Bioelectrochemical anaerobic oxidation of ammonia for sustainable N removal from wastewater

Fact Sheet

Project Information

**ELECTRAMMOX**

Grant agreement ID: 894525

DOI

[10.3030/894525](10.3030/894525)

Project terminated on 14 June 2022

**Funded under**

EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

**Total cost**

€ 172,932.48

**EU contribution**

€ 172,932.48

**Coordinated by**

METFILTER SOCIEDAD LIMITADA

Spain

Project description

**Energetic bacteria remove both organic carbon and nitrogen from wastewater**

Biological wastewater treatment is not a new idea. It harnesses the natural ability of some bacteria and other microorganisms to degrade organic matter. Over the last decade, many scientists have turned their attention to microbial electrogenesis in which the decomposition of organic or inorganic carbon is paired with the release of electrons extracellularly. Microbial electrogenesis can be harnessed by wastewater treatment facilities to generate electricity or to produce fuels. The Spanish SME
METfilter has developed a technology based on microbial electrogenesis that significantly enhances wastewater treatment in constructed wetlands (engineered wetlands designed to treat waterborne pollutants). Within the scope of the EU-funded ELECTRAMMOX project, scientists are identifying electrogenic microbes that additionally remove nitrogen from wastewater for a holistic biological wastewater treatment process.

### Fields of science

- Engineering and Technology > Environmental Engineering > Water Treatment Processes > Wastewater Treatment Processes
- Natural Sciences > Biological Sciences > Microbiology > Bacteriology
- Natural Sciences > Chemical Sciences > Electrochemistry > Electrolysis
- Engineering and Technology > Chemical Engineering > Separation Technologies > Desalination
- Natural Sciences > Chemical Sciences > Catalysis

### Keywords

- Microbial electrocatalysis
- Nitrogen removal
- Wastewater
- Nitrification
- Bioelectrochemical systems

### Programme(s)

- H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions [MAIN PROGRAMME]
- H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility

### Topic(s)

- MSCA-IF-2019 - Individual Fellowships

### Call for proposal

- H2020-MSCA-IF-2019

See other projects for this call
Funding Scheme

MSCA-IF - Marie Skłodowska-Curie Individual Fellowships (IF)

Coordinator

METFILTER SOCIEDAD LIMITADA
Net EU contribution
€172,932.48

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Region
Sur > Andalucía > Sevilla

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

Other funding
€0,00

EC signature date 16 March 2020
Last update: 24 July 2023

Permalink: https://cordis.europa.eu/project/id/894525

European Union, 2023