



**Alessandro Alfredo Carmona
Martínez**

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

Scientific Manager of Environmental related projects with experience achieved in Spain and France after obtaining my Ph.D. (dr.rer.nat) in Germany and M.Sc. and B.Sc. in Mexico.

Environmental Scientist certified by the following Entities:

- Spain: National Agency for Quality Assessment and Accreditation (Certification: PhD Assistant Lecturer).
- Mexico: National Council of Science and Technology (Certification: Level 1).

Teaching Areas of Interest:

- Environmental Engineering.
- Environmental Chemistry.
- Applied Microbiology.
- Biological Methods of Wastewater Treatment.
- Biological Production of Renewable Energy (Biogas, Biohydrogen, etc.).
- Microorganisms Electrochemistry.
- Environmental Biotechnology.

At my most recent affiliation I was in charge of managing (under the guidance of the PI of the group) IMDEA's technical work package of the H2020 project iMETland, a project that sought the scaling-up of a novel Wastewater treatment technology based on electroactive bacteria for small municipalities.



Some of my duties as a Project Manager were:

- ▣ Management of the technical activities.
- ▣ Start-up, operation and maintenance of a novel pilot plant located at IMDEA' facilities.
- ▣ Extensive "hands-on" laboratory work.
- ▣ Preparation of technical documentation and purchase management.
- ▣ Dissemination and communication activities.
- ▣ Support financial department for financial statements.

Brief list of projects that I have managed / been involved in the past 7 years:

- ▣ iMETland: "Microbial Electrochemical Wetland for effective decentralized wastewater treatment".
- ▣ MIDES: "Microbial Desalination for Low Energy Drinking Water".
- ▣ BIORARE: "Microbial electrosynthesis for environmental biorefineries".
- ▣ DéfiH12: "Microbial electrolysis cell for bio-hydrogen production".

During my professional experience I have worked in challenging, highly demanding, multicultural and multidisciplinary research teams where I have been able to develop strong analytical, problem solving and management skills.

My mother tongue is Spanish and I am highly proficient in spoken and written English. I am also able to successfully communicate with native French and German speakers, both at a business and technical level.

I seek a position in a research institution or company that encourages the development of technologies that solve environmental problems and promotes intellectual growth by utilising my expertise and skills.

Alessandro Carmona, PhD

"Environmental Microbial Electrochemistry"

Scopus: Publications (19) / Citations (820) / h-index (14)

Certified Scientist by CONACyT & ANECA

Scientific Project Manager & Researcher at: IMDEA Water & INRA-LBE

Visiting Researcher at: IPICYT & VU Amsterdam

PhD, MSc & BSc from: TU-Braunschweig, CINVESTAV & UPIBI

Mobile: (+34) 6 44 42 49 11

Email: alessandro.carmona@gmail.com

Skype: [alessandro.carmona](https://www.skype.com/people/alessandro.carmona)

Web: alessandrocarmona.com (see Current CV there in)



General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

- ✓ Scopus ID: 13606775100.
- ✓ ORCID: 0000-0002-3015-6802.
- ✓ Documents: 20.
- ✓ Citations: 84 total citations in 692 documents (Source: Scopus).
- ✓ h-index: 14.
- ✓ Co-authors: 57.
- ✓ Publications in the first quartile Q1: 17



Alessandro Alfredo Carmona Martínez

Surname(s): **Carmona Martínez**
Name: **Alessandro Alfredo**
ORCID: **0000-0002-3015-6802**
ScopusID: **13606775100**
ResearcherID: **J-1352-2014**
Land line phone: **(+34) 941 393 971**
Fax: **(+34) 941 393 971**
Email: **alessandro.carmona@gmail.com**
Mobile phone: **644424911**
Personal web page: **http://www.alessandrocarmona.com**

Current professional situation

Employing entity: Electrochemistry & Environmental Biotechnology Consulting
Type of entity: Business
Professional category: Consulting Specialist
Start date: 01/04/2018
Type of contract: Project-to-Project Basis
Dedication regime: Part time
Primary (UNESCO code): 221005 - Electrochemistry; 330530 - Sewers and water purification; 330810 - Sewage technology
Performed tasks: Independent Reviewer of Scientific and Technical Projects involving: • Wastewater bio-based treatment technologies. • Gaseous Biofuels Production such as Biogas, Biohydrogen and Molecules.

Previous positions and activities

	Employing entity	Professional category	Start date
1	IMDEA Water Institute: Madrid Institute of Advanced Studies	Researcher	01/01/2018
2	IMDEA Water Institute: Madrid Institute of Advanced Studies	Project Manager and Researcher	01/03/2016
3	National Institute of Agricultural Research	Project Manager and Researcher	01/01/2014
4	National Institute of Agricultural Research	Project Manager and Researcher	02/07/2012
5	G-A Ambiental S.A. de C.V.	Consulting Engineer	01/01/2008

- 1** **Employing entity:** IMDEA Water Institute: Madrid Institute of Advanced Studies
Type of entity: R&D Centre
Professional category: Researcher
Start-End date: 01/01/2018 - 28/02/2018
Duration: 2 months
Type of contract: Temporary employment contract
Performed tasks: H2020 MIDES project: "Microbial desalination for low energy drinking water" | +info: <https://cordis.europa.eu/project/rcn/200811/factsheet/en> □ Description: The MIDES project aims to revolutionise desalination by developing a sustainable low-energy process of producing safe



drinking water, using Microbial Desalination Cells (MDC). Duties: ✓ Extensive "hands-on" laboratory work on halotolerant bacteria capable of producing an electric current for Wastewater treatment applications. ✓ Tutoring the experimental work of M.Sc. Student whose thesis was selected as one of the best in the academic year 2018. € Laboratory supplies financed by the: "European Union's Horizon 2020 research and innovation programme under grant agreement No. 685793".

Identify key words: Bioelectrochemical; Waste water; Water treatment

2 Employing entity: IMDEA Water Institute: Madrid **Type of entity:** R&D Centre
Institute of Advanced Studies

City employing entity: Spain

Professional category: Project Manager and Researcher **Educational Management (Yes/No):** No

Start-End date: 01/03/2016 - 28/02/2018 **Duration:** 2 years

Type of contract: Temporary employment contract

Dedication regime: Full time

Primary (UNESCO code): 239100 - Environmental Chemistry; 330309 - Electrochemical operations; 330530 - Sewers and water purification; 330800 - Environmental technology and Engineering

Performed tasks: | European H2020 iMETland Project: "A new generation of Microbial Electrochemical Wetland for effective decentralized wastewater treatment" | +info: <https://cordis.europa.eu/project/rcn/196823/factsheet/en> □ Description: iMETland project aimed to construct and validate a full-scale application of a eco-friendly device to treat urban wastewater from small communities at zero-energy operation cost. ✓ Management of the technical activities of the Work Package. ✓ Start-up, operation and maintenance of a novel pilot plant located at IMDEA. ✓ Extensive "hands-on" laboratory work on electroactive biofilters. ✓ Preparation of technical documentation and purchase management. ✓ Dissemination and communication activities. ✓ Support financial department for financial statements. ✓ Tutoring of a M.Sc. Student. € Salary financed by: "European Union's Horizon 2020 research and innovation programme under grant agreement No. 642190".

