

# **Newsletter Issue 3**

#### Welcome...

... to the **3rd issue of the DigiCell newsletter**. We are celebrating our mid-term milestone and are happy to see that first results from the project are becoming available You will find an overview of the latest publications below. There is also an exciting update of our efforts in the IEC TC113 group for standardization in nanotechnology. **Enjoy the read!** 



**DigiCell consortium coming together** 

On a bi-annual basis, the **DigiCell consortium** is meeting to discuss the latest progress in the project and to deep-dive into aligning on technical issues.

In January 2025, the meeting was hosted by METAS in Bern,
Switzerland. In May 2025, LEITAT welcomed the DigiCell partners in Barcelona, Spain.

A big thank you to our hosts!



DigiCell meeting in Bern

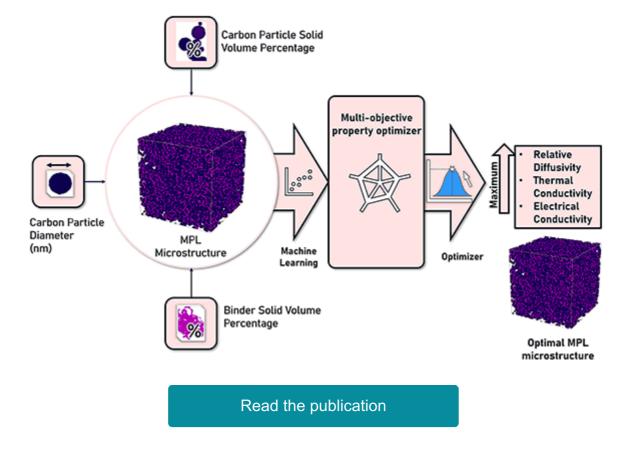
DigiCell meeting in Barcelona

# **DigiCell publications**

With the project reaching its mid-term milestone, first results are becoming available. Over the past months, six articles were published in renowned scientific journals.

Digital correlation analysis and optimization of microporous layer through a machine learning workflow for PEMFC applications

in: Journal of Power Sources

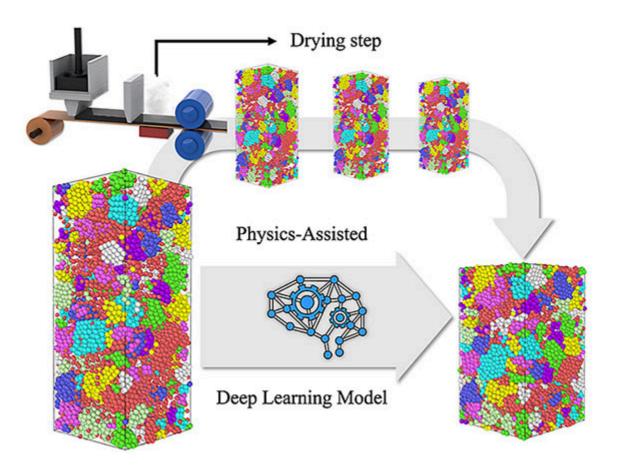


Physics-Assisted Machine Learning for the Simulation of the Slurry

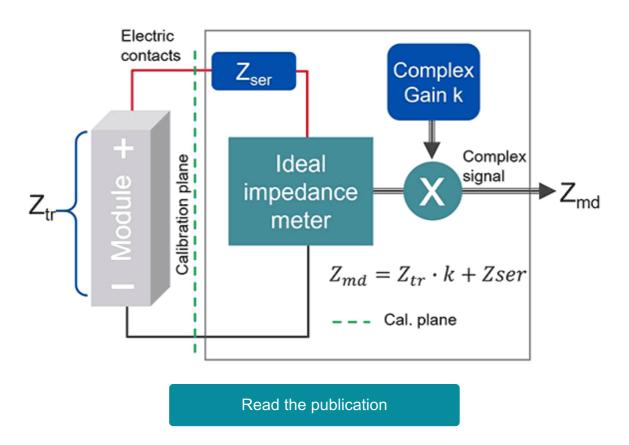
Drying
in the Manufacturing Process of Battery Electrodes: A Hybrid Time-

Dependent VGG16-DEM Model

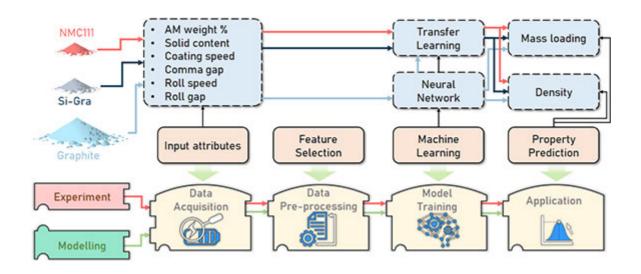
in: ACS Applied Materials & Interfaces



# Reconstruction of Electrochemical Impedance Spectroscopy from Time-Domain Pulses of a 3.7 kWh Lithium-Ion Battery Module in: ElectroChem



