

**Project Coordinator**

Fraunhofer Institute for Ceramic Technologies and Systems

andre.clausner@ikts.fraunhofer.de

Coordination Support

Technikon Forschungs- und Planungsgesellschaft mbH

support@addmorepower.eu

**Budget****€ 5.9 Million**

100% EU-funded

**Consortium****10 Partners**

6 countries

**Duration****48 Months**

01/2023 - 12/2026

**AddMorePower**

ADVANCED MODELLING AND CHARACTERIZATION FOR POWER SEMICONDUCTOR MATERIALS AND TECHNOLOGIES

FOSTERING A MORE RESILIENT
POWER ELECTRONIC INDUSTRY

AddMorePower: Latest Highlights!

The past months have been a busy and productive period for AddMorePower, with the consortium continuing to advance its scientific work while strengthening collaboration across research institutions, industry partners, and large-scale research infrastructures. Alongside significant progress in materials characterisation and modelling, the project has further developed its data management and workflow foundations, supporting the long-term impact and sustainability of its results. In parallel, project partners have actively engaged with the wider scientific community through numerous international conferences, workshops, and scientific events, helping to disseminate project results and foster exchange with researchers and stakeholders. Below, we share a snapshot of recent achievements and ongoing activities.



Funded by the European Union under grant agreement no. 101091621. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Recent Progress and Activities

From labs to large-scale facilities

Project partners continued working with advanced X-ray-, synchrotron- and electron-based characterisation methods, demonstrated across both laboratory environments and large research infrastructures. Recent activities focused on the investigation of power semiconductor materials and device-relevant structures, supporting the project's overarching goal

of advancing reliable characterisation and modelling approaches for power semiconductor materials and technologies.

A strong emphasis remains on non-destructive and in-situ techniques, enabling insights into material behaviour and degradation processes under realistic operating conditions.

Strengthening workflows and data foundations

Alongside experimental activities, the consortium continued to build and share robust foundations for data management and reuse. Key developments include:

- Publication of additional CHADAs and MODAs via the AddMorePower Zenodo space
- Ongoing documentation of characterisation and modelling workflows

- Preparatory work to enable FAIR data publication via NOMAD OASIS
- Completion of a cybersecurity assessment and penetration test for secure data handling

These efforts help ensure that AddMorePower outputs are transparent, reusable and sustainable beyond the project lifetime.

Conferences and events

AddMorePower partners actively engaged with the wider research and innovation community through conferences, user meetings and scientific exchanges. The project was represented at several major international events, including **Euromat 2025 (Granada)**, the **European School for Young Materials**

Scientists (ESYMS) 2025 (Lisbon) and **CMC 2025 (Brno)**, **ESREF 2025 (Bordeaux)**, **ICACC 2026 (Daytona Beach)**, **iCT 2026 (Linz)**, **FCMN 2026 (Monterey)**, **SPIE Photonics Europe 2026 (Strasbourg)**, as well as at **ESRF-related user meetings and community events**.

01 Consortium Meeting

The AddMorePower consortium came together for a two-day project meeting in **Metz, France**, on **9–10 June 2026**.

During the meeting, partners:

- Reviewed technical progress across all work packages
- Discussed upcoming dissemination activities, publications, and events

- Aligned on final steps to successfully complete the project

The sessions sparked productive discussions and reinforced collaboration across the consortium, ensuring a strong finish to AddMorePower.



02 European School for Young Material Scientists 2025

From October 13-14, 2025, the **European School for Young Material Scientists** took place in Lisbon, Portugal, bringing together aspiring researchers and experts at **NOVA University** for an engaging two-day event, co-organized by the AddMorePower project.

The school offered a dynamic platform centered on Materials Science and Characterization, the foundation of the AddMorePower project. The event opened with a keynote by **André Clausner** from **Fraunhofer IKTS**, the project's technical lead, who provided insights into the project's approach to advanced materials research and innovation.

Later, **Laura Neumann**, a PhD researcher at **Fraunhofer IKTS**, presented her work on "Nanoscale examination of degradation in copper metallization layers using lab-based transmission X-ray microscopy."

In total, 40 PhD students participated in the school, making it a valuable opportunity for young scientists to exchange ideas, learn from leading experts, and explore new frontiers in materials science.



03 ICACC 2026

Moreover, from 25-30 January 2026 the AddMorePower consortium participated in the **International Conference and Expo on Advanced Ceramics and Composites (ICACC 2026)** in Daytona Beach, one of the key global events for materials science and advanced ceramics research. With experts

from academia, research institutes, and industry, **ICACC** provides an important platform to exchange knowledge, present new findings, and explore emerging directions in materials and semiconductor technologies.

Strong project presence across sessions

Our partners represented the project in several high-level scientific sessions as part of the symposium "Crystalline Materials for Electronic, Optical and Medical Applications":

- Project coordinator **André Clausner** from **Fraunhofer IKTS** presented the latest GaN-related results in his talk "Advanced characterization of GaN wide-bandgap semiconductors for next-gen power electronics".

- Project partner **Prof. Antoine Guitton** from **Université de Lorraine – LEM3** contributed to the symposium with the presentation "Defects as drivers in MAX phases: micro/nanostructure-property relationships".

