European partners

CSIC
Consejo Superior de Investigaciones Científicas

MANCHESTER 1824
The University of Manchester

ulm university universität
uulm

UCD DUBLIN

Hes·so
Haute Ecole Spécialisée de Suisse occidentale

KTH VETENSKAP OCH KONST

Westfälische Wilhelms-Universität Münster

Université de Strasbourg

Biopolis
Tailor-made Biotechnology

BIOPLASTECH
Ecosustainable Bioplastics

OWS
Organic Waste Systems

bionet

INFORS HT

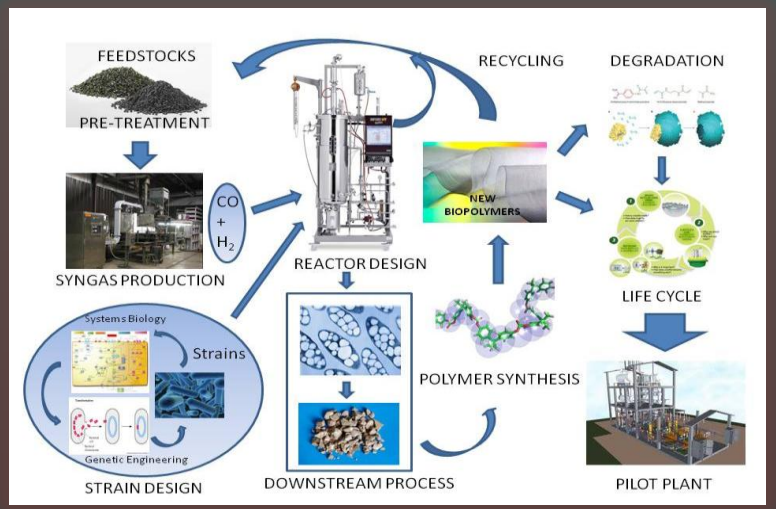
BEFESA
Befesa Gestión de Residuos Industriales, S.L.

The basic idea

of the SYNPOL project is the establishment of an integrated processing technology for the efficient synthesis of cost-effective commercial new biopolymers using the products derived from fermentation of syngas generated from very complex waste feedstocks.

R&D activities will be focused on the integration of innovative physico-chemical, biochemical, downstream and synthetic technologies to produce a wide range of new biopolymers, based on a number of novel and mutually synergistic production methods, and including an assessment on the environmental benefits and drawbacks related to the concept.

The SYNPOL platform allows the treatment and recycling of biological- and chemical-derived wastes and raw materials in a single integrated process.

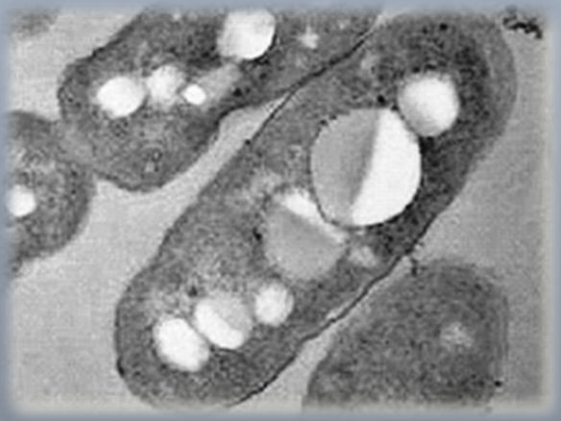


www.synpol.org

SYNPOL

Biopolymers from Syngas Fermentation

A Collaborative Project



The SYNPOL project has received funding from the European Union Seventh Framework Programme (FP7; 2007-2013) under grant agreement no. 311815.

SEVENTH FRAMEWORK PROGRAMME

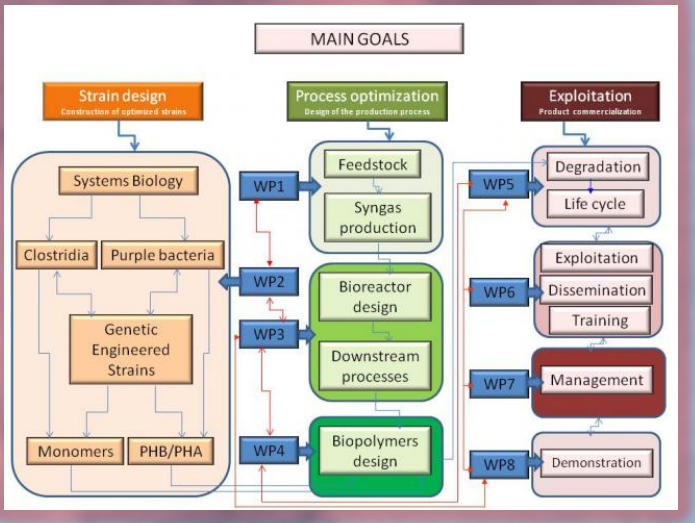
Complex wastes → Syngas production → Syngas fermentation → Biopolymers

The strategy

of the SYNPOL project aims at the establishment of a platform that will integrate syngas production and fermentation technologies for the cost-effective commercial production of high-added value biopolymers.
The project will also demonstrate the efficient and techno-economic feasible production of "green" fine chemicals using an overall sustainability assessment perspective.

The proposed work plan (see Figure) comprises three main goals:

1. Strain design.
2. Process optimization.
3. Exploitation.



(WP1) Production of syngas.
(WP2) Improvement of microorganisms.
(WP3) Fermentation design.
(WP4) Biopolymers design.
(WP5) Biopolymer degradation and life cycle.
(WP6) Exploitation, dissemination and training activities.
(WP7) Management.
(WP8) Demonstration.

Partnership

The project has a clear European dimension involving partners from public (8) and private (6) sectors from the research and industrial community.

They integrate their research effort on a European scale in order to persue ambitious long-term goals by developing new bacterial syngas fermentation techniques and producing high-added value compounds.

The participants are European leaders in their fields and many have work experience in other EU research projects, thus providing high performance and stable collaboration. The combination of different partners´ backgrounds allows us to have a holistic view of the problems, which we believe is crucial for success.