

Poster Award Winners

Marina Ramirez-Moreno from the University of Surrey, UK with the work “**Bioelectrochemical Metal-Recovery: closing the lithium loop**”

Funded by the UK's Biotechnology and Biological Sciences Research Council (BBSRC-UKRI) BB/X011372/1, the BELIEVE project aims to couple a bioleaching process to a bioelectrochemical system to optimize the bio-recovery of lithium (and other metals) present in spent battery waste, with the objective of achieving sustainable circular metal economy.

Nir Sukenik from the University of Southern California, Los Angeles, California, USA with the work “**Electron Spin Effects in Extracellular Respiration**”

The poster presented electron spin effects in extracellular electron transport. It showed dry conduction measurements of multiheme cytochrome monolayer films (by atomic force microscopy) that displayed spin polarization of up to 75%. Moreover, electrochemical measurements of *Geobacter sulfurreducens* biofilms exhibited a change in current when changing the spin orientation in a correlative manner to the preferred orientation of the dry measurements. These results suggest an electron spin effect in the conduction in EET that might contribute to a more efficient charge transfer.



Opinion from NA-ISMET participants



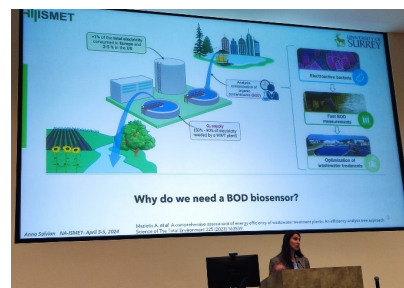
by **Sukrampal**, Postdoctoral researcher at USC, USA

Being a first-time attendee of NA-ISMET, I found it to be a whirlwind of innovation and collaboration in the field of microbial electrochemistry. In fact, it exceeded my expectations of meeting some friends whom I had been talking to virtually, by providing us with a dynamic environment for bonding and discussing science. Moreover, the blend of ISMET terminologies and Mime Mastermind helped us get so well to discuss the future directions for collaborations, which I enjoyed the most. In conclusion, I can say that the energy and enthusiasm in the air were contagious, leaving me eager to dive deeper into this fascinating field and contribute to its growth.

Experience at NA-ISMET by Anna Salvian

Ph.D. Student, University of Surrey, UK

The ISMET conferences are always wonderful opportunities for sharing ideas and drawing inspiration. This year, the North American ISMET at Rice University stood out for its unique blend of presentations and posters from researchers at all career levels—from pioneers in the field to graduate students. This diverse line-up provided an overview of current microbial electrochemical technologies and offered insights into the future directions of the field. It's always refreshing to step out of the lab, see the global progress in our field, and explore ways to collaborate for greater impact.



On a personal note, as a graduate student, I deeply appreciated the platform provided for us to share our ideas and engage with more experienced researchers. Although presenting at such a prestigious event was initially intimidating, it turned out to be a supportive and enriching experience.

Last but not least, I am glad I had the opportunity to visit Houston and I am extremely grateful to the organizers for their hospitality and helpful recommendations on local attractions and dining.

The visits to NASA's Space Center, the Museum of Natural Science, and experiencing authentic Texan BBQ were definitely highlights of my trip!

Opinion of NA-ISMET by Christine Lewis

Postdoctoral researcher, Arizona State University, USA

The NA-ISMET Conference took place between April 3rd to the 5th at the lovely, tree lined, Rice University in Houston. It was my first conference as a post-doctoral researcher of Chemistry. Caroline Ajo-Franklin graciously introduced the conference attendees to the venue at Rice's Synthetic Biology Institute (to which she is the director) and made everyone feel welcome. It was nice that the conference allowed us to arrive on Wednesday, and be home with our families by Friday evening. Despite the three-day agenda there was no shortage of informative interdisciplinary research presented. In true ISMET form, the level of respect between researchers was readily apparent between conference speakers (something that I find refreshing).



Dianne Newman's keynote kicked off the conference with a fantastic introduction to interesting work completed in her laboratories with collaborators with microbial reactor screening technologies in the keynote speech. The conference program ensured a constant stream of really impressive presentations that ranged between microbial electron transport, electrochemistry, reactor designs, electron shuttles and some incredibly interesting discussions on microbial communities. All of which initiated animated discussions between the breaks, during the poster sessions, meals and during our evening dinners.



One thing that stood out was the encouragement for new scientists and engineers to participate in the discussions and question sessions. The opportunity to talk with researchers doing similar work to my own is often difficult and the conference encouragement of groups of high level professors that serendipitously form and provide advice is priceless. There were no shortages of exchanges of scientific ideas flowing between the researchers. I know that I look forward to some collaborative work that I discussed with researchers and working on ideas that were sparked during my time there.

The perspective of Xu Zhang

Postdoctoral researcher, Rice University, USA

The NA-ISMET conference was successfully held at Rice University, United States. This event brought together over 70 esteemed participants from various corners of the globe to network, share insights, and forge lasting collaborations. Key discussions focused on the biological mechanisms of extracellular electron transfer, innovations at the microbe-material interface, and advancements in sensing and actuation technologies.

This was my first experience attending NA-ISMET, and I also served as a volunteer to help organize the conference. Experiencing the conference from both perspectives was truly insightful.

As an attendee, I enjoyed the intimate size of the event, which encouraged close collaboration and stimulating discussions. The organizing committee took a bold step with a new interactive format, featuring concise 10-minute presentations and a condensed schedule. This innovation greatly enhanced the participation of younger attendees, enabling them to showcase their research and ideas. Additionally, it allowed for extended periods of discussion and knowledge exchange, contributing to a vibrant and cooperative atmosphere.

As a volunteer, I witnessed firsthand the tremendous effort that the organizing committee invested in the planning stages and their commitment to gathering feedback for future improvements post-conference. Their dedication to enhancing the conference experience was remarkable and truly appreciated by all participants.



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