proof of concept
- Demonstrate environmental & economic sustainability



IMPACT

Far-reaching effects of the next-generation bioplastics

This technology has the potential to completely transform the plastics industry - drastically reducing the amount of virgin material produced from petroleum extraction, and positioning recycled PET as a valuable & reusable resource.

In addition to engineering, our project is relevant to several SPIRE sectors derived from chemicals and plastics which are characterized by a high dependence on fossil raw materials and energy in their production and processing technologies and are therefore under greater pressure to shift to circular models.

Our projects aligns with the UN Sustainable Development Goal on Sustainable Consumption and Production (SDG12) and the EU Climate Plan. Moreover, being the technological lead for next generation plastics creates key intellectual property (IP) and new jobs in industrial manufacturing of bioplastics in Europe.