PULSELiON

Newsletter #5 – October 2025

In this newsletter, you will learn more about the project PULSELiON latest activities and the activities to come. The next newsletter will be published in April 2026. Do you want to stay informed about the latest PULSELiON news in the meanwhile? Please stay tuned via our website www.project-pulselion.eu, or follow us on LinkedIn and X.

WHAT IS NEW?

Zois Award for Prof. Dr. Tomaž Katrašnik

PULSELiON is proud to congratulate Prof. Dr. Tomaž Katrašnik with receiving the Zois Award for top achievements. The Zois Awards are the highest recognitions of the Republic of Slovenia in the field of scientific research and development.

Our project colleague Prof. Dr. Tomaž Katrašnik received this award for the work of his group at the University of Ljubljana – Faculty of Mechanical Engineering, on progressing innovative computer models and diagnostic methods for electromobility. These models make it possible to discover new phenomena and understand processes in battery materials, as well as to predict their internal states in relation to the impact on the health and safety of batteries.

The models are co-developed in the framework of Horizon Europe project PULSELiON amongst other projects. The model library allows for faster and cheaper development of batteries and fuel cells. The transfer of his cutting-edge scientific findings to the world's leading companies has a significant impact on the development of more efficient and safer electric vehicle drives.

The fact that his work in project PULSELiON has contributed to receiving this award, makes us extra proud in congratulating Prof. Dr. Tomaž Katrašnik and his group with this spectacular achievement. Our sincere congratulations!

Prof. Alejandro A. Franco receives the 2025 ECS – The Electrochemical Society Battery Division M. Stanley Whittingham Mid-Career Award

There was more to celebrate! Our colleague Prof. Alejandro A. Franco had the honor to receive the 2025 ECS – The Electrochemical Society Battery Division M. Stanley Whittingham Mid-Career Award.

The ECS Battery Division M. Stanley Whittingham Mid-Career Award was established in 2024 to recognize mid-career achievement and contributions to the field of electrochemical energy storage. The award is granted based on the importance and significance of the applicant's science and technology (S&T) achievement or major contribution to the field of electrochemical energy storage, intercalation chemistry, solid state ions, interface and interphase and energy materials synthesis and manufacturing.

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PULSELiON hosts the Solid4B Cluster workshop on the future of solid-state batteries

The Solid4B Cluster workshop on the future of solid-state batteries was organized by PULSELiON, kindly facilitated by our partner PNO. This third clustering event of the Solid4B cluster, titled “Bridging Policy, Research, and Industry: A Transversal Workshop on Solid-State Batteries” was held on the 17th of September 2025 in Brussels. The event showcased recent advances in solid-state battery research and facilitated discussions on aligning EU policy to accelerate SSB development and broader industry adoption. You can watch an impression video of this electrifying event on our website. Also, the presentations and proceedings can be downloaded from this location.

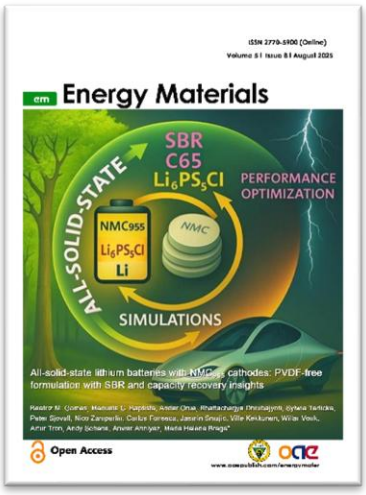
17 NEW OPEN ACCESS PUBLICATIONS

Since the publication of the last newsletter, the researchers within the PULSELiON project have been very active in disseminating the innovations in our project. Another 17 new open access publications, that acknowledge funding by the project PULSELiON, have been published over the last period.

This brings the total number of open access publications to 26!

This astonishing number of publications in the PULSELiON project underpins the high level of the groundbreaking research that is performed within the project, both on hardcore battery and battery production technology, as well as on battery models.

The social media campaign to introduce these publications is ongoing. All published articles can also be found on our website: https://project-pulselion.eu/results/



General Assembly meeting at CIC energiGUNE

Our month 30 General Assembly meeting was organized on 2 and 3 April by CIC energiGUNE. Our specialists from 15 countries all over Europe gathered in Vitoria-Gasteiz. Each work package presented their progress, and we have discussed plans for overcoming the challenges we are facing. Also, we have discussed how we can exploit the project results.

