

SSUCHY

Sustainable structural and multifunctional bio-composites from hybrid natural fibres and bio-based polymers



Summary

The SSUCHY project seeks to contribute to developing bio-based composite products with advanced functionalities and high structural properties for transportation sectors and in high value market niches.

It will create opportunities to expand market applications for bio-based composites to semi-structural and functional applications in ground transportation and aerospace along with new opportunities in high value niches such as acoustics and electronic sectors.

It aims to exploit the intrinsic and differentiating properties of plant fibres and bio-based polymers to develop and enhance the functionalities of bio-based composites.

<https://www.ssuchy.eu/>

Type of Action:

Research & Innovation Action

Value Chain: VC1 –

lignocellulose

Start date: 01 September 2017

End date: 31 August 2021

BBI JU contribution: € 4,457,194.75

Objectives

The SSUCHY project has five core objectives:

1. Leverage the intrinsic properties of plant fibres to realise new functionalities in plant fibre composites (PFCs) and to create new opportunities in high value market niches, for example in next-generation of smart materials.
2. Take advantage of the availability and low cost of hemp fibres, along with their technical and environmental-friendly characteristics to market a high-performance plant fibre reinforcement for composite application at a competitive price.
3. Use the wide diversity of plant and polymeric fibres to create and design hybrid composites with specific properties and functionalities.
4. Take advantage of availability and versatility of ligno-cellulosic feedstock and the chemical building blocks it provides to develop biopolymers with improved physical properties while remaining essentially recyclable and/or biodegradable.
5. Deploy novel new fractionation processes for lignocellulosic biomass to generate

Expected impacts

The SSUCHY project expects to have the following impacts:

1. Increase the sustainability and the competitiveness of Europe's industry through engagement in the bio-based composite sector through the materials and process technologies it develops;
2. Create new bio-based composite structures and products and demonstrate their advanced functionalities at demonstrator level.

for lignin-derived monomers suitable for high-grade polymers synthesis.

- Université de Franche-Comté (France)
- Association Industries et Agro-ressources (France)
- Katholieke Universiteit Leuven (Belgium)
- University of Bristol (United Kingdom)
- Centre national de la recherche scientifique CNRS (France)

Communications Coordination

- Stockholm universitet (Sweden)
- École nationale d'ingénieurs de Tarbes (France)

Name: Stéphanie Clément

Organisation name: Akzo Nobel Functional Chemicals BV (The Netherlands)
IAR – The French Bioeconomy Cluster

Phone: +39 02 7523853
L'Industria Canapificio Nazionale Srl (Italy)

Email: CERAsAs (France)
clement@iar-pole.com

- Wilson Benesch Ltd (United Kingdom)
- Eadco GmbH (Germany)
- NPSP BV (The Netherlands)
- École nationale supérieure des arts et industries textiles (France)
- University of Derby (United Kingdom)
- Université Dijon Bourgogne (France)
- Università Cattolica del Sacro Cuore (Italy)

Project coordination

Name: Vincent Placet

Organisation name: Université de Franche-Comté (France)

Phone: +33 381666055