

Liberate

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Lignin Biorefinery Approach using Electrochemical Flow

H2020-NMBP-SPIRE-2018

CE-SPIRE-02-2018

Processing of material feedstock using non-conventional energy sources (IA)

Collaborative project

Start date of the project: 1^o October 2018

Duration 48 months

D 8.1- Creation of project website for internal and external use

WP	8	Dissemination and Communication			
Dissemination level ¹		PU	Due delivery date		31/12/2018
Nature ²		O	Actual delivery date		03/01/2019

Lead beneficiary	LEITAT
Contributing beneficiaries	

Version	Date	Author	Partner	Email	Comments ³
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¹ Dissemination level: **PU** = Public, **PP** = Restricted to other programme participants (including the JU), **RE** = Restricted to a group specified by the consortium (including the JU), **CO** = Confidential, only for members of the consortium (including the JU)

² Nature of the deliverable: **R** = Report, **P** = Prototype, **D** = Demonstrator, **O** = Other

³ Creation, modification, final version for evaluation, revised version following evaluation, final

Deliverable abstract

This deliverable aims to present the communication materials developed for the LIBERATE project in order to assure a high-quality communication during its execution. Several materials were created in digital and printed format. This includes a website, a leaflet, a roll-up and a Twitter account. Its use by all the partners will greatly increase the project's visibility.

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1. Introduction

The communication materials of LIBERATE aim to provide support to all partners to ensure the dissemination and communication of development, testing and demonstration results into European and global biorefineries market and industry. This task runs during the whole project duration in order to achieve as early as possible grounding toward successful communication, dissemination and exploitation of project results. The activities aim at communicating and disseminating information and results of the project within the partners and outside the consortium.

For the communication (defined as the promotion of the project and its results in a non-specialised language), the messages will concentrate on the following themes: the electrochemical depolymerisation, the electrochemical oxidation, the biorefineries and the circular economy.

The materials produced will be updated during the project lifetime and aim to demonstrate how LIBERATE results are cutting-edge contributions to the European Innovation Union. These materials will be used during every type of event, face-to-face meeting, scientific conferences, workshops, and networks such as ETPs. The LIBERATE consortium will also establish linkages and collaborations with relevant other projects and initiatives to amplify the impact of the project. An important event will be the design and organisation of the final LIBERATE project conference. For these events, good communication materials are essential.

2. Website

LIBERATE benefits are shown since the beginning of the project on the website (<http://www.liberate-project.eu/>) that presents the project objectives and activities. It is the project's main digital communication channel and is being updated on a regular basis.

It aims to present the project in a visual and attractive way. As the activities of the project are easy to represent in a graphical manner, the consortium will try to benefit from it as much as possible to ensure an excellent communication.

The first page shows the great characteristics of the project's electrochemical plant concept, its efficiency and performance with visual images that show the biorefinery process in which the project consist. A button drives the visitor to the next page of the website, which explains in greater detail the objectives of the project. There is a progression of complexity of the information, starting with simple information to more and more complex one in order that each visitor can pick the amount of information he/she is seeking for.

The news section is updated regularly with important news related to the project such as meetings. In the future, intermediary results will also be published to inform the stakeholders about the public developments.

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Liberate Project

Design of an electrochemical plant to demonstrate the commercial opportunities of converting low cost lignin feedstock in high value biosustainable chemicals such as vanillin, antioxidants or polyamide.

[More about the project](#)

The idea is to convert lignin (low cost material) in different chemicals (high value and biosustainable) by means electricity in an electrochemical reactor.