Identify key words: Bioelectrochemical; Waste water

3 Employing entity: National Institute of Agricultural Research

Department: Laboratory of Environmental Biotechnology

City employing entity: France

Professional category: Project Manager and Researcher

Start-End date: 01/01/2014 - 30/06/2015 **Duration:** 18 months

Type of contract: Temporary employment contract

Dedication regime: Full time

Performed tasks: | BIORARE Projecy: "Microbial electrosynthesis for environmental biorefineries". | +info: <https://anr.fr/ProjetIA-10-BTBR-0002> □ Description: The BIORARE project aimed at evaluating the potential of BioElectrochemical Systems (BES) to become a cornerstone technology for future environmental biorefineries. ✓ Management of the technical activities of the Work Package. ✓ Essays with acetate producing microorganisms to test their ability to produce such molecule via microbial electrosynthesis. ✓ Extensive "hands-on" laboratory work. ✓ Preparation of technical and scientific documentation. ✓ Dissemination and communication activities. € Salary financed by: "The National Research Agency (Project: ANR 10 BTBR 02)".

4 Employing entity: National Institute of Agricultural Research **Type of entity:** R&D Centre

Department: Laboratory of Environmental Biotechnology

City employing entity: France

Professional category: Project Manager and Researcher

Start-End date: 02/07/2012 - 31/12/2013 **Duration:** 18 months

Type of contract: Temporary employment contract

Dedication regime: Full time



Performed tasks: | DéfiH12 Project: "Microbial electrolysis cell (MEC) for bio-hydrogen production"
| +info: <https://goo.gl/zbdv7k> □ Description: The project proposed to convert organic acids produced by fermentation into hydrogen by taking advantage from the Microbial Electrolysis Cells Technology. ✓ Management of the technical activities of the Work Package. ✓ Start-up, operation and maintenance of a novel semi-pilot bioreactor to produce hydrogen from organic fatty acids by means of microbial electrolysis. ✓ Electrochemical and microscopic characterisation of novel bacteria capable of producing an electrical current. ✓ Extensive "hands-on" laboratory work. ✓ Preparation of technical and scientific documentation. ✓ Dissemination and communication activities. € Salary financed by: "The National Research Agency (Project: ANR 09 BioE 10)".

- 5** **Employing entity:** G-A Ambiental S.A. de C.V. **Type of entity:** Business
City employing entity: Mexico City, Mexico
Professional category: Consulting Engineer **Educational Management (Yes/No):** No
Start-End date: 01/01/2008 - 30/04/2008 **Duration:** 4 months
Type of contract: Temporary employment contract
Primary (UNESCO code): 330810 - Sewage technology
Performed tasks: Diagnostic Study of the Department in charge of managing the distribution of Drinkable Water and the treatment of municipal Wastewater in a Municipality with 1-7 million people surrounding Mexico City
Field of management activity: Consulting Engineering Company



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

1 **University degree:** Master

Name of qualification: Master in Project Management

City degree awarding entity: Madrid, Community of Madrid, Spain

Degree awarding entity: IMF Business School and Camilo José Cela University **Type of entity:** University Department

Date of qualification: 31/03/2020

2 **University degree:** Higher degree

Name of qualification: Master of Science, Specialised in Environmental Biotechnology (GPA: 9.1 of a highest 10.0)

City degree awarding entity: Mexico City, Mexico

Degree awarding entity: The Center for Research and Advanced Studies of the National Polytechnic Institute **Type of entity:** R&D Centre

Date of qualification: 06/04/2009

Average mark: Excellent

Standardised degree: No

Foreign qualification: Master of Science, Specialised in Environmental Biotechnology

3 **University degree:** Higher degree

Name of qualification: Environmental Engineer (GPA: 8.29 of a highest 10)

City degree awarding entity: Ciudad de México, Mexico

Degree awarding entity: Interdisciplinary Professional Unit of Biotechnology of the National Polytechnic Institute **Type of entity:** University Centres and Structures and Associated Bodies

Date of qualification: 23/04/2007

Average mark: Good

Standardised degree: No

Foreign qualification: Environmental Engineer

Doctorates

Doctorate programme: Doctor in Natural Sciences (dr. rer. nat.)

Degree awarding entity: Technical University of Braunschweig **Type of entity:** University

City degree awarding entity: Braunschweig, Germany

Date of degree: 05/10/2012

DEA awarding entity: Technical University of Braunschweig

Date DEA was awarded: 05/10/2012

Thesis title: Investigation of electron transfer mechanisms in electrochemically active microbial biofilms



Thesis director: Uwe Schröder
Thesis co-director: Falk Harnisch
Obtained qualification: Magna cum laude
Standardised degree: No

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
French	B2	B2	B2	B2	A1
German	C1	C1	C1	C1	C1
English	C2	C2	C2	C2	C2
Spanish	C2	C2	C2	C2	C2

Teaching experience

Experience supervising doctoral thesis and/or final year projects

- Project title:** Study of defined co-cultures of electroactive microorganisms for the treatment of saline wastewater
Type of project: Minor thesis
Co-director of thesis: Abraham Esteve Núñez; Alessandro Alfredo Carmona Martínez; Juan Manuel Ortiz Díaz
Entity: University of Alcalá de Henares **Type of entity:** University
City of entity: Alcalá de Henares, Community of Madrid, Spain
Student: Juliana Maita Abad
Identify key words: Bioelectrochemical; Wastewater management
Date of reading: 18/07/2018
Quality recognition: Yes **Date of award:** 18/07/2018
- Project title:** Bioelectrogenic wetlands: a sustainable strategy to treat urban wastewater
Type of project: Minor thesis
Co-director of thesis: Abraham Esteve Núñez; Alessandro Alfredo Carmona Martínez
Entity: University of Alcalá de Henares **Type of entity:** University
City of entity: Alcalá de Henares, Community of Madrid, Spain
Student: Lorena Peñacoba Antona
Identify key words: Bioelectrochemical; Wastewater management
Date of reading: 13/06/2017
Date of award: 13/06/2017

Student tutorials

- Name of the programme:** Doctorate
Entity: National Institute of Agricultural Research **Type of entity:** R&D Centre
City of entity: Narbonne, Languedoc-Roussillon, France
Number of tutored students: 5



- 2 Name of the programme:** Doctorate
Entity: IMDEA Water Institute: Madrid Institute of Advanced Studies **Type of entity:** R&D Centre
City of entity: Alcalá de Henares, Community of Madrid, Spain
Number of tutored students: 2
- 3 Name of the programme:** B.Sc. Students
Entity: The Center for Research and Advanced Studies of the National Polytechnic Institute **Type of entity:** R&D Centre
City of entity: Mexico City, Mexico
Number of tutored students: 4
- 4 Name of the programme:** B.Sc. and M.Sc. Students
Entity: Technical University of Braunschweig
City of entity: Braunschweig, Braunschweig, Germany
Number of tutored students: 6

Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

- 1 Name of the project:** A new generation of Microbial Electrochemical Wetland for effective decentralized wastewater treatment
Identify key words: Bioelectrochemical; Drinking water; Wastewater management; Waste water; Water treatment
Type of project: Demonstration, pilot projects, conceptual formulations and design of processes and services **Geographical area:** International
Degree of contribution: Managing coordinator
Entity where project took place: IMDEA Water Institute: Madrid Institute of Advanced Studies **Type of entity:** R&D Centre
City of entity: Alcalá de Henares, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Alessandro Carmona Martínez; Abraham Esteve Núñez
Nº of researchers: 30
Type of participation: Co-ordinator
Name of the programme: H2020-EU.3.5.4. - Enabling the transition towards a green economy and society through eco-innovation
Code according to the funding entity: Grant agreement ID: 642190
Start-End date: 01/03/2016 - 31/12/2018 **Duration:** 2 years
Total amount: 3.461.622 €
Dedication regime: Full time
Applicant's contribution: | European H2020 iMETland Project: "A new generation of Microbial Electrochemical Wetland for effective decentralized wastewater treatment" | +info: <https://cordis.europa.eu/project/rcn/196823/factsheet/en> □ Description: iMETland project aimed to construct and validate a full-scale application of a eco-friendly device to treat urban wastewater from small communities at zero-energy operation cost. ✓ Management of the technical activities of the Work Package. ✓ Start-up, operation and maintenance of a novel pilot plant located at IMDEA. ✓ Extensive



"hands-on" laboratory work on electroactive biofilters. ✓ Preparation of technical documentation and purchase management. ✓ Dissemination and communication activities. ✓ Support financial department for financial statements. ✓ Tutoring of a M.Sc. Student. € Salary financed by: "European Union's Horizon 2020 research and innovation programme under grant agreement No. 642190".

