



**Newsletter**  
**March, 2023**

**The vision** for BATTERY 2030+ is to invent the batteries of the future, providing European industry with disruptive technologies and a competitive edge across the full value chain, that will enable Europe to take the lead in battery science and technology.

**This newsletter** gives you an update on what's going on within the initiative. Enjoy your reading!



**Kristina Edström,**  
**Director of BATTERY 2030+**

**BATTERY 2030+**  
**ANNUAL CONFERENCE 3**  
9-10 MAY 2023 | UPPSALA (SWEDEN)

**BATTERY**  
**2030+**

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 957213.

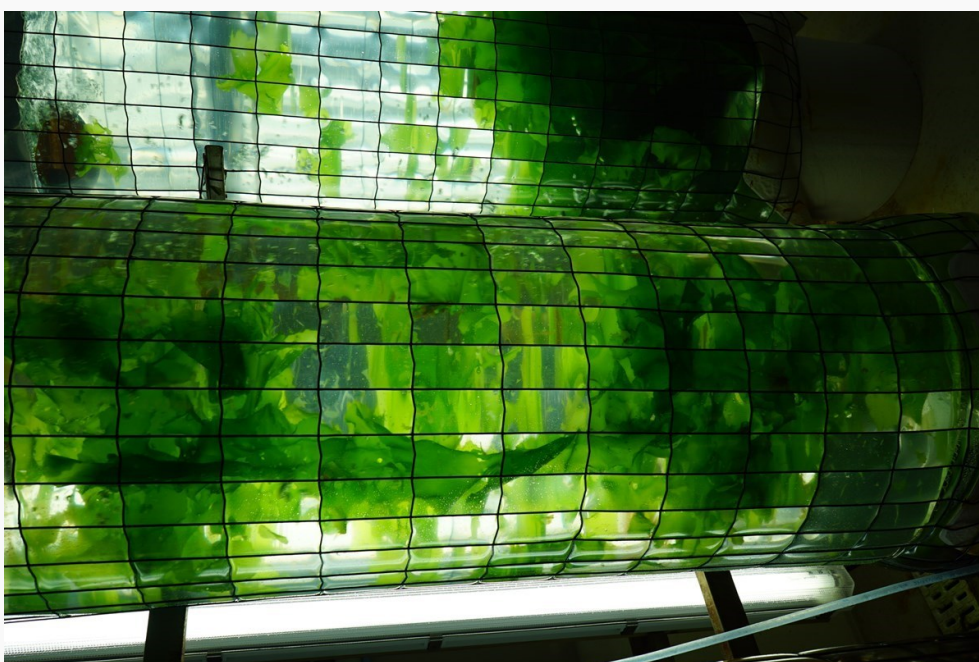
## **BATTERY 2030+ 3rd Annual conference!**

We are looking forward to see you all in Uppsala, Sweden on May 9th and 10th. We have a really interesting conference planned with all our projects presenting their final results, a poster session, renowned plenary speakers, talks with industry and much more.

Send in your abstract before March 30th with a chance to present your poster and do an oral presentation pitch in front of an audience. Find guidelines for submitting an abstract [here](#).

We are proud to present two of our plenary speakers, Clare Grey, professor at Cambridge and Jean-Marie Tarascon Professor at College de France. A few others will follow as soon as details are confirmed. On the agenda we also have BEPA and Batteries Europe giving presentations. Greger Ledung (Swedish delegate in NRCG) talking about Swedish batteries and the European perspective. Future merging research leader from our young scientist network giving their perspective. Industry leaders like Maria Åstrand from Northvolt, Stefan Koller from Varta Innovations, and Matthew Lacey from Scania among others. The European Commission will also be included during our conference. We hope you are as excited as us!

If you have not registered yet, visit this website, <https://meetbattery2030.eu/>



## Together towards environmentally friendly batteries

**M-ERA.NET involving 49 public funding organisations in 35 countries is a network for materials science and engineering to support the transition to a circular economy and other sustainable goals within Europe. It is part of the Horizon 2020 and coordinated by Roland Brandenburg at Austrian Research Promotion Agency.**

Almost half of the projects are related to batteries and therefore it is of mutual interest for us to have insight in each other's projects. Several seminars are planned and the first was held February 21 with Robert Dominko as moderator and introduction by Roland Brandenburg and Kristina Edström.