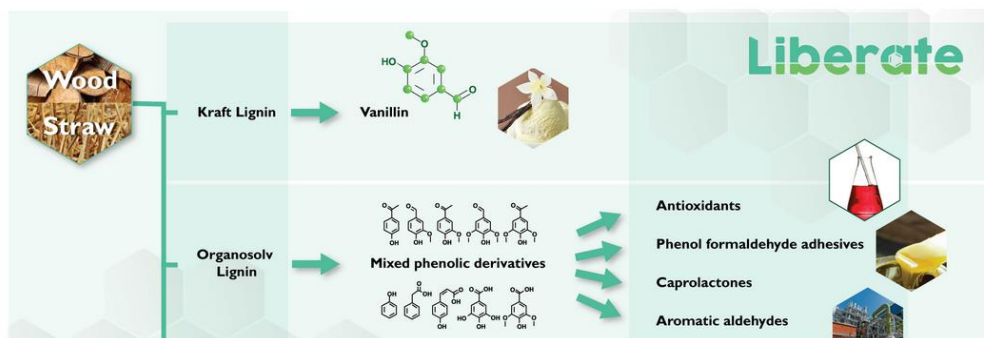
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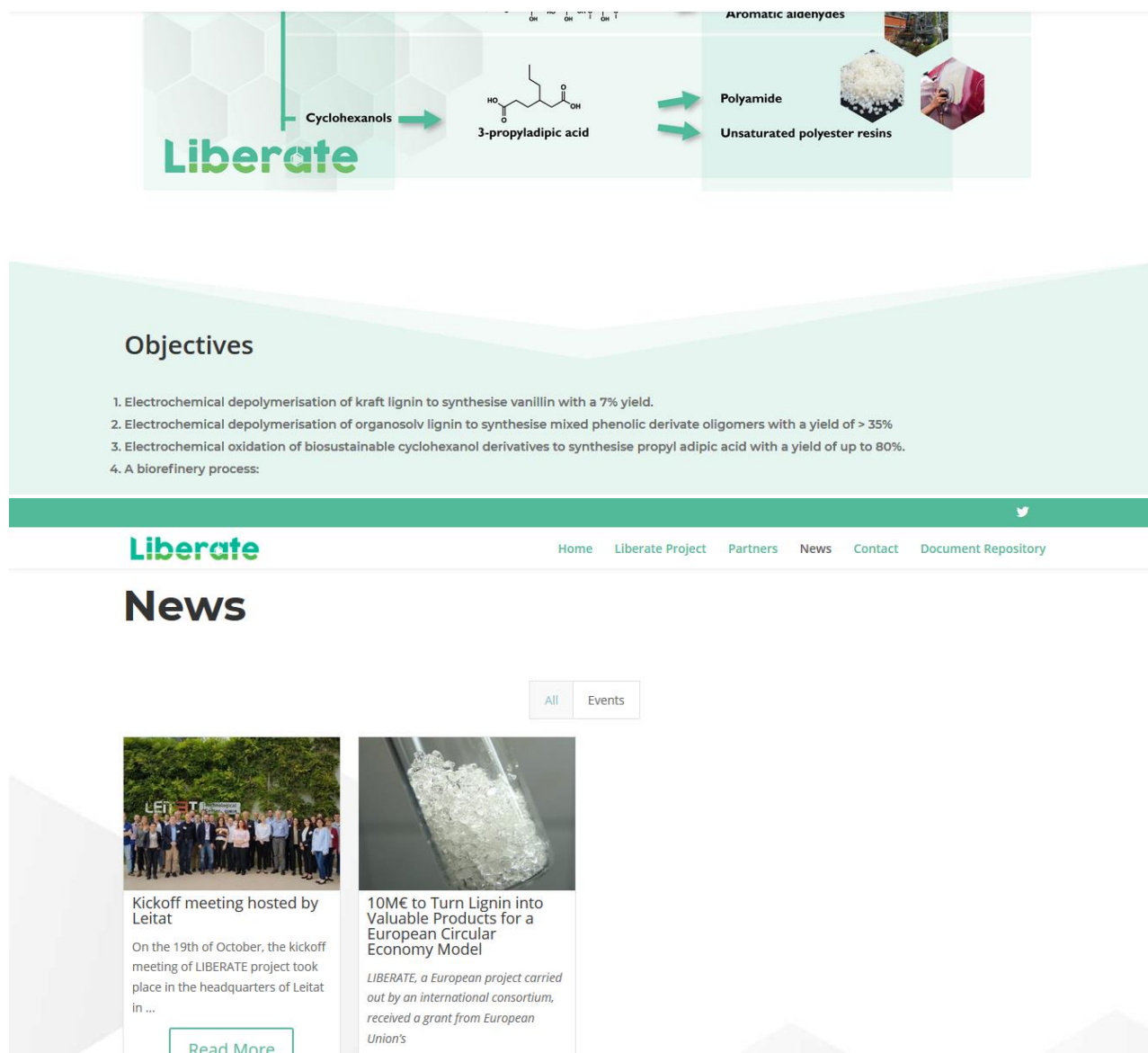
graph LR
    A[Lignin from wood feedstock  
(low value chemical)] --> B[Electricity]
    B --> C[Phenol  
(high value chemical)]
    