2 Name of the project: Microbial Desalination for Low Energy Drinking Water

Identify key words: Use of biochemical, microbiological and biological tools; Bioelectrochemical; Microbiology; Wastewater management; Waste water

Type of project: Demonstration, pilot projects, conceptual formulations and design of processes and services

Geographical area: International

Degree of contribution: Researcher

Entity where project took place: IMDEA Water Institute: Madrid Institute of Advanced Studies

Type of entity: R&D Centre

City of entity: Alcalá de Henares, Community of Madrid, Spain

Nº of researchers: 30

Type of participation: Team member

Code according to the funding entity: Grant agreement ID: 685793

Start-End date: 01/01/2018 - 28/02/2018

Duration: 2 months

Total amount: 8.019.583 €

Dedication regime: Part time

Applicant's contribution: H2020 MIDES project: "Microbial desalination for low energy drinking water" +info: <https://cordis.europa.eu/project/rcn/200811/factsheet/en> Description: The MIDES project aims to revolutionise desalination by developing a sustainable low-energy process of producing safe drinking water, using Microbial Desalination Cells (MDC). Duties: ✓ Extensive "hands-on" laboratory work on halotolerant bacteria capable of producing an electric current for Wastewater treatment applications. ✓ Tutoring the experimental work of M.Sc. Student whose thesis was selected as one of the best in the academic year 2018. € Laboratory supplies financed by the: "European Union's Horizon 2020 research and innovation programme under grant agreement No. 685793".

3 Name of the project: Bioelectrosynthesis for the refinery of residual waste

Type of project: Basic research (including archaeological digs, etc)

Geographical area: European Union

Degree of contribution: Scientific coordinator

Entity where project took place: National Institute of Agricultural Research

Type of entity: R&D Centre

City of entity: Narbonne, Languedoc-Roussillon, France

Name principal investigator (PI, Co-PI...): Nicolas Bernet; Théodore Bouchez

Nº of researchers: 29

Type of participation: Team member

Name of the programme: Investissement d'avenir

Code according to the funding entity: ANR-10-BTBR-02

Start-End date: 01/01/2014 - 30/06/2015

Duration: 18 months

Total amount: 2.214.634 €

Dedication regime: Full time

Applicant's contribution: BIORARE Projecy: "Microbial electrosynthesis for environmental biorefineries" +info: <https://anr.fr/ProjetIA-10-BTBR-0002> Description: The BIORARE project aimed at evaluating the potential of BioElectrochemical Systems (BES) to become a cornerstone technology for future environmental biorefineries. ✓ Management of the technical activities of the Work Package. ✓ Essays with acetate producing microorganisms to test their ability to produce such molecule via microbial electrosynthesis. ✓ Extensive "hands-on" laboratory work. ✓ Preparation of technical and scientific documentation. ✓ Dissemination and communication activities. € Salary financed by: "The National Research Agency (Project: ANR 10 BTBR 02)".



4 Name of the project: Sustainable hydrogen production from waste via two-stage bioconversion process: an eco-biotechnological approach

Type of project: Basic research (including archaeological digs, etc)

Geographical area: European Union

Degree of contribution: Researcher

Entity where project took place: National Institute of Agricultural Research

Type of entity: R&D Centre

City of entity: Narbonne, Languedoc-Roussillon, France

Name principal investigator (PI, Co-PI...): Alessandro A. Carmona-Martínez; Jean-Phillipe Steyer; Eric Trably; Nicolas Bernet; Antonella Marone

N° of researchers: 5

Type of participation: Team member

Name of the programme: MC-IEF - Intra-European Fellowships (IEF)

Code according to the funding entity: 326974

Start-End date: 01/06/2013 - 31/05/2015

Duration: 2 years

Total amount: 194.046 €

Dedication regime: Part time

Applicant's contribution: ✓ Transfer of "hands-on" laboratory experience to postdoctoral colleagues. ✓ Consulting activities regarding the production of hydrogen using microbial electrolysis.

5 Name of the project: Microbial electrolysis cell (MEC) for bio-hydrogen production

Type of project: Demonstration, pilot projects, conceptual formulations and design of processes and services

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: National Institute of Agricultural Research

Type of entity: R&D Centre

City of entity: Narbonne, Languedoc-Roussillon, France

Name principal investigator (PI, Co-PI...): Eric Trably; Nicolas Bernet; Théodore Tzedakis; Alain Bergel; Marie-Line Delia

N° of researchers: 24

Type of participation: Team member

Name of the programme: French National Agency for Research

Code according to the funding entity: ANR-09-BioE-10 D'efiH12

Start-End date: 01/07/2012 - 30/11/2013

Duration: 18 months

Total amount: 916.129 €

Applicant's contribution: | DéfiH12 Project: "Microbial electrolysis cell (MEC) for bio-hydrogen production" | +info: <https://goo.gl/zbdv7k> □ Description: The project proposed to convert organic acids produced by fermentation into hydrogen by taking advantage from the Microbial Electrolysis Cells Technology. ✓ Management of the technical activities of the Work Package. ✓ Start-up, operation and maintenance of a novel semi-pilot bioreactor to produce hydrogen from organic fatty acids by means of microbial electrolysis. ✓ Electrochemical and microscopic characterisation of novel bacteria capable of producing an electrical current. ✓ Extensive "hands-on" laboratory work. ✓ Preparation of technical and scientific documentation. ✓ Dissemination and communication activities. € Salary financed by: "The National Research Agency (Project: ANR 09 BioE 10)".

6 Name of the project: In vivo study of outer membrane cytochromes embedded in aggregations of living bacteria (i.e microbial biofilms) grown on electrodes by a combination of surface-enhanced resonance Raman scattering spectroscopy and electrochemistry

Type of project: Basic research (including archaeological digs, etc)

Geographical area: European Union

Degree of contribution: Researcher

Type of entity: University Research Institute



Entity where project took place: Vrije Universiteit
Amsterdam

City of entity: Ámsterdam, Noord-Holland, Holland

Name principal investigator (PI, Co-PI....): Alessandro A. Carmona-Martínez; Diego Millo

Nº of researchers: 2

Type of participation: Team member

Start-End date: 01/04/2012 - 30/06/2012

Duration: 3 months

Total amount: 4.500 €

Dedication regime: Full time

Applicant's contribution: ✓ Electrochemical and microscopic characterisation of novel bacteria capable of producing an electrical current. ✓ Extensive "hands-on" laboratory work. ✓ Preparation of technical and scientific documentation. ✓ Dissemination and communication activities.

