



Lignin Biorefinery Approach using Electrochemical Flow

Fact Sheet

Project Information

LIBERATE

Grant agreement ID: 820735

Project website 

DOI

10.3030/820735 

Project closed

EC signature date

27 September 2018

Start date

1 October 2018

End date

31 March 2023

Funded under

INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Advanced manufacturing and processing

Total cost

€ 10 050 549,60

EU contribution

€ 8 763 489,00

Coordinated by

ACONDICIONAMIENTO
TARRASENSE ASSOCIACION



Spain

This project is featured in...



Decarbonisation, energy efficiency and circularity for a climate-neutral and sustainable EU

Project description

Converting ubiquitous lignin into value-added chemicals

Lignin is one of the most abundant organic polymers on Earth, exceeded only by cellulose. Its depolymerisation into value-added products would yield great environmental benefits. The EU-funded LIBERATE project aims to convert low-cost lignin feedstock from wood into high-value and sustainable chemicals through an electrochemical process. For this, it will deliver a pilot-scale electrochemical plant to demonstrate lignin conversion into chemicals such as vanillin and mixed phenolic derivatives, currently stemming from fossil energy sources. By developing the electrochemical lignin biorefinery, LIBERATE will help Europe move a step closer to a circular economy model – making the energy industry less dependent on imported oil and reducing its environmental footprint.

Fields of science (EuroSciVoc)

[engineering and technology](#) > [environmental engineering](#) > [energy and fuels](#) > [renewable energy](#)



Keywords

[Electrochemical](#)

[lignin](#)

[biorefinery](#)

[flow reactor](#)

Programme(s)

[H2020-EU.2.1.5. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Advanced manufacturing and processing](#)

MAIN PROGRAMME

Topic(s)

[CE-SPIRE-02-2018 - Processing of material feedstock using non-conventional energy sources \(IA\)](#)

Call for proposal

[H2020-NMBP-ST-IND-2018-2020](#)

[See other projects for this call](#)

Sub call

H2020-NMBP-SPIRE-2018

Funding Scheme

[IA - Innovation action](#)

Coordinator



ACONDICIONAMIENTO TARRASENSE ASSOCIACION

Net EU contribution

€ 1 000 801,00

Total cost

€ 1 000 801,10

Address

CARRER DE LA INNOVACIO 2

08225 Terrassa



Spain



Region

Este > Cataluña > Barcelona

Activity type

Research Organisations

Links

Participants (15)



NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO

 Netherlands

Net EU contribution

€ 369 860,00

Address

ANNA VAN BUERENPLEIN 1

2595 DA Den Haag 

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 369 860,00



JOHANNES GUTENBERG-UNIVERSITAT MAINZ

 Germany

Net EU contribution

€ 916 745,00

Address

SAARSTRASSE 21

55122 Mainz 

Region

Rheinland-Pfalz > Rheinhessen-Pfalz > Mainz, Kreisfreie Stadt

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 916 745,00



FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV

 Germany

Net EU contribution

€ 807 540,00

Address

HANSASTRASSE 27C

80686 Munchen 

Region

Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 807 540,00



SINTEF AS

 Norway

Net EU contribution

€ 2 060 545,25

Address

STRINDVEGEN 4

7034 Trondheim 

Activity type

Research Organisations

Links

- [Contact the organisation](#)
- [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

€ 2 060 546,00



IDENER TECHNOLOGIES SL

Spain

Net EU contribution

€ 263 200,00

Address

CALLE EARLY OVINGTON 4 NAVE 8
41300 Sevilla

SME

Yes

Region

Sur > Andalucía > Sevilla

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#)
- [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

€ 376 000,00



OXIRIS CHEMICALS SA

Spain

Net EU contribution

€ 207 622,00

Address

CARRETERA C-35 KM 59
08470 Sant Celoni 

Region
Este > Catalunya > Barcelona

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
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[Participation in EU R&I programmes](#) 
[HORIZON collaboration network](#) 

Total cost
€ 296 603,75



**CHIMAR (HELLAS) AE - ANONYMI VIOMICHANIKI KAI EMPORIKI ETAIREIA
CHIMIKON PROIONTON**

 Greece
Net EU contribution
€ 209 499,00

Address
**15 KM NATIONAL ROAD THESSALONIKI POLYGYROS
570 01 THERMI THESSALONIKI** 

SME 
Yes

Region
Βόρεια Ελλάδα > Κεντρική Μακεδονία > Θεσσαλονίκη

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
[Contact the organisation](#)  [Website](#) 
[Participation in EU R&I programmes](#) 
[HORIZON collaboration network](#) 

Total cost
€ 299 285,00



INVESTORNET-GATE2GROWTH APS

 Denmark

Net EU contribution

€ 247 983,75

Address

DIPLOMVEJ 381 ST
2800 Kgs Lyngby 

SME 

Yes

Region

Danmark > Hovedstaden > Københavns omegn

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#)  [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

€ 354 262,50



UNIVERSIDAD DE ALICANTE

 Spain

Net EU contribution

€ 604 872,00

Address

CAMPUS DE SAN VICENTE RASPEIG
03690 Alicante 

Region

Este > Comunitat Valenciana > Alicante/Alacant

Activity type

Higher or Secondary Education Establishments

Links

- [Contact the organisation](#)  [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

€ 604 872,50



MEGARA RESIN INDUSTRY - ANASTASIOSFANIS SA

Greece

Net EU contribution

€ 337 278,00

Address

38TH KM NEO ATHINON KORINTHOU MEGARA ATTIKI
191 00 Megara

SME

Yes

Region

Αττική > Αττική > Δυτική Αττική

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#)
- [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

€ 481 826,25



ENSO INNOVATION SL

Spain

Net EU contribution

€ 163 023,00

Address

JUAN DE LA CIERVA 5 LA GRELA
15008 A Coruna

SME

Yes

Region

Noroeste > Galicia > A Coruña

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- Contact the organisation
- Participation in EU R&I programmes
- HORIZON collaboration network

Total cost

€ 232 891,25



CONDIAS GMBH

Germany

Net EU contribution

€ 568 839,00

Address

FRAUNHOFER STRASE 1B
25524 Itzehoe



Region

Schleswig-Holstein > Schleswig-Holstein > Steinburg

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- Contact the organisation
- Participation in EU R&I programmes
- HORIZON collaboration network

Total cost

€ 812 627,50



EVONIK OPERATIONS GMBH

Germany

Net EU contribution

€ 257 959,00

Address

RELLINGHAUSER STRASSE 1-11
45128 Essen



Region

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

€ 368 513,75



PERSTORP AB

Sweden

Net EU contribution

€ 410 725,00

Address

20125 Perstorp

Region

Södra Sverige > Sydsverige > Skåne län

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

€ 586 750,00



NX FILTRATION BV

Netherlands

Net EU contribution

€ 336 997,00

Address

INSTITUTENWEG 35
7521 PH Enschede 

SME 

Yes

Region

Oost-Nederland > Overijssel > Twente

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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[HORIZON collaboration network](#) 

Total cost

€ 481 425,00

Last update: 15 July 2024

Permalink: <https://cordis.europa.eu/project/id/820735>

European Union, 2025