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Project

Pilot scale electrochemical plant to demonstrate the commercial opportunities of converting low cost lignin feedstock in high value biosustainable chemicals such as vanillin, antioxidants or polyamide.





2.1 Repository Document

A private and secure Repository Document (<https://docs.leitat.org>) based in a cloud open source software is available for the partners of the project. They can access through the website with its username and password and use it to share documents with others from the Consortium. The partners can freely share all type of archives and download them easily from this repository. It is a simple and intuitive tool to facilitate the collaboration between partners.

3. Leaflet

The second communication material of LIBERATE is the leaflet, which is distributed in printed and digital format. In 8 pages, it aims to present visually and graphically the activities of the project in an attractive manner.

It is used for any face to face meeting, public event, conference or any other occasion by the partners to promote the project and inform stakeholders.

According to the needs of the consortium, more will be printed or new versions will be published including updated information.





System demonstrator

Design
Construction



Validation

Energetic
Business
LCA



Market

Antioxidant
Phenolformaldehyde
Caprolactones
Aromatic aldehydes
Polyamide
Polyester

OBJECTIVES

- 01 Electrochemical depolymerisation of kraft lignin to synthesise vanillin with a 7% yield.
- 02 Electrochemical depolymerisation of organosolv lignin to synthesise mixed phenolic derivative oligomers with a yield of > 35%.
- 03 Electrochemical oxidation of biosustainable cyclohexanol to synthesise propylidipic acid with a yield of up to 80%.
- 04 A biorefinery process:
 - Capable of accommodating renewable energy fluctuations without loss in efficiency
 - Exhibits a 95% improvement in the energy efficiency of the process and 350% improvement in resource efficiency
 - Produce 29 times less CO₂ than the conventional petrochemical alternatives

PARTNERS



Universitat d'Alacant
Universidad de Alicante



LEITAT
managing technologies



JGU
JOHANNES GUTENBERG
UNIVERSITÄT MAINZ



MEGARA RESINS
RESIN TECHNOLOGY



Perstorp



EVONIK
REACTORS



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TNO
Innovation for life



CONDIA
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SINTEF



NXF
filtration



Idener



ANSC
ENVIRONMENTAL SOLUTIONS



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4. Roll-up

The roll-up is a further communication material that will rather be used in a printed format during events such as fairs and conferences where the project will have a stand. It aims to explain very briefly that LIBERATE is developing a pilot scale electrochemical plant which owns some interesting characteristics that allow it to convert low cost lignin into high-value biosustainable chemicals. It should attract attention and be visually appealing.

As the leaflet and according to the needs, new versions will be created along the development of the project.



5. Social media

The project created a Twitter account for two main purposes: the first one, to communicate smaller pieces of news and to amplify the ones published on the website to drive traffic; and the second one, to interact with stakeholders, mainly industries in the field of biorefineries and to raise awareness around LIBERATE.

All members of the consortium are encouraged to actively provide content and tweet about their activities to position LIBERATE as a reference in the field.



6. Conclusion

The communication materials produced for LIBERATE are already and will be for the entire project of a great help for all the consortium members. It will help them to promote a common image and with high quality materials that will improve the quality of the message. For digital or physical communication, these materials will be of a great help.

The materials will be updated on a regular basis whenever it is considered necessary by the consortium to make sure that the content is aligned with the current state of the project and the strategy of the consortium.