Nine interesting M-ERA.NET projects using different approaches to advance sustainable batteries were presented. One of them, **Restina**, uses silicon recovered from end-of-life solar panels to make anodes. **Plasmanode**, another project, develops materials for Li-ion battery anodes processable by water-based techniques, potentially getting rid of toxic solvents in today's manufacturing processes. Scalable and sustainable anodes for Li-ion batteries using algae as a raw material is yet another project called **Sustbatt**.

Graphite is classified as a raw material by EU and the storage capacity when used in anodes is limited. SiOx anodes on the other hand has limited stability, but a potential for

high storage capacity – and they can be derived from algae exoskeletons Maria Valeria Blanco, NTNU (Norwegian University of Science and Technology), told us. Samson Y. Lai, IFE, (Institute for Energy and Technology) also in Norway gave an overview of the **Balsa**-project, focused on bio-sourced alternatives, in this case for Si/CNF anodes made from biomass, like agricultural waste or leftovers from the production of paper pulp.



From left: Mashood Nasir, Estibaliz Crespo

## Spain on the move for a fossil free society

**BATSUM23**, arranged by CIC energi Gune, took recently place in Vitoria-Gasteiz, Spain. **Battery 2030+** was there and Robert Dominko, research professor at University of Ljubljana in Slovenia gave a presentation of **Battery 2030+**.

- I was impressed by the achievements being done in the Basque region with 2,2 million people. It is a good example of how a region, or a small country for that matter, can accomplish a lot given support from government, industries and other actors in the battery field, says Robert Dominko. They understood early on that there is no turn back to a fossil-based society, and the need for education and research.

Many parts of the battery chain in play

The regional government in Basque has been working with a long-term focus on and strong financial support on education and independent research. There has also been a huge willingness to establish many parts of the value chain for batteries. It has now established itself as the center for battery research and manufacturing in Spain, with research institutes like Ikerlan, Cidetec, and of course Cicenergigune, Estibaliz Crespo, R&D Project coordinator at Cicenergigune and active in Battery 2030+, told us. In southern Spain and along the Atlantic coast there are furthermore rather large resources of suitable raw materials that are, or can be, mined.

**BAT4EVER**  
**Modelling Self-Healing battery components**  
 Self-healing Course 13<sup>th</sup> – 14<sup>th</sup> March 2023  
 Prof. Rita Magri

**Binder**

**Electrolyte**

- IL group
- UPy
- IL/Li salt mixture

UNIMORE  
 UNIVERSITÀ DEGLI STUDI DI MODENA E REGGIO EMILIA  
 1175

This project has received funding from BATTERY

## What characterises a self-healing battery?

To claim that a battery has self-healing (SH) properties has become popular. But what really distinguishes a self-healing battery from a modified, just better battery? This question of philosophical dimensions was debated at the “Battery 2030 Webinar on Self-healing functionalities” in March. Are polymers designed to encapsulate the electrolyte to allow for higher energy-density materials or the use of piezoelectric effect to hinder dendrite growth at the anode making the battery self-healing?

Regardless the course provided the basics on the self-healing functionalities in Lithium batteries. We got a good overview of self-healing functionalities for polymer electrolytes and binders, of modelling, characterization and methods to evaluate SH properties.

### Read our latest news

**Keep up** to date with the latest news from BATTERY 2030+ and other battery related topics. [Read more...](#)

## Do not miss out...

**Excellence Seminars** Did you miss any of our Excellence seminars? Do not worry we have them recorded and transcribed on our website for you to watch [here...](#)

**APRIL 3rd BATTERY 2030+ Southern regional meeting** with esteemed speakers discussing research initiatives and activities along with long-term research needs across Europe and identifying possible activities to increase synergies. Register [here..](#)

**April 4th BATTERY 2030+ AND M-ERA.NET WORKSHOP II** learn more about all projects in BATTERY 2030+, M-ERA.NET and find common collaborations and other possible ways of knowledge exchange that will benefit your project and network. Register [here..](#)



### Support us

BATTERY 2030+ is a long-term initiative enabling Europe to take the lead in battery science and technology by developing radically new concepts for the batteries of the future.



### Contact us

E-mail: [battery2030@uu.se](mailto:battery2030@uu.se)

[Read more](#) about us and find [additional contact details](#) on our website:

[www.battery2030.eu](http://www.battery2030.eu)

Help us achieve these ambitious goals by endorsing BATTERY 2030+ as long-term research initiative for Europe. **Read more...**



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