7 Name of the project: Investigation of electron transfer mechanisms in electrochemically active microbial biofilms

Type of project: Basic research (including archaeological digs, etc)

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: Technical
University of Braunschweig

Type of entity: University Department

City of entity: Braunschweig, Braunschweig, Germany

Name principal investigator (PI, Co-PI....): Alessandro A. Carmona-Martínez; Falk Harnisch; Uwe Schroeder

Nº of researchers: 3

Funding entity or bodies:

German Academic Exchange Service

Type of entity: State agency

City funding entity: Bonn, Köln, Germany

Type of participation: Principal investigator

Start-End date: 01/10/2008 - 30/09/2011

Duration: 3 years

Total amount: 36.000 €

Dedication regime: Full time

Applicant's contribution: ✓ I carried out all experimental work. ✓ Preparation of technical documentation and purchase management. ✓ Dissemination and communication activities. ✓ Support financial department for financial statements. ✓ Tutoring of M.Sc and B.Sc. Students.

8 Name of the project: Electricity production in a microbial fuel cell fed with spent organic extracts from hydrogenogenic fermentation of organic solid wastes

Type of project: Basic research (including archaeological digs, etc)

Geographical area: Non EU International

Degree of contribution: Researcher

Entity where project took place: The Center for Research and Advanced Studies of the National Polytechnic Institute

City of entity: Mexico City, Mexico

Name principal investigator (PI, Co-PI....): Alessandro A. Carmona-Martínez; Héctor Mario Poggi Varaldo

Nº of researchers: 2

Type of participation: Team member

Code according to the funding entity: 199930

Start-End date: 01/09/2005 - 30/08/2007

Duration: 2 years

Total amount: 6.753 €

Dedication regime: Full time



Applicant's contribution: ✓ I carried out all experimental work. ✓ Preparation of technical documentation and purchase management. ✓ Dissemination and communication activities. ✓ Support financial department for financial statements. ✓ Tutoring of B.Sc. Students.

R&D non-competitive contracts, agreements or projects with public or private entities

- 1 Name of the project:** Monitoring, control, modelling and optimization of a semi pilot microbial electrolysis cell for continuous H₂ production from the anaerobic treatment of tequila vinasses

Degree of contribution: Scientific coordinator

Name principal investigator (PI, Co-PI....): Alessandro A. Carmona Martínez; Victor Alcaraz

Nº of researchers: 2

Participating entity/entities: University of Guadalajara, Mexico

Start date: 01/07/2014
- 2 Name of the project:** Use of electrochemical tools for the characterization of denitrifying electroactive cathodic biofilms

Type of project: Basic research (including archaeological digs, etc) **Geographical area:** European Union

Degree of contribution: Scientific coordinator

Entity where project took place: The Laboratory of Chemical and Environmental Engineering **Type of entity:** R&D Centre

City of entity: Girona, Catalonia, Spain

Name principal investigator (PI, Co-PI....): Narcís Pous; Alessandro A. Carmona-Martínez; Sebastià Puig; Nicolas Bernet

Nº of researchers: 4

Participating entity/entities: Universitat de Girona

Funding entity or bodies: Catalan Government (2012 FI-B 00941, predoctoral grant) **Type of entity:** R&D Centre

City funding entity: Narbonne, Languedoc-Roussillon, France

Start date: 01/02/2013

Relevant results: <https://doi.org/10.1016/j.bios.2015.08.035>



- 7** Alessandro A. Carmona-Martínez; Eric Trably; Kim Milferstedt; Rémy Lacroix; Luc Etcheverry; Nicolas Bernet. Long-term continuous production of H₂ in a microbial electrolysis cell (MEC) treating saline wastewater. *Water Research*. 2015. Available on-line at: <<https://www.sciencedirect.com/science/article/abs/pii/S0043135415300245>>.
Type of production: Scientific paper **Format:** Journal
- 8** Mélanie Pierra; Alessandro A. Carmona-Martínez; Eric Trably; Jean-Jacques Godon; Nicolas Bernet. Microbial characterization of anode-respiring bacteria within biofilms developed from cultures previously enriched in dissimilatory metal-reducing bacteria. *Bioresource Technology*. 2015. Available on-line at: <<https://www.sciencedirect.com/science/article/pii/S0960852415009633>>.
Type of production: Scientific paper
- 9** Mélanie Pierra; Alessandro Carmona Martínez; Eric Trably; Jean-Jacques Godon; Nicolas Bernet. Specific and efficient electrochemical selection of *Geoalkalibacter subterraneus* and *Desulfuromonas acetoxidans* in high current-producing biofilms. *Bioelectrochemistry*. In revision, Elsevier, 2015. Available on-line at: <<https://www.sciencedirect.com/science/article/abs/pii/S1567539415000067>>.
Type of production: Scientific paper **Format:** Journal
- 10** Alessandro A. Carmona-Martínez; Falk Harnisch; Ute Kuhlicke; Thomas R. Neu; Uwe Schröder. Electron transfer and biofilm formation of *Shewanella putrefaciens* as function of anode potential. *Bioelectrochemistry*. 93 - 0, pp. 23 - 29. 2013. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S1567539412000795>>. ISSN 1567-5394
Type of production: Scientific paper **Format:** Journal
- 11** Alessandro A. Carmona-Martínez; Melanie Pierra; Eric Trably; Nicolas Bernet. High current density via direct electron transfer by the halophilic anode respiring bacterium *Geoalkalibacter subterraneus*. *Phys. Chem. Chem. Phys.* 15, pp. 19699 - 19707. The Royal Society of Chemistry, 2013. Available on-line at: <<http://dx.doi.org/10.1039/C3CP54045F>>.
Type of production: Scientific paper **Format:** Journal
- 12** Alessandro A. Carmona-Martínez; Falk Harnisch; Lisa A. Fitzgerald; Justin C. Biffinger; Bradley R. Ringeisen; Uwe Schröder. Cyclic voltammetric analysis of the electron transfer of *Shewanella oneidensis* MR-1 and nanofilament and cytochrome knock-out mutants. *Bioelectrochemistry*. 81 - 2, pp. 74 - 80. 2011. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S1567539411000120>>. ISSN 1567-5394
Type of production: Scientific paper **Format:** Journal
- 13** Sunil A. Patil; Falk Harnisch; Christin Koch; Thomas Hübschmann; Ingo Fetzer; Alessandro A. Carmona-Martínez; Susann Müller; Uwe Schröder. Electroactive mixed culture derived biofilms in microbial bioelectrochemical systems: The role of pH on biofilm formation, performance and composition. *Bioresource Technology*. 102 - 20, pp. 9683 - 9690. 2011. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S0960852411010388>>. ISSN 0960-8524
Type of production: Scientific paper **Format:** Journal
- 14** Shuilian Chen; Haoqing Hou; Falk Harnisch; Sunil A. Patil; Alessandro A. Carmona-Martínez; Seema Agarwal; Yiyun Zhang; Suman Sinha-Ray; Alexander L. Yarin; Andreas Greiner; Uwe Schroder. Electrospun and solution blown three-dimensional carbon fiber nonwovens for application as electrodes in microbial fuel cells. *Energy Environ. Sci.* 4, pp. 1417 - 1421. The Royal Society of Chemistry, 2011. Available on-line at: <<http://dx.doi.org/10.1039/C0EE00446D>>.
Type of production: Scientific paper **Format:** Journal
- 15** Shuilian Chen; Guanghua He; Alessandro Alfredo Carmona-Martínez; Seema Agarwal; Andreas Greiner; Haoqing Hou; Uwe Schröder. Electrospun carbon fiber mat with layered architecture for anode in microbial fuel cells. *Electrochemistry Communications*. 13 - 10, pp. 1026 - 1029. 2011. Available on-line at: <<http://www.sciencedirect.com/science/article/pii/S1388248111002414>>. ISSN 1388-2481



