



Integrated Catalytic **Recycling** of
Plastic Residues Into Added-Value
Chemicals

NEWSLETTER 4 – November 2020

iCAREPLAST just reached its half of lifetime (month 24).

Welcome to the **iCAREPLAST** newsletter!

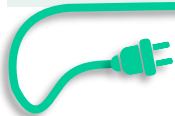
This is the fourth edition of our semi-annual newsletter series.

This SPIRE project started in October 2018 and has received funding from the European Union's Horizon 2020 research and innovation programme (G.A. N° 820770).

iCAREPLAST addresses the cost and energy-efficient recycling of a large fraction of today's non-recyclable plastics and multi-layered films. The process combines chemical routes (pyrolysis, catalytic and separation steps) to produce valuable chemicals.

Please, visit the website in order to learn more about the **iCAREPLAST** project in general, as well as find more detailed information on upcoming activities: <https://www.icareplast.eu/>

Your **iCAREPLAST** Team



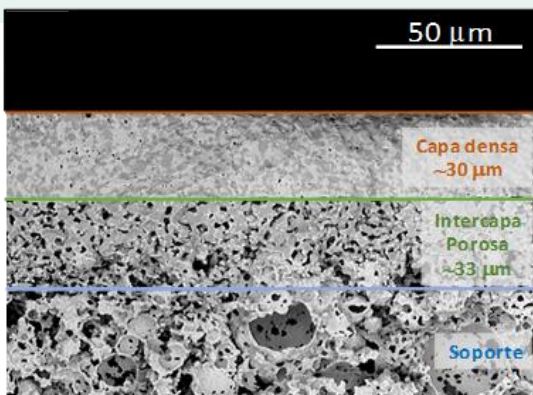
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More about.....KERIONICS

What KERIONICS does?

KERIONICS is a SME Technological Base Company, founded in 2014 as Spin-Off of the Institute of Chemical Technology (ITQ). KERIONICS is dedicated to the industrial development and commercialisation of an innovative system to produce highly energy-efficient and compact designs of industrial membrane modules for oxygen production with high purity (>99.5%) and low-cost O₂. Its principal activity is the R&D in the field of chemical engineering and ceramic technology, as well as the later exploitation of its own developments. KERIONICS possesses the inherent R&D attitude since it is a fully technological-based company.

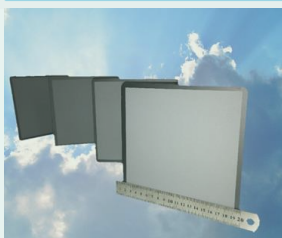
KERIONICS produces highly efficient Oxygen Transport Membranes (OTM) for air components separation. Specifically, OTM favour O₂ diffusion and permeation through them, while the N₂ is retained by the ceramic membrane. Thus, this OTM modules act as a oxycombustion reactor when a fuel is efficiently burned without any pollutants as a by-products, such as NO_x and CO₂, which can be easily captured. Hence, KERIONICS provides a new alternative oxygen production method which presents higher levels of purity, affordability, energy savings and environmental friendliness than existing methods.



Which is KERIONICS role in iCAREPLAST Project?

KERIONICS performs the following tasks:

KERIONICS



Coordination of project **communication** and **dissemination plan**.



Design, building and testing of **oxycombustion membrane reactor** for complete combustion of fuel gas.



Evaluation of the valorisation of different **fuel side streams**.



iCAREPLAST Meetings

All partners met virtually via Microsoft TEAMS to have a Plenary Meeting corresponding to M24. The Plenary Meeting took place online last month with great success due to the support collaboration from the whole consortium. Learn more about the meetings [here](#).

iCAREPLAST joined Plastics Circularity Multiplier (PCM)

iCAREPLAST joined [PCM](#) and takes part of a group of the most interesting innovation projects related to boost circular economy for plastics. The initiative aims to perform the synergies of EU-funded projects in the field of plastic circularity and coordinating communication and dissemination activities.



iCAREPLAST Video

As a reminder, our first project video was launched, presenting the challenges, our solution and the consortium. Watch it!

<https://youtu.be/1sSNRRSldTY>



Dissemination Events

During this period, very few dissemination activities could be celebrated due to COVID-19. Nevertheless, José Serra, from CSIC presented the main features of the iCAREPLAST project in an Online Conference within a PCM event. Check the [link](#) to go into detail about the events.



Upcoming Events

- 3rd Advisory Board Meeting → 24th November 2020, online
 - **Chemical Recycling of Plastics Workshop: iCAREPLAST SOLUTION & PERCEPTION.**
- (date to be announced). Participation is free of charge. [Flyer and Registration Form available.](#)



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