

5B POLYMERS

Turning agri-food waste & biomass into sustainable polymers

Synthesis of Biobased and Biodegradable polymers using monomers from renewable Biowastes via Biocatalysis and Green Chemistry

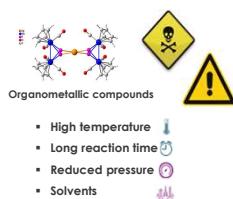
Luis Fonseca

1) The ubiquitous role of synthetic polymers and plastic materials in our Society, produced from fossil-based sources, are characterized by huge Greenhouse Gas (GHG) emissions and negative environment impact.

Synthetic Polymer



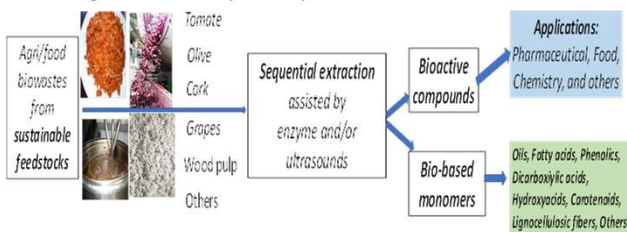
The reaction of polymer production



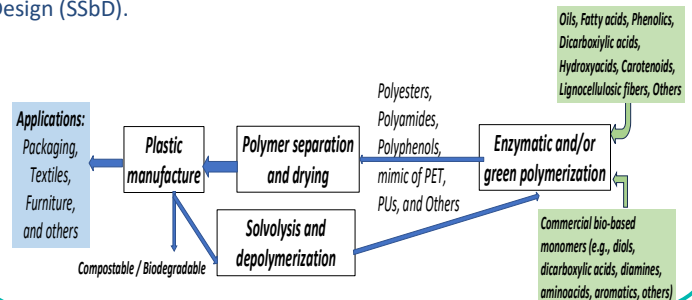
2) Today, there is a need to develop new biodegradable polymers based on renewable sources and environmentally friendly processes like Green Chemistry and Biocatalysis.



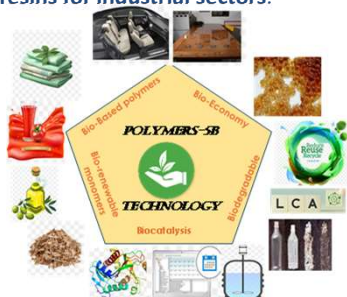
3) Today, it is important implement new Renewable chemical platform for the extraction of biobased monomers and valuable chemicals like from agro/food biowastes feedstocks (e.g., tomato and olive pomaces, and wood pulp and lignin) according to Biorefinery concept.



4) Polymers-5B project is focused on the synthesis of new biobased and highly efficient polymers (e.g., polyesters, polyamides, others) based on Biocatalysis, Green Chemistry and Safe and Sustainable by Design (SSbD).



5) Polymers-5B polymers meet market demands, namely the production of new biocomposites and polymeric materials for the Textile, Automotive, Furniture, and Polymeric resins for industrial sectors.



6) Polymers-5B project contributes to the EU Policy European Green Deal, including the Circular Economy Action Plan, Bioeconomy strategy action plan, Environment action program, Chemicals strategy, Zero pollution action plan.