Type of production: Scientific paper

Format: Journal

16

Héctor Mario Poggi-Varaldo; Alessandro Carmona-Martínez; Ana Line Vázquez-Larios; Omar Solorza-Feria. Effect of inoculum type on the performance of a microbial fuel cell fed with spent organic extracts from hydrogenogenic fermentation of organic solid wastes. *J New Mater Electrochem Syst.* 12, pp. 49 - 54. 2009. Available on-line at: <https://www.researchgate.net/publication/233911262_Effect_of_Inoculum_Type_on_the_Performance_of_a_Microbial_Fuel_Cell_Fed_with_Spent_Or>

Type of production: Scientific paper

Format: Journal

17

Idania Valdez-Vazquez; Elvira Ríos-Leal; Karla M. Muñoz-Páez; Alessandro Carmona-Martínez; Héctor M. Poggi-Varaldo. Effect of inhibition treatment, type of inocula, and incubation temperature on batch H₂ production from organic solid waste. *Biotechnology and Bioengineering.* 95 - 3, pp. 342 - 349. Wiley Subscription Services, Inc., A Wiley Company, 2006. Available on-line at: <<http://dx.doi.org/10.1002/bit.20891>>. ISSN 1097-0290

Type of production: Scientific paper

Format: Journal

18

Idania Valdez-Vazquez; Elvira Ríos-Leal; Alessandro Carmona-Martínez; Karla M. Muñoz-Páez; Héctor M. Poggi-Varaldo. Improvement of Biohydrogen Production from Solid Wastes by Intermittent Venting and Gas Flushing of Batch Reactors Headspace. *Environmental Science & Technology.* 40 - 10, pp. 3409 - 3415. 2006. Available on-line at: <<https://pubs.acs.org/doi/abs/10.1021/es052119j>>.

Type of production: Scientific paper

Format: Journal

19

Anna Vilajeliu-Pons; Sebastià Puig; Alessandro A. Carmona-Martínez; Nicolas Bernet; Marta Coma; Federico Aulenta; Jesús Colprim; Maria Balaguer. *Electroactive Biofilms in Water and Air Pollution Treatment. Aquatic Biofilms: Ecology, Water Quality and Wastewater Treatment.* pp. 183 - 204. Caister Academic Press, 2016. Available on-line at: <<https://www.caister.com/aquaticbiofilms>>. ISBN 978-1-910190-18-0

Type of production: Book chapter

Format: Book

Position of signature: 3

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Total no. authors: 8

Works submitted to national or international conferences

1

Title of the work: iMETland: A new generation of Microbial Electrochemical Wetlands for effective decentralized wastewater treatment

Name of the conference: 2nd Innovation Match MX

Corresponding author: Yes

City of event: Ciudad de México, Mexico

Date of event: 31/05/2017

End date: 02/06/2017

Organising entity: Innovation Match MX A.C.

Alessandro A. Carmona-MARTÍNEZ; Amanda Prado; Colin Wardman; Belén Barroeta; Ramón Esteve; Carlos Aragón; Khalid Draissi; Juan José Salas; Irene Carlos; Michael Stich; Quynh Do; Abraham Esteve. "Oral".

2

Title of the work: Direct microbial electrosynthesis or H₂ mediated microbial synthesis of acetate?

Name of the conference: Fifth international meeting on microbial electrochemistry and technologies

Corresponding author: Yes

City of event: Arizona, United States of America

Date of event: 01/10/2015

End date: 04/10/2015

Organising entity: Arizona State University

Alessandro A. Carmona Martínez; Eric Trably; Nicolas Bernet.



- 3** **Title of the work:** Sustainable hydrogen production from agro-industrial wastewater combining dark fermentation and microbial electrolysis
Name of the conference: 5th Meeting of the International Society for Microbial Electrochemistry and Technology
Corresponding author: No
City of event: Arizona, United States of America
Date of event: 01/10/2015
End date: 04/10/2015
Organising entity: Arizona State University **Type of entity:** University
Antonella Marone; Olga Ayala; Eric Trably; Alessandro A. Carmona-Martínez; Eric Latrille; Victor Alcaráz; Nicolas Bernet.
- 4** **Title of the work:** Microbial electrosynthesis of molecules of industrial interest with homoacetogenic bacteria from the reduction of CO₂
Name of the conference: XVI Congreso Nacional de Biotecnología y Bioingeniería
Corresponding author: Yes
City of event: Guadalajara, Jalisco, Mexico
Date of event: 21/06/2015
End date: 26/06/2015
Organising entity: Sociedad Mexicana de Biotecnología y Bioingeniería
Alessandro A. Carmona-Martínez; Eric Trably; Nicolas Bernet. "Microbial electrosynthesis of molecules of industrial interest with homoacetogenic bacteria from the reduction of CO₂".
- 5** **Title of the work:** Denitrifying bioelectrochemical systems: from fundamentals to water applications
Name of the conference: Bacterial Electron Transfer Processes and their Regulation
Corresponding author: No
City of event: Vimeiro, Portugal
Date of event: 15/03/2015
End date: 18/03/2015
Organising entity: Instituto de Tecnologia Química e Biológica
Narcís Pous; Christin Koch; Falk Harnisch; Alessandro Carmona Martínez; Bernadino Viridis; M. Dolors Balaguer; Jesús Colprim; Sebastià Puig.
- 6** **Title of the work:** Caractérisation de la communauté microbienne du biofilm anodique d'une cellule d'électrolyse microbienne (MEC) en conditions salines
Name of the conference: Journées Recherche-Industrie, Management des ressources microbiennes, Détecter et gérer les populations microbiennes impliquées dans les services écosystémiques: Outils analytiques et nouveaux indicateurs
Corresponding author: Yes
City of event: Narbonne, France
Date of event: 07/10/2014
End date: 09/10/2014
Organising entity: INRA Transfert Environnement
Alessandro A. Carmona-Martínez; Eric Trably; Kim Milferstedt; Nicolas Bernet.
- 7** **Title of the work:** On the modeling of the surface area that actually contributes to the current density produced in microbial electrochemical systems
Name of the conference: 2nd European meeting of the International Society for Microbial Electrochemistry and Technology
Corresponding author: Yes
City of event: Alcalá de Henares, Community of Madrid, Spain
Date of event: 03/09/2014



End date: 05/09/2014

Organising entity: University of Alcalá de Henares **Type of entity:** University

City organizing entity: Alcalá de Henares, Community of Madrid, Spain

Alessandro Carmona Martínez; Rémy Lacroix; Serge DaSilva; Eric Trably; Nicolas Bernet.

- 8** **Title of the work:** Treatment of olive brine wastewater by bioelectrochemical systems
Name of the conference: 2nd European meeting of the International Society for Microbial Electrochemistry and Technology
Corresponding author: No
City of event: Alcalá de Henares, Community of Madrid, Spain
Date of event: 03/09/2014
End date: 05/09/2014
Organising entity: University of Alcalá de Henares **Type of entity:** University
City organizing entity: Alcalá de Henares, Community of Madrid, Spain
Antonella Marone; Alessandro Carmona Martínez; Yannich Sire; Nicolas Bernet; Eric Trably; Jean-Philippe Steyer.
- 9** **Title of the work:** Electrochemical and microscopic characterization of the novel anode-respiring bacterium *Geoalkalibacter subterraneus*
Name of the conference: 4th International Microbial Fuel Cell Conference
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Cairns, Australia
Date of event: 01/09/2013
End date: 04/09/2013
Organising entity: Queensland University
Alessandro A. Carmona-Martínez; Mélanie Pierra; Eric Trably; Nicolas Bernet.
- 10** **Title of the work:** Innovative Continuous High Yield Hydrogen Gas Production System: Coupling a Microbial Electrolysis Cell Fed with Resultant Dead-end Metabolites of a Saline Dark Fermentation Reactor
Name of the conference: BioH2 2013
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: No
City of event: Montréal, Canada
Date of event: 05/08/2013
End date: 07/08/2013
Organising entity: University of Montreal
City organizing entity: Montréal, Canada
Alessandro A. Carmona-Martínez; Eric Trably; Nicolas Bernet. "Innovative Continuous High Yield Hydrogen Gas Production System: Coupling a Microbial Electrolysis Cell Fed with Resultant Dead-end Metabolites of a Saline Dark Fermentation Reactor".
- 11** **Title of the work:** Electron Transfer and Biofilm Formation of *Shewanella putrefaciens* as Function of Anode Potential
Name of the conference: EU-ISMET meeting: From extracellular electron transfer to innovative process development
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Ghent, Belgium
Date of event: 27/09/2012



End date: 28/09/2012

Organising entity: Ghent University

Alessandro A. Carmona-Martínez; Falk Harnisch; Ute Kuhlicke; Thomas Neu; Uwe Schröder.