A valuable opportunity for exchange

The conference provided an excellent opportunity to discuss our research with peers, connect with the wider materials science community, and gather feedback relevant for our pro-

gress in the project's final year. We look forward to continuing these exchanges and sharing more results as the project advances.



04 15th International Conference on Industrial Computed Tomography (iCT 2026)

AddMorePower was represented at the **15th International Conference on Industrial Computed Tomography (iCT 2026)** in February 2026 in Linz, Austria - a key forum for the latest developments in industrial CT, including non-destructive testing, 3D materials characterization, and advanced imaging techniques by PhD student **Laura Neumann** from **Fraunhofer IKTS**.

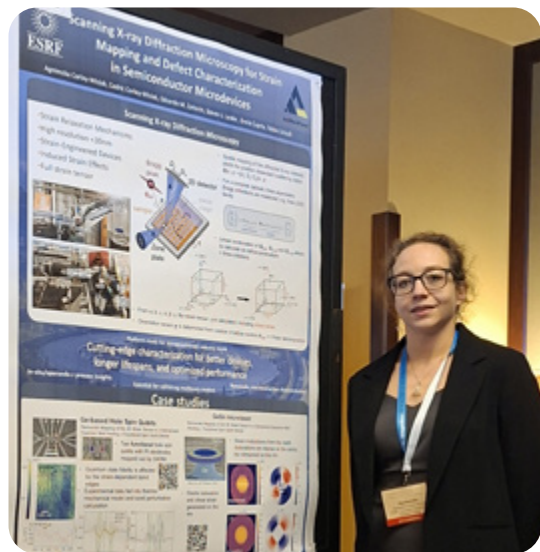
She presented a talk titled "*Correlative in-situ X-ray examination of copper metallization layers*" as part of the session on in-situ investigations.



05 FCMN 2026

AddMorePower was also represented at the **International Conference on Frontiers of Characterization and Metrology for Nanoelectronics 2026**, which took place from 16-19 March 2026 in Monterey, CA.

Agnieszka Anna Corley-Wiciak from **ESRF - The European Synchrotron** presented a poster on Scanning X-ray Diffraction Microscopy (SXDM) as a metrology tool for the semiconductor industry.



06 IEEE 33rd International Symposium on the Physical and Failure Analysis of Integrated Circuits (IPFA 2026)

From July 13-16, 2026, **Sebastian Moser (KAI Kompetenzzentrum Automobil- und Industrieelektronik GmbH)** and **Till Dreier (Excillum AB)** attended the **IEEE IPFA 2026** conference in Singapore.

Sebastian Moser gave a talk titled "*In-situ X-ray tomography of Cu fatigue in power microelectronics*". The presented work was carried out within the AddMorePower project, with contributions from the collaboration partners **KAI Kompetenzzentrum Automobil- und Industrieelektronik GmbH**, **Excillum AB**, and **Fraunhofer IKTS**.

The conference made clear that innovative characterization methods are essential for the development, process control, and failure analysis of advanced microelectronic components, and that the work within AddMorePower actively drives progress in these fields.



07 Summer School on Multiphysics Material Modeling

The Summer School on Multiphysics Material Modeling took place from 9-12 September 2026 at **KU Leuven**.

The four-day programme was tailored to researchers with a materials science background, especially those working ex-

perimentally that want to understand better the capabilities and limitations of simulation approaches.

Looking ahead

As AddMorePower progresses further into its final phase, the focus remains on preparing the project outputs for long term exploitation and impact! Ongoing and upcoming activities

will continue to be shared via the project website and communication channels. Keep a look out!

ESYMS 2026 – European School for Young Materials Scientists

We are looking forward to the **ESYMS 2026 – European School for Young Materials Scientists**, which will take place from **23rd-24th November 2026** in Dresden/Germany. The event aims to bring together young scientists, mainly PhD students, working in the exciting fields of Materials Science, Nanotechnology, Nanoscale Materials, Nanoanalysis, Multi-scale materials characterization, as well as Microscopy.

The European School for Young Materials Scientists will be organized in close cooperation with the **6th Correlative Materials Characterization Workshop 2026** (25-26 November 2026).

In case you have any further questions or need further assistance, please feel free to contact André Clausner directly via email: andre.clausner@ikts.fraunhofer.de

We are looking forward to seeing you in Dresden, Germany!

AddMorePower Public Advisory Board Meeting

Furthermore, we are delighted to invite you to the AddMorePower Public Advisory Board Meeting.

Join us and register now via: [AddMorePower Public Advisory Board](#)

Event Details:

- 📅 Date: 17th December 2026
- 🕒 Time: 15:00 - 17:00 CET
- 📍 Location: online

Further recent activities are also reflected in images and updates shared via the project website and blog:

<https://addmorepower.eu/>



Funded by the European Union under grant agreement no. 101091621. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.



Video material created

You can find all videos and interviews in the AddMorePower **Video Showcase** !



GitHub

Make sure to check out our **GitHub Repositories** as well!



Upcoming Events

Visit our website for more info: addmorepower.eu/events/

All past and upcoming events can be found on the AddMorePower official webpage.