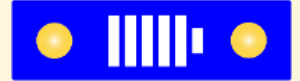


Meet the SPINMATE Partners!

MEET:



SPINMATE



Introducing Avesta Battery & Energy Engineering (ABEE): dynamic engineering company based in Brussels and specialised in the field of battery processing, manufacturing, battery system design, prototyping, and recycling and in particular for advanced Li-ion and solid-state battery technology. ABEE is supporting the industry in development of tailored made solutions from battery materials to recycling for automotive and stationary applications through development of dedicated multi-scale simulation tools and functions embedded in different platforms. In addition, ABEE is setting up state of the art battery manufacturing infrastructures and battery system design platforms.

<https://abeegroup.com/>

Hello Takwa Benissa and Andrea Martinez! Thank you for this opportunity to meet you and talk about SPINMATE. To kick off, could you give us, in your own words, a short introduction to ABEE and your role there?

Avesta Battery & Energy Engineering (ABEE) specializes in battery processing, manufacturing, system design, prototyping, and recycling, particularly for advanced Li-ion and solid-state battery technology. For **SPINMATE**, **ABEE** is the Project Coordinator, with a main role in the equipment development and pilot line assembly, ensuring the proper **SPINMATE** development and leading project work packages 1 and 5 – *Project Coordination and Management*, and *Equipment development and pilot line assembly*- as well contributing to implementing all the other work packages. At ABEE, Takwa is a Project Manager, and Andrea is a Cell Design Engineer.

To someone reading this who is still unfamiliar with SPINMATE, how would you describe it in simple terms, and how do you distinguish it from other projects or initiatives?

SPINMATE technology has been carefully selected based on the **SPINMATE** partners' expertise and considering the industrial partners' state-of-the-art materials involved in the project to reach the energy density targets while at the same time achieving safer and more sustainable batteries than the conventional Li-ion batteries in the market.

ABEE is the project coordinator. Could you tell us about how was the process of establishing the SPINMATE consortium and the development of the project concept?

The project was based on other EU projects that we are a part of. We found the missing elements from the different projects and completed them with the right partners. As a concept, we wanted to not work on optimising at the material level but to target the manufacturing process and the challenges in this domain.

ABEE leads on setting and managing collaboration with other projects and initiatives. Can you tell us how SPINMATE – in parallel with those synergies – aims to impact the battery industry and EV industries?

Those projects will work closely to promote technology transfer across relevant stakeholders, such as academia and the entire EV battery supply chain under the umbrella of the SOLID4B cluster. Want to know more? Follow the SOLID4B [LinkedIn](#) page!

ABEE will manage the equipment development and pilot line assembly on SPINMATE. Could you share some details on these activities regarding the upscaled production through innovative concepts on solid-state cell assembly?

When moving from conventional Li-ion technology to LiMetal solid-state batteries, several challenges need to be addressed given the differences in the properties of the materials used for this battery technology. Thus, as battery manufacturers, engineering problems arise as tools need to be adapted to ensure the technological transition. The main challenges are mostly related to the compatibility of the materials used in these batteries (i.e., Li metal and the polymer-based oxide electrolyte), which we are addressing within **SPINMATE** project.

Demonstrating environmental performance of battery cells will be a key milestone. To achieve this, a recycling process flow design and process optimisation will be established by ABEE. Which added value /major impact SPINMATE proposes to achieve regarding battery recycling?

Process optimization and sustainability are at the core of **ABEE's** recycling concepts. Establishing an efficient and flexible flow design will not only allow for achieving good selectivity and yield values but also a valuable opportunity to integrate recycled battery components back into the battery production line. This will also encourage battery manufacturers to design more recyclable batteries soon.

Indeed, there will be readers interested in meeting you and discussing your experience in SPINMATE. Which events will be possible to meet ABEE in the upcoming months?

Sure, for any interactions, they can always reach us via email. Still, we are planning to disclose the **SPINMATE** project during the Battery innovation days 2023 and similar events, which we will advertise beforehand on our website. So, stay tuned!



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INOVA+ – responsible for implementing the communication and dissemination activities in SPINMATE – conducted a series of interviews to the SPINMATE partners. If you would like to know more about the project partners, visit our online channels.

SPINMATE Website: www.spinmate.eu

SPINMATE Social media channels:



Contact info: info@spinmate.eu