- 12** **Title of the work:** High Surface Area Electrospun and Solution-blown Carbonized Nonwovens to Enhance the Current Density in Bioelectrochemical Systems (BES)
Name of the conference: Wissenschaftsforum Chemie 2011
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: Yes
City of event: Bremen, Bremen, Germany
Date of event: 04/09/2011
End date: 07/09/2011
Organising entity: German Chemical Society **Type of entity:** Associations and Groups
City organizing entity: Bremen, Bremen, Germany
Haoqing Hou; Falk Harnisch; Sunil A. Patil; Alessandro A. Carmona-Martínez; Seema Agarwal; Yiyun Zhang; Suman Sinha-Ray; Alexander L. Yarin; Andreas Greiner; Uwe Schröder. "High Surface Area Electrospun and Solution-blown Carbonized Nonwovens to Enhance the Current Density in Bioelectrochemical Systems (BES)".
- 13** **Title of the work:** Analysis of the electron transfer and current production of *Shewanella oneidensis* MR-1 wild-type and derived mutants
Name of the conference: Electrochemistry 2010: From microscopic understanding to global impact
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: Yes
City of event: Bochum, Arnsberg, Germany
Date of event: 13/09/2010
End date: 15/09/2010
Organising entity: International Society of Electrochemistry
City organizing entity: Bochum, Arnsberg, Germany
Alessandro A. Carmona-Martínez; Falk Harnisch; Uwe Schröder. "Analysis of the electron transfer and current production of *Shewanella oneidensis* MR-1 wild-type and derived mutants".
- 14** **Title of the work:** Cyclic voltammetry as a useful technique to characterize electrochemically active microorganisms: *Shewanella putrefaciens*
Name of the conference: Wissenschaftsforum Chemie 2009
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: Yes
City of event: Frankfurt am Main, Darmstadt, Germany
Date of event: 30/08/2009
End date: 02/09/2009
Organising entity: German Chemical Society
City organizing entity: Frankfurt am Main, Darmstadt, Germany
Alessandro A. Carmona-Martínez; Falk Harnisch; Uwe Schröder. "Cyclic voltammetry as a useful technique to characterize electrochemically active microorganisms: *Shewanella putrefaciens*".
- 15** **Title of the work:** Microbial fuel cells: an alternative for the production of clean electricity
Name of the conference: German Academic Exchange Service Scholarship Holders Meeting
Type of event: Conference
Type of participation: Participatory - oral communication



Corresponding author: Yes

City of event: Hannover, Hannover, Germany

Date of event: 19/06/2009

End date: 21/06/2009

Organising entity: German Academic Exchange Service

City organizing entity: Hannover, Hannover, Germany

Alessandro A. Carmona-Martínez. "Microbial fuel cells: an alternative for the production of clean electricity".

- 16** **Title of the work:** Batch tests of a microbial fuel cell for electricity generation from spent organic extracts from hydrogenogenic fermentation of organic solid wastes
Name of the conference: Third International Meeting on Environmental Biotechnology and Engineering
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Palma de Mallorca, Balearic Islands, Spain
Date of event: 21/09/2008
End date: 25/09/2008
Organising entity: University of the Balearic Islands
City organizing entity: Palma de Mallorca, Balearic Islands, Spain
Alessandro A. Carmona-Martínez; Omar Solorza-Feria; Héctor M. Poggi-Varaldo. "Batch tests of a microbial fuel cell for electricity generation from spent organic extracts from hydrogenogenic fermentation of organic solid wastes".
- 17** **Title of the work:** Design and characterization of a microbial fuel cell for electricity production from leachates
Name of the conference: Sixth International Conference on Remediation of Chlorinated and Recalcitrant Compounds
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Monterey, California, United States of America
Date of event: 19/05/2008
End date: 22/05/2008
Organising entity: Battelle Memorial Institute
City organizing entity: Monterey, California, United States of America
Alessandro A. Carmona-Martínez; Omar Solorza-Feria; Héctor M. Poggi-Varaldo. "Design and characterization of a microbial fuel cell for electricity production from leachates".
- 18** **Title of the work:** Characterization of a Microbial Fuel Cell for the Treatment of contaminated effluents
Name of the conference: 1er Congreso Nacional de Energías Alternativas
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: Yes
City of event: Ciudad de Querétaro, Mexico
Date of event: 02/07/2007
End date: 04/07/2007
Organising entity: Research Center for Applied Science and Advanced Technology of the National Polytechnic Institute
Type of entity: R&D Centre
City organizing entity: Queretaro, Mexico



Alessandro A. Carmona-Martínez; Juan C. Fernández-Ortiz; Jaime García-Mena; Omar Solorza-Feria; Héctor M. Poggi-Varaldo. "Characterization of a Microbial Fuel Cell for the Treatment of contaminated effluents".

- 19** **Title of the work:** Operation of a Microbial Fuel Cell for the Generation of Direct Electric Power from Extracts from the Hydrogen Fermentation of Solid Wastes
Name of the conference: 1er Congreso Nacional de Energías Alternativas
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: Yes
City of event: Ciudad de Querétaro, Mexico
Date of event: 02/07/2007
End date: 04/07/2007
Organising entity: Research Center for Applied Science and Advanced Technology of the National Polytechnic Institute
Type of entity: R&D Centre
City organizing entity: Queretaro, Mexico
Alessandro A. Carmona-Martínez; Jaime García-Mena; Omar Solorza-Feria; Héctor M. Poggi-Varaldo. "Operation of a Microbial Fuel Cell for the Generation of Direct Electric Power from Extracts from the Hydrogen Fermentation of Solid Wastes".

- 20** **Title of the work:** Electricity production through a microbial fuel cell using a methanogenic digester as inoculum
Name of the conference: XII National Congress of Biotechnology and Bioengineering
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: Yes
City of event: Ciudad de Morelia, Michoacán, Mexico
Date of event: 25/06/2007
End date: 29/06/2007
Organising entity: Mexican Society of Biotechnology and Bioengineering
City organizing entity: Morelia, Mochoacan, Mexico
Alessandro A. Carmona-Martínez; Omar Solorza-Feria; Jaime García-Mena; Juan C. Fernández-Ortiz; Héctor M. Poggi-Varaldo. "Electricity production through a microbial fuel cell using a methanogenic digester as inoculum".

- 21** **Title of the work:** Discussion and Analysis on the Experiences of graduated Environmental Engineers
Name of the conference: Mesa Redonda: "La experiencia en el campo laboral del Ingeniero Ambiental"
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Mexico City, Mexico
Date of event: 08/06/2007
End date: 08/06/2007
Organising entity: Interdisciplinary Professional Unit
Type of entity: University Department of Biotechnology of the National Polytechnic Institute
City organizing entity: Mexico City, Mexico
Alessandro A. Carmona-Martínez. "Discussion and Analysis on the Experiences of graduated Environmental Engineers".



