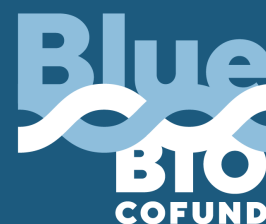


PlatiSea

Novel enhanced bioplastics from sustainable processing of seaweed

About the project

Conventional plastic materials are made from non-renewable resources and their pollution presents a global threat to marine environments. The EU recently voted for a complete ban of the most common single use plastics by 2021 which has significantly stimulated the interest in bio-based and biodegradable materials, particularly in the food packaging and service industries. However, bioplastics still face challenges related to sustainability of the feedstock, low biodegradability and/or recyclability and unsatisfactory properties, limiting their applications and widespread implementation. The main objective of PlatiSea is to develop novel bioplastic materials based on cultivated and wild underutilized species of brown algae. The project will thus provide an innovative and sustainable bioplastic substrate with promising properties, and simultaneously add value to a growing seaweed industry in Europe. The seaweed biomass will be processed to obtain polysaccharide-rich fractions, employing various degrees of refinement toward single-use biodegradable materials for food industries as well as higher-value applications in the biomedical and cosmetic sector. Novel bioplastic substrates will be developed with a focus on competitive structural properties and biodegradability, primarily toward single-use food packaging that is seldom recycled. Structuring technology will be developed toward pilot-scale production and future industrial-scale implementation after the project's end. Importantly, the value chain from raw material to finished products will be evaluated from an environmental and economic perspective to identify and address challenges and opportunities in scaling and ensure a sustainable pipeline for value creation. The PlatiSea consortium consists of partners from Norway, Sweden, Denmark and Spain, and combines research expertise with industrial innovation to achieve the goals of the project and fulfil the visions of the Blue Bioeconomy.



Project Overview

CALL 1 | 2019

Project Coordinator:

Dr. Øystein Arlov, SINTEF AS, Biotechnology and Nanomedicine, Trondheim, Norway

Project Partners:

- Mrs. Maren Sæther, Seaweed Energy Solutions AS, Trondheim, Norway
- Mr. Guy Maurice, B'ZEOS, Oslo, Norway
- Dr. Pere Castell, AITIIP TECHNOLOGICAL CENTRE, Zaragoza, Spain
- Dr. Massimo Pizzol, Aalborg University, Aalborg, Denmark
- Prof. Qi Zhou, KTH Royal Institute of Technology, School of Engineering Sciences in Chemistry, Biotechnology and Health, Stockholm, Sweden

Keywords:

Brown algae, bioplastics, biorefinery, alginate, cellulose

Priority Area:

Exploring new bioresources

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