Biocatalytic membranes for micro/nano plastic degradation within waste water effluents

Fact Sheet

Project Information

**BMReX**
Grant agreement ID: 101099528

**DOI**
10.3030/101099528

Funded under
The European Innovation Council (EIC)

Total cost
€ 3,213,793.75

EU contribution
€ 3,213,793.50

Coordinated by
AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS
Spain

Project description

A safer and more efficient way to recycle wastewater

The presence of micro- and nano-plastics in our ecosystems is one of the biggest environmental challenges of our time. With the widespread use of plastic-based materials, these harmful particles are now found in marine and freshwater environments as well as terrestrial ecosystems. Despite their small size, they pose a growing threat to human health and ecosystem services. The EU-funded BMReX project will develop a biocatalyst-based membrane reactor technology to remove micro/nano-plastics from household and industrial wastewater effluents using a
combination of enzymes and porous inorganic scaffolds. The technology will be designed to resist biofouling and maximise biocatalytic activity, making it more efficient and safer for in situ wastewater recycling. BMRex aims to transform how society uses plastic, promoting a more sustainable future.

Fields of science

- engineering and technology
- environmental engineering
- waste management
- waste treatment processes
- recycling
- water treatment processes
- wastewater treatment processes
- natural sciences
- biological sciences
- ecology
- ecosystems
- natural sciences
- biological sciences
- biochemistry
- biomolecules
- proteins
- enzymes
- natural sciences
- biological sciences
- zoology
- invertebrate zoology

Programme(s)

- HORIZON.3.1 - The European Innovation Council (EIC)

Topic(s)

- HORIZON-EIC-2022-PATHFINDEROPEN-01-01 - EIC Pathfinder Open 2022

Call for proposal

- HORIZON-EIC-2022-PATHFINDEROPEN-01

See other projects for this call

Funding Scheme

- EIC - EIC

Coordinator
AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS

Net EU contribution
€ 678,505,00

Address
Calle serrano 117
28006 Madrid
Spain

Region
Comunidad de Madrid > Comunidad de Madrid > Madrid

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

Other funding
€ 0,00

Participants (7)

DANMARKS TEKNISKE UNIVERSITET

Net EU contribution
€ 461,308,75

Address
Anker engelunds vej 101
2800 Kongens lyngby

Region
Danmark > Hovedstaden > Københavns omegn

Activity type
Higher or Secondary Education Establishments

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

Other funding
€ 0,00
UNIVERSIDAD COMPLUTENSE DE MADRID

Spain

Net EU contribution

€ 528 513,75

Address

Avenida de seneca 2
28040 Madrid

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Higher or Secondary Education Establishments

Links

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

Other funding

€ 0,00

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ASOCIACION CENTRO DE INVESTIGACION COOPERATIVA EN BIOMATERIALES- CIC biomaGUNE

Spain

Net EU contribution

€ 305 591,00

Address

Paseo miramon 182, parque tecnologico de san sebastian edificio empresarial c
20009 San sebastian

Region

Noreste > País Vasco > Gipuzkoa

Activity type

Research Organisations

Links

Contact the organisation  Website  Participation in EU R&I programmes  HORIZON collaboration network
JOHANNES GUTENBERG-UNIVERSITAT MAINZ
Germany
Net EU contribution
€ 363 750,00
Address
Saarstrasse 21
55122 Mainz
Region
Rheinland-Pfalz > Rheinhessen-Pfalz > Mainz, Kreisfreie Stadt
Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

CETAQUA, CENTRO TECNOLOGICO DEL AGUA, FUNDACION PRIVADA
Spain
Net EU contribution
€ 257 625,00
Address
Carretera d’esplugues 75 local 1-2
08940 Cornella de llobregat barcelona
Region
Este > Cataluña > Barcelona
Activity type
Research Organisations
Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network
Other funding
€ 0,00

REPSOL SA
Spain
Net EU contribution
€ 400 750,00
Address
Calle mendez alvaro 44
28045 Madrid
Region
Comunidad de Madrid > Comunidad de Madrid > Madrid
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
Other funding
€ 0,00

ASA SPEZIALENZYME GMBH
Germany
Net EU contribution
€ 217 750,00
Address
Am exer 19 c
38302 Wolfenbüttel
SME
Yes
Region
Niedersachsen > Braunschweig > Wolfenbüttel
Links
SWANSEA UNIVERSITY

United Kingdom

Net EU contribution

€ 0,00

Address
Singleton park
SA2 8PP Swansea

Region
Wales > West Wales and The Valleys > Swansea

Activity type
Higher or Secondary Education Establishments

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

Other funding
€ 0,00

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