- 22** **Title of the work:** Current and perspectives in microbial fuel cells for obtaining electricity from waste
Name of the conference: Second International Meeting on Environmental Biotechnology and Engineering
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: Yes
City of event: Mexico City, Mexico
Date of event: 26/09/2006
End date: 29/09/2006
Organising entity: Research Center for Applied Science and Advanced Technology of the National Polytechnic Institute
Type of entity: R&D Centre
City organizing entity: Mexico City, Mexico
Alessandro A. Carmona-Martínez; Fernando Esparza-García; Jaime García-Mena; Omar Solorza-Feria; Héctor M. Poggi-Varaldo. "Current and perspectives in microbial fuel cells for obtaining electricity from waste".
- 23** **Title of the work:** Biological production of hydrogen by inhibited methanogenic consortia: effect of temperature crossing
Name of the conference: IV Encuentro Nacional de Biotecnología del IPN
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Tlaxcala, Mexico
Date of event: 10/11/2004
End date: 12/11/2004
Organising entity: National Polytechnic Institute of Mexico
City organizing entity: Tlaxcala, Mexico
Alessandro A. Carmona-Martínez; Karla Muñoz-Páez; Idania Valdez-Vázquez; Héctor M. Poggi-Varaldo. "Biological production of hydrogen by inhibited methanogenic consortia: effect of temperature crossing".
- 24** **Title of the work:** Hydrogen production by inhibited methanogenic consortia: Effect of the temperature shift
Name of the conference: First International Meeting on Environmental Biotechnology and Engineering
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Mexico City, Mexico
Date of event: 06/09/2004
End date: 08/09/2004
Organising entity: Research Center for Applied Science and Advanced Technology of the National Polytechnic Institute
City organizing entity: Mexico City, Mexico
Alessandro A. Carmona-Martínez; Karla Muñoz-Páez; Idania Valdez-Vázquez; Héctor M. Poggi-Varaldo. "Hydrogen production by inhibited methanogenic consortia: Effect of the temperature shift".
- 25** **Title of the work:** Hydrogen production by inhibited methanogenic consortia: Effect of the temperature shift
Name of the conference: IX Congreso Nacional y III congreso Internacional de Ciencias Ambientales
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Huatulco, Oaxaca, Mexico
Date of event: 12/05/2004
End date: 14/05/2004



Organising entity: University of the Sea

Type of entity: University

City organizing entity: Huatulco, Oaxaca, Mexico

Idania Valdez-Vázquez; Alessandro A. Carmona-Martínez; Karla Muñoz-Páez; Héctor M. Poggi-Varaldo.
"Hydrogen production by inhibited methanogenic consortia: Effect of the temperature shift".

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

- 1** **Committee title:** Scientific and Technical Reviewer of Abstracts for the Conference "2nd Innovation Match"
Geographical area: National
Primary (UNESCO code): 330800 - Environmental technology and Engineering
City: Mexico City, Mexico
Affiliation entity: Innovation Match MX Association
City affiliation entity: Mexico City, Mexico
Start-End date: 31/05/2017 - 02/06/2017
- 2** **Committee title:** Technical Reviewer of Project for the Spanish Entity "Cámara Certificada" (<http://camaracertifica.es/>)
Primary (UNESCO code): 221005 - Electrochemistry; 330810 - Sewage technology
Affiliation entity: Cámara Certificada **Type of entity:** R&D Centre
(<http://camaracertifica.es/>)
City affiliation entity: Madrid, Community of Madrid, Spain
Start-End date: 01/02/2017 - 15/02/2017
- 3** **Committee title:** Scientific Reviewer of Abstracts for the "4th International Symposium on Environmental Biotechnology and Engineering"
Geographical area: National
Primary (UNESCO code): 330800 - Environmental technology and Engineering
City: Ciudad de México, Mexico
Affiliation entity: The Center for Research and Advanced Studies of the National Polytechnic Institute **Type of entity:** R&D Centre
City affiliation entity: Mexico City, Mexico
Start-End date: 09/09/2014 - 12/09/2014
- 4** **Committee title:** Member of the Spanish Chapter
Geographical area: International
Primary (UNESCO code): 330000 - Technological Science.
City: Mexico City, Mexico
Affiliation entity: Global Network of Qualified Mexicans Abroad **Type of entity:** Associations and Groups
City affiliation entity: Mexico City, Mexico
Start date: 01/07/2016
- 5** **Committee title:** Scientific Reviewer: Search for me in Publons with J-1352-2014
Geographical area: International
Primary (UNESCO code): 221005 - Electrochemistry; 230331 - Water chemistry; 240000 - Life Science; 240602 - Bioelectricity; 240603 - Bioenergetics; 330810 - Sewage technology
City: London, Inner London, United Kingdom



Affiliation entity: Elsevier, IWA, Springer, American Chemical Society, MDPI, entre otras agencias

City affiliation entity: London, Inner London, United Kingdom

Start date: 14/05/2013

- 6** **Committee title:** Miembro de "The International Society for Microbial Electrochemical Technologies"
Geographical area: Internacional
Primary (UNESCO code): 221005 - Electrochemistry; 330800 - Environmental technology and Engineering
City: Gante, Belgium
Affiliation entity: The International Society for Microbial Electrochemical Technologies
City affiliation entity: Gante, Belgium
Start date: 27/09/2012

Organization of R&D activities

- 1** **Title of the activity:** Workshop on Microbial Electrochemistry and Technologies
Type of activity: Workshop **Geographical area:** National
City of event: Alcalá de Henares, Community of Madrid, Spain
Convening entity: University of Alcalá de Henares **Type of entity:** University
City convening entity: Alcalá de Henares, Community of Madrid, Spain
Type of participation: Instructor del Taller
N° assistants: 40
Start-End date: 20/12/2016 - 21/12/2016 **Duration:** 1 day
- 2** **Title of the activity:** Instructor of the pre-conference practical session of the workshop on Cyclic voltammetry at the 1st meeting of the European International Society for Microbial Electrochemistry and Technology
Type of activity: Workshop **Geographical area:** European Union
City of event: Ghent, Belgium
Convening entity: Faculty of Bioscience Engineering **Type of entity:** University Research Institute of the Ghent University. Belgium
City convening entity: Ghent, Belgium
Type of participation: Instructor
Start-End date: 03/09/2012 - 03/09/2012 **Duration:** 1 day
- 3** **Title of the activity:** Instructor of exemplary microbial electrochemical reactions at the "Summer school program on Sustainability in the organic chemistry lab course". Organized at the TU Braunschweig by the DAAD
Type of activity: Summer school **Geographical area:** Regional
City of event: Braunschweig, Braunschweig, Germany
Convening entity: Technical University of Braunschweig **Type of entity:** University Research Institute Braunschweig
City convening entity: Braunschweig, Braunschweig, Germany
Type of participation: Organiser
N° assistants: 30
Start-End date: 25/03/2009 - 26/03/2009 **Duration:** 2 days
- 4** **Title of the activity:** Symposium on renewable and biological energies, H2 and fuel cells
Type of activity: Fully involved in the organizing committee **Geographical area:** National
City of event: Mexico City, Mexico



Convening entity: Center for Research and Advanced Studies of the National Polytechnic Institute

City convening entity: Mexico City, Mexico

Type of participation: Organiser

N° assistants: 50

Start-End date: 19/09/2007 - 19/09/2007

Type of entity: R&D Centre

Duration: 1 day

5 Title of the activity: Second International Meeting on Environmental Biotechnology and Engineering

Type of activity: Fully involved in the organizing committee

City of event: Mexico City, Mexico

Convening entity: Center for Research and Advanced Studies of the National Polytechnic Institute

