JOURNAL OF MICROBIAL ELECTROCHEMISTRY

A new step forward for ISMET?

This may be my last editorial for the ISMET newsletter as the president, because in October Sarah Glaven will take over from me at ISMET6 in Lisbon, Portugal. During the last 6 years, I have observed that the ISMET members and their work become more and more diverse, resulting in a mature research field. ISMET originated from discussions at conferences, where colleagues had organized special sessions. After several of these sessions at rather expensive and massive conferences in which we did not get much in return, we decided that enough was enough. We, as a grassroots organization, could organize much better meetings within in a small setting where everybody would have a chance to meet each other. That resulted in ISMET for which the main goal still is to get its members together. I think we have succeeded. Now, I have observed a new trend - special issues (SI) in journals. Some of these came out of our regional meetings. Just in 2016-2017 alone, the field of microbial electrochemistry has special issues in (and these are the ones I know of):


My question to you is whether the same thing holds for the journal papers as to the meetings – can we do a better job in publishing ourselves? Should ISMET start their own journal? We can possibly work with an already open-access publisher to prevent too much secretarial work for ISMET. We are not setup to perform such activity ourselves since we do not employ a business assistant. Of course, we have had this discussion within the board meetings over the last years, but we had always concluded that it would be too much for a new organization. During the maturation process, has this changed now that so many of our colleagues are willing to be special editors? Has ISMET reached a point that it does want to be linked to a peer-reviewed journal? Do we even want to have our own journal? Would we draw in enough manuscripts of high quality to obtain respectable impact? I will not be ISMET president long enough to lead discussions regarding these questions, it will be for the 4th president. It has been my pleasure to serve and I hope to see all of you in Lisbon.

Lars Angenent
President, ISMET

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General Meeting of the
International Society for Microbial
Electrochemistry and Technology
Lisbon - 3rd-6th October 2017
Campus de Campolide, Universidade NOVA de Lisboa

Plenary Speakers

Falk Harnisch
Helmholtz Centre for Environmental Research- UFZ, Germany

Jeffrey Gralnick
University of Minnesota Twin Cities, USA

Stefano Fregua
The University of Queensland, Australia

Gemma Reguera
Michigan State University, USA

Madalena Alves
University of Minho, Portugal

Tian Zhang
Wuhan University of Technology, China & Technical University of Denmark

Sessions
I: Fundamentals of the extracellular electron transport processes
II: Microbial Electrochemical Technologies: from fundamental to applied research
III: Electrochemical cell design and electrode materials
IV: Microbial fuel cell applications
V: Microbial electrochemical synthesis
VI: Microbial ecology
VII: Novel applications of microbial electrochemical systems
VIII: Water treatment and bioremediation

Dear colleagues,

Abstract submission is now open for the forthcoming General Meeting of the International Society for Microbial Electrochemistry and Technology “ISMET 6”, which will take place from the 3rd to the 6th of October 2017 in Lisbon, at Campus de Campolide of Universidade NOVA de Lisboa.

Topics will cover the whole palette of interests in the field including fundamental aspects of the biochemistry, microbiology and ecology of the relevant organisms and communities, as well as improved materials and designs of devices, and their industrial applications.

64 opportunities for oral presentation will be selected from submitted abstracts.

In keeping with the excellent tradition of ISMET meetings, students have the opportunity to attend a pre-ISMET workshop with teaching sessions delivered by renowned leaders in our field on the following topics:

“Fundamentals of electrochemical methods and microbial thermodynamics” by Falk Harnisch

“Molecular genetic techniques for understanding and engineering electroactive organisms” by Jeffrey Gralnick

“Electricity driven carbon capture and utilisation: where is microbial electrogenesis?” by Korneel Rabaey

We will strive, and count on your active participation, to make this four-day meeting a celebration of the recent and important advances in research and industrial application of microbial electrochemistry and technologies.

For more information, registration and abstract submission, please go to http://www.itqb.unl.pt/ismet6

Abstract submission deadline is May 31st.

The organizing committee, Ricardo O. Louro, Carlos A. Salgueiro, Catarina M. Paquete

For updates follow us on Twitter
https://twitter.com/ismet6_Lisbon
Microbial Electrochemistry Goes to School

Everyone can teach to make microbial electrochemistry a success. Teaching is a versatile method to spread the word on the exciting phenomena of electrochemically active microorganisms and the break-through applications it is delivering. A quick survey learns that education is applied in various ways and that everyone can join (both as student or tutor). Teaching is actually also the basis of commercial application of several microbial electrochemical technologies.

ISMET’s goal is to link researchers from various areas of science and engineering towards studying the complex interactions of microorganisms and electrodes, while finding novel ways to use them for sustainability applications. To allow impact of our findings on our society we have to inspire others and transfer knowledge. You can do it yourself. Nowadays Internet is full of information on how to build a bioelectrochemical system and to understand the basic working principles. Just open Wikipedia on the microbial fuel cell1 or check out numerous movies and animations on YouTube.

Also ISMET members, typically researchers, professors and students, are intrinsically active teachers and ‘students’. You probably recognize yourself in both roles. Belén Barroeta, predoctoral researcher at the University of Alcalá (UAH)/Spain, trained secondary school students in microbial electrochemistry and technology (METs) for a entire year. As Barroeta says:

“Prof. Abraham Esteve’s Bio-E Group at UAH has always been very interested in disseminating not only science, but also to spread their MET research among society.”