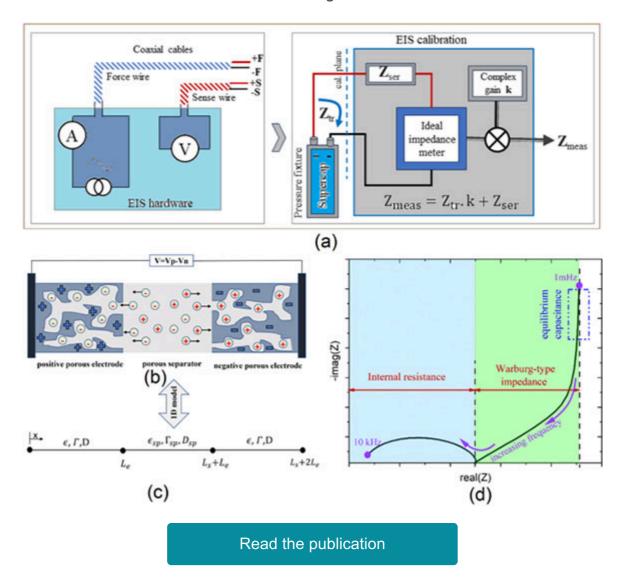
Transfer learning assessment of small datasets relating manufacturing parameters with electrochemical energy cell component properties in: npj advanced manufacturing



Read the publication

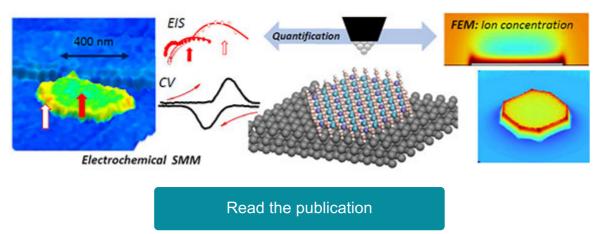
# Electrochemical Analysis of Carbon-Based Supercapacitors Using Finite Element Modeling and Impedance Spectroscopy

in: Energies

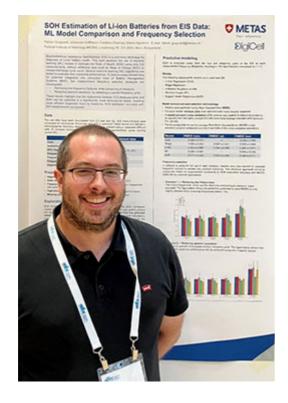


# **Electrochemical Scanning Microwave Microscopy Reveals Ion Intercalation Dynamics and Maps Active Sites in 2D Catalyst**

in: small



## DigiCell at AABC 2025



On 23-36 June 2025, The Advanced Automotive Battery Conference (AABC) Europe 2025 took place in Mainz, Germany.

Fabian Guignard from METAS presented their results with regard to the machine learning approach they are taking to predict State of Health (SoH) using only Electrochemical Impedance Spectroscopy (EIS) data.

More about AABC 2025

### **IEC TC113 Spring Meeting in Tokyo**

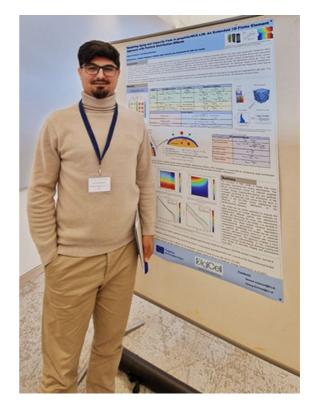


From 27-30 May 2025, **DigiCell partner ISC** participated in the **IEC TC 113 Spring Meeting** in Tokyo, Japan. The meeting brought together global experts in nanotechnology standardization. As demand for sustainable and high-performance energy storage grows, international standardization through IEC TC 113 and its working groups is a key enabler for safe and reliable adoption of nanotechnologies.

More about TC113 Spring Meeting

On 11-12 March 2025, Ahmad
Azizpour from Johannes Kelpler
Univerity Linz presented the latest
results of their group about modelling
aging and capacity fade at ModVal
2025, the 21st Symposium on
Modeling and Experimental Validation
of Electrochemical Energy
Technologies.

More about ModVal 2025



#### **Event announcements**



#### **Euro PM2025 Congress & Exhibition**

14 - 17 September 2025, Glasgow, UK More information



#### E-MRS 2025 Fall Meeting

15 - 18 September 2025, Warsaw, Poland More information



#### 248th ESC Meeting

12 - 16 October 2025, Chicago, IL, US More information

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









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