City convening entity: Mexico City, Mexico

Type of participation: Organiser

N° assistants: 150

Start-End date: 26/09/2006 - 29/09/2006

Geographical area: Non EU International

Type of entity: R&D Centre

Duration: 3 days

6 Title of the activity: Instructor of the post-conference workshop on Statistics and Experimental Design for Environmental Research at the 2nd International Meeting on Environmental Biotechnology and Engineering

Geographical area: Non EU International

City of event: Mexico City, Mexico

Convening entity: Center for Research and Advanced Studies of the National Polytechnic Institute

City convening entity: Mexico City, Mexico

Type of participation: Instructor of the post-conference workshop

N° assistants: 10

Start-End date: 26/09/2006 - 26/09/2006

Type of entity: R&D Centre

Duration: 1 day

7 Title of the activity: International Meeting on Environmental Biotechnology and Engineering

Type of activity: Fully involved in the organizing committee

City of event: Mexico City, Mexico

Convening entity: Center for Research and Advanced Studies of the National Polytechnic Institute

City convening entity: Mexico City, Mexico

Type of participation: Organiser

N° assistants: 150

Start-End date: 06/09/2004 - 08/09/2004

Geographical area: Non EU International

Type of entity: R&D Centre

Duration: 3 days



Other achievements

Stays in public or private R&D centres

- 1** **Entity:** Institute of Scientific Research and Technology of San Luis Potosi **Type of entity:** R&D Centre
Faculty, institute or centre: Department of Environmental Science
City of entity: San Luis Potosi, Mexico
Primary (UNESCO code): 221005 - Electrochemistry; 330530 - Sewers and water purification
Start-End date: 01/06/2015 - 30/06/2015 **Duration:** 1 month
Funding entity: IRSES Marie Curie Project BITA PIRSES-GA-2011-295170
City funding entity: Brussels, Belgium
Goals of the stay: Guest
Identify key words: Biosensors; Wastewater; Electrochemistry
- 2** **Entity:** VU University Amsterdam, The Netherlands **Type of entity:** University
Faculty, institute or centre: Chemistry department
City of entity: Amsterdam, Noord-Holland, Holland
Start-End date: 01/04/2012 - 30/06/2012 **Duration:** 3 months
Funding entity: Centre for Analytical and Environmental Studies and Research, The Netherlands
Goals of the stay: Guest

Obtained grants and scholarships

- 1** **Name of the grant:** Scholarship to conduct research at IPICYT Mexico
City awarding entity: Bruselas, Belgium
Identify key words: Biosensors; Wastewater; Electrochemistry
Aims: Guest Researcher
Awarding entity: European Commission **Type of entity:** State agency
Amount of the grant: 2.100 €
Conferral date: 01/06/2015 **Duration:** 1 month
End date: 30/06/2015
Entity where activity was carried out: Institute of Scientific Research and Technology of San Luis Potosi in Mexico
- 2** **Name of the grant:** Scholarship to conduct research at VU Amsterdam
City awarding entity: Ámsterdam, Noord-Holland, Holland
Identify key words: Biosensors; Wastewater; Electrochemistry
Aims: Post-doctoral
Awarding entity: Centre for Analytical and Environmental Studies and Research, The Netherlands **Type of entity:** Foundation
Amount of the grant: 4.500 €
Conferral date: 01/04/2012 **Duration:** 3 months
End date: 30/06/2012
Entity where activity was carried out: VU University Amsterdam
Faculty, institute or centre: Chemistry Department



- 3** **Name of the grant:** Complementary Scholarship to conduct PhD studies
City awarding entity: Mexico City, Mexico
Identify key words: Biosensors; Bioelectrochemical; Wastewater; Electrochemistry
Aims: Pre-doctoral
Awarding entity: Secretariat of Public Education **Type of entity:** State agency
Amount of the grant: 7.200 €
Conferral date: 01/10/2008 **Duration:** 3 years
End date: 30/09/2011
Entity where activity was carried out: Technical University of Braunschweig in Germany
Faculty, institute or centre: Institute of Environmental and Sustainable Chemistry
- 4** **Name of the grant:** Full Scholarship to conduct PhD studies
City awarding entity: Bonn, Köln, Germany
Identify key words: Bioelectrochemical; Wastewater; Microbiology; Electrochemistry
Aims: Pre-doctoral
Awarding entity: The German Academic Exchange Service **Type of entity:** Foundation
Amount of the grant: 36.000 €
Conferral date: 01/10/2008 **Duration:** 3 years
End date: 30/09/2011
Entity where activity was carried out: Technical University of Braunschweig
Faculty, institute or centre: Institute of Environmental and Sustainable Chemistry
- 5** **Name of the grant:** Scholarship for German course
City awarding entity: Bonn, Köln, Germany
Identify key words: Germanic languages
Aims: Pre-doctoral
Awarding entity: The German Academic Exchange Service **Type of entity:** State agency
Amount of the grant: 7.020 €
Conferral date: 01/05/2008 **Duration:** 5 months
End date: 30/09/2008
Entity where activity was carried out: DID Deutsch Institute
Faculty, institute or centre: Berlin
- 6** **Name of the grant:** Scholarship to conduct BSc studies
City awarding entity: Mexico City, Mexico
Identify key words: Wastewater; Biofuels; Electrochemistry
Aims: Pre-doctoral
Awarding entity: National Council of Science and Technology **Type of entity:** State agency
Amount of the grant: 6.760 €
Conferral date: 01/09/2005 **Duration:** 2 years
End date: 31/10/2007
Entity where activity was carried out: Centre for Research and Advanced Studies of the National Polytechnic Institute
Faculty, institute or centre: Biotechnology and Bioengineering



Prizes, mentions and distinctions

- 1** **Description:** PhD Assistant Lecturer (CSV: 332816054794433654668906)
Awarding entity: National Agency for Quality Assessment and Accreditation
Type of entity: State agency
City awarding entity: Madrid, Community of Madrid, Spain
Conferral date: 10/04/2019
Recognition linked: <https://sede.educacion.gob.es/cid/welcome>
- 2** **Description:** Certification Equivalence as PhD in Spain
Awarding entity: University of La Rioja
Type of entity: University
City awarding entity: Logroño, La Rioja, Spain
Conferral date: 15/06/2017
Recognition linked: https://www.slideshare.net/slideshow/embed_code/key/k1SGtZexERESzv
- 3** **Description:** National System of Researchers Level 1
Awarding entity: National Council of Science and Technology
Type of entity: State agency
City awarding entity: Mexico City, Mexico
Conferral date: 01/01/2016
Recognition linked: https://twitter.com/alessandroalfre/status/636544408742174720?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwtterm%5E636544408742174720&ref_url=http%3A%2F%2Fwww.alessandrocarmona.com%2F2016%2F04%2Fawards-and-honours.html
- 4** **Description:** Winner in the student paper competition at the Sixth International Conference on Remediation of Chlorinated and Recalcitrant Compounds
Awarding entity: Battelle Memorial Institute
Type of entity: R&D Centre
City awarding entity: Monterey, California, United States of America
Conferral date: 19/05/2008
Recognition linked: https://projects.battelle.org/chlorinated-conference/2008Chlor_Proceedings_Download.zip
- 5** **Description:** Winner of the poster competition in the renewable energies section
Awarding entity: Center for Research and Advanced Studies of the National Polytechnic Institute
Type of entity: Public Research Body
City awarding entity: Mexico City, Mexico
Conferral date: 06/09/2004