Belén used her background as scientific communicator and editor to set-up and coordinate this course. High school students ran independent projects investigating their own systems and presented their work at a mini-workshop with oral presentations. The course was evenly rewarded with first prize on best dissemination. At Cornell University, Miriam Agler-Rosebaum and Lars Angenent with the support of a high school teacher developed a curriculum for high schools online available2. Nowadays, working as Professor at RWTH Aachen she states:

“Teaching about bioelectrochemistry and promoting outreach courses is a great chance to promote bioelectrochemistry as a whole. Partly because of my high-school courses, kids decided to study Biology/Biotechnology. And every year, I am recruiting great thesis and also future PhD students from my lectures.”

Additionally, the Bruce E. Logan website provides numerous examples of student-led MFC projects and materials you can use to supplement your own courses3.
Senior researcher Dr. Deepak Pant gives lectures on bioelectrochemistry in a masters course on wastewater treatment that VITO organizes each year since 2008 with UGhent. He states:

“I teach to share my knowledge with young researchers and students to make them interested in interdisciplinary sciences such as bioelectrochemical systems which goes beyond the conventional studies in traditional subjects like chemistry, biology or physics. Also by introducing the students to the topic of microbial fuel cells and other bioelectrochemical systems, I hope create a knowledge pool for this subject for future.”

Hereby the challenge is to make the course neither too detailed or too superficial for students with different backgrounds.

Scientists also teach each other. ISMET and other groups like the International Society of Electrochemistry or the Symposium on Bioelectrochemistry and Bioenergetics organize meetings, summer courses and workshops on diverse aspects of biology and its electrochemical relationships. Teaching also forms a successful basis for the commercial application of MET. It provides attention to decision makers, industry and our educational systems. Activities by companies like Magical Microbes (formerly known as Mudwatt) and Plant-e show that education is commercially attractive. Plant-e inspires primary school kids to produce real PlantPower. Plant-e reached the status of a Technology Pioneer 2015 of the World Economic Forum. Meanwhile Mudwatt created a complete community and is extending its profile to engage the creativity of kids' minds and inspire students to appreciate the beautiful complexity of the microbial world around them. Possibly there is much more to gain here! Let's continue with inspiration... See you at ISMET Portugal!

Do you want to find out what ISMET provides on education? check out the website: https://www.is-met.org/membership

References
6. https://www.magicalmicrobes.com
New Trees for the ISMET Forest

New trees are growing in the ISMET Forest in Juan Carlos I Royal Botanic Gardens, University of Alcalá, Spain. The planting added last March reinforces that carried out in May 2015, which was composed of almost 70 specimens of the same native species (Quercus ilex and Quercus faginea). The aim is to mitigate the carbon footprint from the international conferences organised by our society, a step forward to a carbon neutral organization.

ISMET wants to act responsibly and sustainably and therefore offsets CO₂ emissions caused by conference attendance of its members by planting a forest in Alcalá de Henares, Spain.

This project was started for the 2014 EU-ISMET. trees were planted to make the meeting of 200 participants a CO₂ neutral event. The ISMET Board decided to make this a permanent activity for the conferences and financially supports the planting of trees to offset the carbon footprint of the attendance for all future ISMET meetings. Our forest is growing and more are coming soon in other locations.

Author: Belén Barroeta, University of Alcalá
Nomination for the ISMET Awards
Open until June 30th 2017

Best Scientific Paper Award & Innovation
Award for Best Technological Advancement

Nominations for both ISMET Awards are to be sent before the June 30th 2017 deadline to the ISMET Awards committee at the following address: ismet.awards@gmail.com by the Senior Author of the publication or work being nominated.

The award nomination should contain the following:

- Full name and affiliation of the nominee.
- Full name and affiliation of the nominator.
- Statement that nominee was a postgraduate student or postdoctoral researcher or industry affiliate at the time of publication.
- Statement that the nominee and nominator are members of ISMET in good standing.
- For Discovery Award: An attachment with the publication for which the nominee is being nominated.
- For Innovation Award: Documentation describing the breakthrough technological innovation.

Additional information can be found at: https://www.is-met.org/awards

E-mail award nominations to ismet.awards@gmail.com

Annually, ISMET acknowledges outstanding work published by postgraduate students, postdoctoral researchers and industry affiliates who are current ISMET members with two awards. These awards will acknowledge the best scientific publication and best breakthrough innovation published between January 1st of the previous year and the nomination deadline. Nominations for the awards will be judged on a competitive basis by an awards committee and selected based on the quality and impact of the research or discovery.

DISCOVERY AWARD FOR BEST SCIENTIFIC PAPER

The purpose of this award is to acknowledge the scientific manuscript published in a peer-reviewed journal that has most furthered the field of Microbial Electrochemical Technologies as encompassed by ISMET. The award is open to postgraduate students, postdoctoral researchers and industry affiliates in all fields including, but not limited to: Microbiology; Electrochemistry; Engineering; Physics; Material Science, associated with microbial electrochemical systems and technologies.

INNOVATION AWARD FOR BEST TECHNOLOGICAL ADVANCEMENT

The purpose of this award is to acknowledge the best technical innovation within the field of microbial electrochemical technologies. Technical innovations encompass, but are not limited to, all processes, research, design and equipment within the field of microbial electrochemical technologies. The award broadly encompasses new innovations that may or may not have been published in peer review journals that are available in the public domain (e.g. through websites, newspapers, etc.).