

# **Newsletter issue 11**

#### Welcome...

... to the 11th issue of the MeBattery newsletter. We are approaching the end of the project with giant strides. And as we do, we are happy to see that more and more results become available. We therefore have some insightful publications for you and, while we said goodbye to our "Meet the team" interview series, we have an exciting new series upcoming! Enjoy the read!

# **MeBattery Progress Meeting in St. Ingbert**



On 8-9 April 2025, the **MeBattery consortium** convened for their bi-annual Progress Meeting hosted by **EURICE in St. Ingbert**. The meeting was packed with discussions for the last stretch of the project and beyond – covering exploitation and sustainability planning of the project's outcomes.

Read more about the meeting.

New interview series upcoming!



On the occasion of our last meeting, **EURICE** filmed interviews with the project partners highlighting the innovative work done in **MeBattery**. The interviews include major achievements, insights into research techniques and the potential impact of MeBattery. The interview series will be published as of September 2025. **Watch out for it!** 

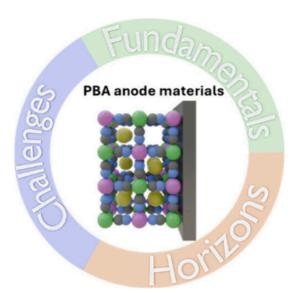
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## **Publication:**

Prussian Blue Analogues as Anode Materials for Battery Applications: Complexities and Horizons

Mario Palacios-Corella, Igor Echevarria, Carla Santana Santos, Wolfgang, Schuhmann, Edgar Ventosa, Maria Ibáñez

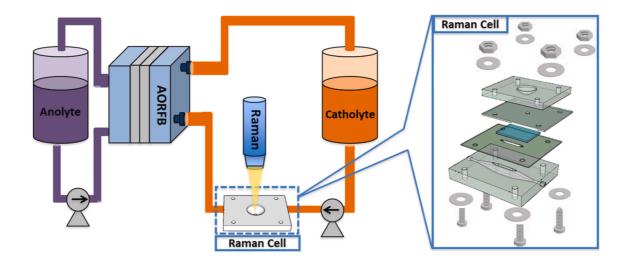
Prussian blue (PB) and Prussian blue analogues (PBAs) are a class of porous materials. So far, PBAs with Cr or Mn as the active site display lower redox potentials and remain significantly underexplored as anode materials. In this publication, the teams at IST Austria, Ruhr-University Bochum and Burgos University comprehensively analyze the challenges involved in producing and employing PBAs with low redox potentials as active battery materials..



The full publication is available here.

## **Publication:**

Raman spectroelectrochemistry for operando characterization of redox flow batteries



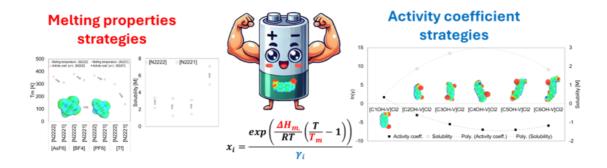
Lara Lubian, Rubén Rubio-Presa, Virginia Ruiz, Alvaro Colina, Edgar Ventosa

Advanced in-situ and time-resolved techniques play a critical role to improve performance of **Aqueous Organic Redox Flow Batterie (AORFBs)**. In this publication, the development and implementation of operando Raman spectroscopy is shown for dihydroxyanthraquinone—ferrocyanide alkaline flow battery.

The full publication is available here.

#### **Publication:**

Thermodynamic strategies to increase solubility for higher energy density in organic redox flow batteries



Murilo L. Alcantara, Dinis O. Abranches, Catarina M.S.S. Neves, Rubén Rubio-Presa, Edgar Ventosa, João A.P. Coutinho

Improving the solubility of **redox-active organic molecules (ROMs)** in electrolyte solutions is vital for boosting the energy density of redox flow batteries and avoiding precipitation issues. This study explores six thermodynamic strategies to enhance ROM solubility by lowering melting points or activity coefficients.

The full publication is available here.

## **Publication:**

Enhancing the Stability of Aqueous Membrane-Free Flow Batteries: Insights into Interphase Processes



Paula Navalpotro, Carla Santana Santos, Murilo L. Alcantara, Vanesa Muñoz-Perales, Santiago E. Ibañez, Antonio Martínez-Bejarano, Nomnotho Jiyane, Catarina M. S. S. Neves, Rubén Rubio-Presa, Thomas Quast, Wolfgang Schuhmann, João A. P. Coutinho, Rebeca Marcilla

This study presents a **new aqueous membrane-free flow battery** based on a novel aqueous biphasic system with enhanced electrolyte properties. The system uses compatible species exhibiting high partitioning behavior, as demonstrated by computational and experimental analysis. These species prevent parasitic reactions, enabling unprecedented studies of the liquid—liquid interphase and providing valuable insights into advancing this battery technology.

The full publication is available here.

# MeBattery crosses the ocean ISE Topical Meeting



In March 2025, **Ruhr University Bochum** crossed the ocean to spread the word about MeBattery in Brazil. This included invites from the **University of Sao Paulo** and the **Federal University of Rio de Janeiro** as well as attending the 39th ISE Topical Meeting.



#### 76th ISE Annual Meeting

7-12 September 2025, Mainz, Germany

More information

#### 5th SUPERBAT: International Course on Batteries and Supercaps

22-23 September 2025, Madrid, Spain

More information

#### 248th ECS Meeting

12-16 October 2025, Chicago, USA

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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## **EURICE - European Research and Project Office GmbH**

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