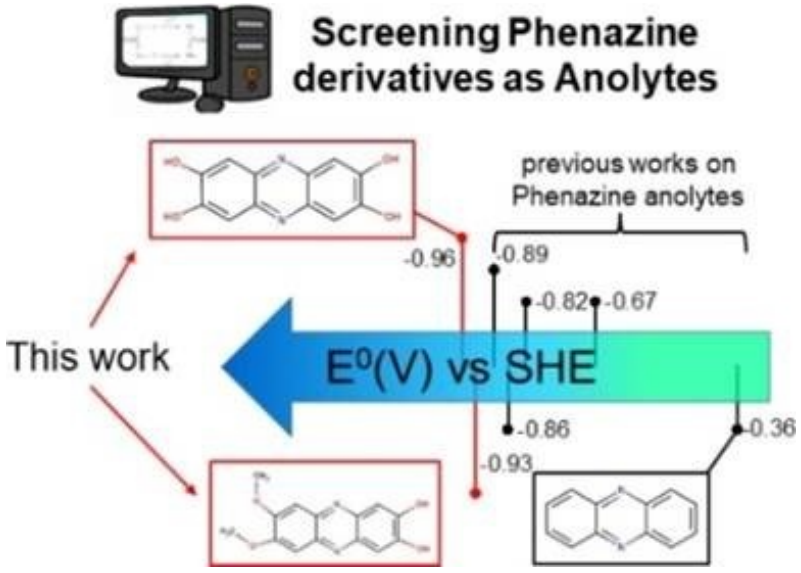
Newsletter issue 3

Welcome…

… to the 3rd issue of the MeBattery newsletter in which we are happy to make you aware of two publications (one in Chemical Reviews!) that were recently published by our teams at University of Burgos/IMDEA and Ruhr-Universität Bochum, respectively. In addition, ISTA explains how MeBattery helps to make energy more environmentally friendly and efficient. And last but not least, we are making use of this newsletter to say goodbye to José Pedro Wojeicchowski who is leaving MeBattery to tackle new challenges. Enjoy the read!



Publication: A Systematic Study on the Redox Potentials of Phenazine-Derivatives in Aqueous Media: A Combined Computational and Experimental Work

Carlos de la Cruz, Roberto Sanz, Anisley Suárez, Edgar Ventosa, Rebeca Marcilla, Andreas Mavrandonakis

Phenazines are an emerging class of organic compounds that have been recently utilized in aqueous redox flow batteries, a promising technology for large-scale energy storage. A virtual screening based on density functional theory calculations is used to investigate the redox potentials of around 100 phenazine derivatives in aqueous media containing various electron-donating or electron-withdrawing groups at different positions.

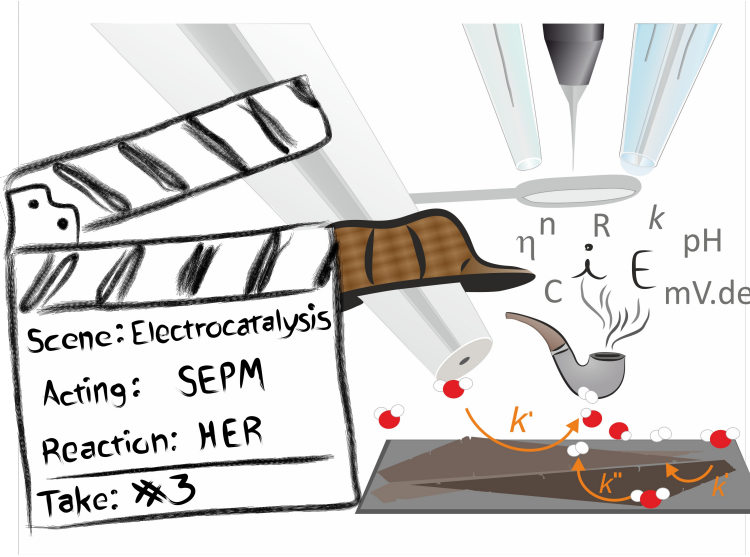
The full publication is available here.

Meet the MeBattery

team: José Pedro Wojeicchowski

Before José Pedro Wojeicchowski is moving on to new challenges, he shared with us his experience in the MeBattery team at University of Aveiro. His focus was on developing a predictive tool to estimate the partition coefficient of redox compounds. He particularly enjoyed working in MeBattery for the network of people, who were all dedicated to making a positive impact on society.
We wish José all the best for his future endeavours!

Read the full interview on the MeBattery website



Review: Operando Scanning Electrochemical Probe Microscopy during Electrocatalysis

Carla Santana Santos, Bright Nsolebna Jaato, Ignacio Sanjuán, Wolfgang Schuhmann, and Corina Andronescu

This review focused in the recent progress in operando scanning electrochemical probe microscopy (SEPM) measurements during electrocatalysis. SEPM techniques can disclose the local electrochemical reactivity of interfaces in single-entity and sub-entity studies. The powerful operando SEPM measurements can correlate electrochemical activity with changes in surface properties as well as provide insight into reaction mechanisms. The capabilities of SEPMs are showcased toward toward the reduction and evolution of O2 and H2 and electrochemical conversion of CO2. Emphasis is given to scanning electrochemical microscopy (SECM), scanning ion conductance microscopy (SICM), electrochemical scanning tunneling microscopy (EC-STM), and scanning electrochemical cell microscopy (SECCM).

The full publication is available here.

How ISTA is striving to make batteries more environmentally friendly and more efficient

In an article published in the ISTA Magazine on April 13, 2023 on how ISTA contributes to making batteries more environmentally friendly and more efficient, Mario Palacios Corella from Maria Ibáñez' research group explains how their work in MeBattery is helping to reach that goal. Their work concentrates not only on improving the performance of redox flow batteries but also on replacing environmentally harmful material with eco-friendly alternatives.

Read the full article here.

Reminder! 1st MeBattery Workshop Registration still open!

Our 1st MeBattery Workshop will focus on material science for the development of advanced battery devices. Progress in material science is of key importance for the development of any disruptive energy storage technology. The workshop will therefore cover topics from synthesis of advanced materials for batteries to tuning of their properties and to their recycling.

Participation is possible on location in Aveiro, Portugal, or online.

Register now for our workshop!

Announcements

1st Iberian Symposium on Functional Organic Polymers

11-12 May 2023
Aveiro, Portugal
More information

WCCE11 – 11th World Congress of Chemical Engineering
4-8 June 2023
Buenos Aires, Argentina
More information

Organic Battery Days 2023
7-8 June 2023
San Sebastian, Spain
More information

We hope that you enjoyed this issue of our newsletter and we look forward to sharing our exciting journey with you.

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