

## Main Room

**Monday,  
13<sup>th</sup>**  
September 2021

### 9:00-12:30 EU-ISMET WORKSHOP

#### 9:00-9:15 Welcome session

Chair: *Narcís Pous*

9:00-09:50 W1: Introduction to microbialelectrochemistry: fundamentals and characterization tools. *Bernardino Virdis* (University of Queensland)

10:00-10:50 W2: On the thermodynamics of electroactive microorganisms

*Benjamin Korth* (Helmholtz Center for Environmental Research)

11:00-11:50 W3: How basic biology research can inspire us to innovate in microbial electrochemistry. *Sara Tejedor-Sanz* (Rice University)

12:00-12:30 Separated meetings for screen-to-screen discussion with workshop speakers (**Networking area**)

### 14:00-14:30 Opening ceremony

*Annemiek ter Heijnen & Sebastià Puig*

### 14:30-15:10 Plenary: "Mediator-based electroactivity for biotechnological applications"

*Miriam Rosebaum*

### 15:15-16:35 Parallel Session 1: Fundamentals of the electron transfer processes

Chair: *Catarina Paquete*

In situ and non-destructive real time microscopic investigation of multi-species electroactive biofilms on transparent microfluidic BES. *Lucila Martinez Ostormujof*

La persistència de l'entropia: Measuring the microbial electrochemical Peltier heat of different electrode materials. *Benjamin Korth*

Role of phenazine-enzyme physiology for current generation in a bioelectrochemical system. *Anthony Chukwubuikem*

Exploration of the reactivity of multiheme cytochromes and how it can be improved for (bio)electrocatalysis. *Ricardo Louro*

Degustació de pernil a diferent voltatge de l'ànode: The influence of the anode potential on single cell yield coefficients of *Geobacter sulfurreducens*. *Francesco Scarabotti*

16:35 – 16:45 Coffee Break

### 16:45-18.05 Parallel Session 3: Fundamentals of the electron transfer processes

Chair: *Lluís Bañeras*

Crossing the wall: extracellular electron transfer in Gram-positive bacteria. *Catarina Paquete*

Extracellular electron transfer in a C. ljungdahlii-based platform for microbial electrosynthesis. *Santiago Treceño Boto*

Bioelectrochemical characterization of a cytochrome belonging to the NapC/NirT family from *Sideroxydans lithotrophicus* ES-1. *Anáisa Coelho*

Charge transfer parameters through biofilms of an enhanced current-producing *Geobacter sulfurreducens* strain reveal increased electron transfer diffusion rate. *Fernanda Jimenez Otero*

Electron uptake in MES: How does *Sporomusa ovata* accept electrons at the cathode?. *Joana Madjarov*

### 18:05-19:00 Social event. Girona guided tour

Note: The time zone is UTC+2.

## Room 2

### 15:15-16:35 Parallel Session 2: Commercialisation, Scale-up of METs

Chair: *Esteve Núñez Abraham*

Scaling Up of Electro-Stimulated Anaerobic Reactor (ELSARTM) in the industrial wastewater treatment sector.

*Antonio Gimenez Lorang*

Competitive advantages of a circular bioeconomy based on microbial electrosynthesis and CO<sub>2</sub>.

*Jamin Wood*

IoT biosensing: a microbial electrochemical sensor for monitoring water quality.

*Antonio Berna*

Wastewater treatment with a 1000 L microbial fuel cell: a 16-month experience.

*Fabian Fischer*

Role of the C/N ratio in the feeding solution of a micro pilot microbial electrolysis cell aimed at biogas upgrading.

*Lorenzo Cristiani*

16:30-16:45 Coffee Break

### 16:45-18.05 Parallel Session 4: Commercialisation, Scale-up of METs

Chair: *Juan Antonio Baeza Labat*

Full scale operation of decentralized urban wastewater using METland® technology.

*Abraham Esteve-Núñez*

Development of Innovative Soil Microbial Fuel Cells for Energy Harvesting.

*Jakub Dziegielowski.*

Increasing the voltage in series-stacked bioelectrochemical systems, a road towards technology up-scaling.

*Pau Bosch-Jimenez*

Life cycle assessment of Microbial Electrosynthesis.

*Siddharth Gadkari*

MIDES H2020 Project: Microbial Desalination for Low Energy Drinking Water. From lab-scale concept to Pilot Plant validation.

*Juan Manuel Ortiz*

**Monday,  
13<sup>th</sup>**  
September 2021