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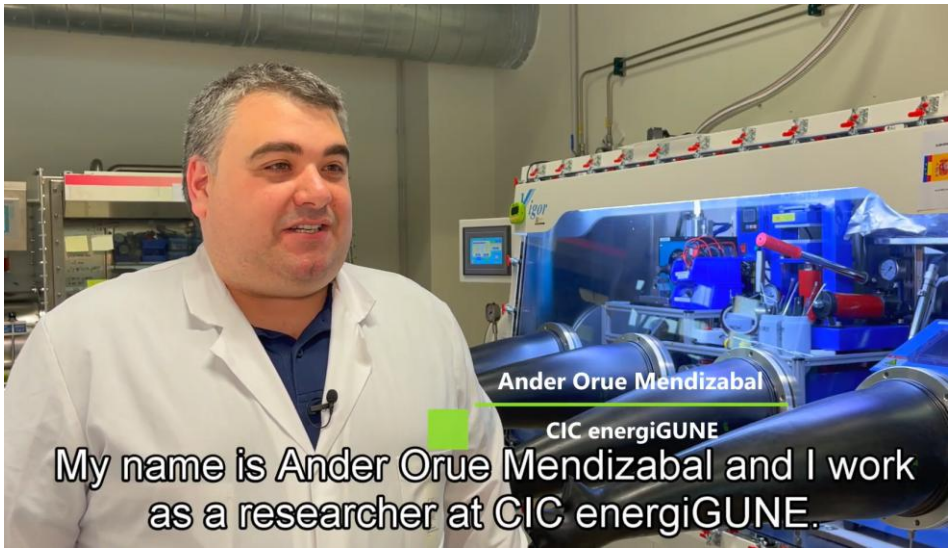
New interview video with our specialists

We have recently published a new interview video featuring project coordinator Anwar Ahniyaz of RISE Research Institutes of Sweden, researchers Ander Orue Medizabal and Nico Zamperlin of CIC energiGUNE, innovation consultant Francisco Ngomo of PNO innovation Belgium and researcher Ville Kekkonen of PULSEDEON. They talk about the progress of the project and the technology that we develop.



The video also gives a behind-the-scenes look at our General Assembly hosted by CIC energiGUNE, along with an exclusive glimpse of the cutting-edge research and development facilities of CIC energiGUNE in Vitoria-Gasteiz (Spain) and PULSEDEON in Ii (Finland). Check out this interview video on our website

PULSELiON Showcased at EARPA Meetings 2025

The PULSELiON project was proudly represented at this year's EARPA Meetings by Emanuel Lourenço from INEGI (Portugal). The event gathered leading research organisations, industry representatives, and experts from across Europe to discuss the future of mobility and sustainable technologies.

During the meetings, Emanuel actively engaged with specialists in battery development, Life Cycle Assessment (LCA), and sustainability, sharing insights from PULSELiON and contributing to discussions on overcoming data gaps in environmental analysis.

Participation in the EARPA Meetings not only helped disseminate PULSELiON's achievements but also positioned its outcomes as enablers for upcoming European projects focused on sustainable battery technologies.

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WHAT IS NEXT?

In the next issue of the newsletter, we hope to present new progress. The main developments in the coming period will be:

ACHIEVE MILESTONE 6:

PLD process (equipment capabilities and targets) upscaled

A next milestone was originally planned to be achieved a few months ago. With some delay, we now expect to achieve this Milestone soon, when the PLD process (equipment capabilities and targets) are upscaled under lead of ABEE in Work Package 4. The milestone will be verified through Validation of the quality and performance of roll-format anode components in coin cells.

ABOUT PROJECT PULSELiON:

Project PULSELiON has the ambition to develop a manufacturing process for Generations 4a – 4b solid-state batteries, while improving the battery energy density (450-475 Wh/Kg and 1300-1450 Wh/L), costs and safety. The main innovation in project PULSELiON is bringing Pulsed Laser Deposition (PLD) based solid-state battery manufacturing technology from TRL3 to TRL6. The results of PULSELiON will help increase global competitiveness of the European battery ecosystem, increase safety of batteries, decrease battery production costs, and improve battery recyclability. PULSELiON is a Horizon Europe project bringing together a multidisciplinary consortium of 15 partners from 10 countries.

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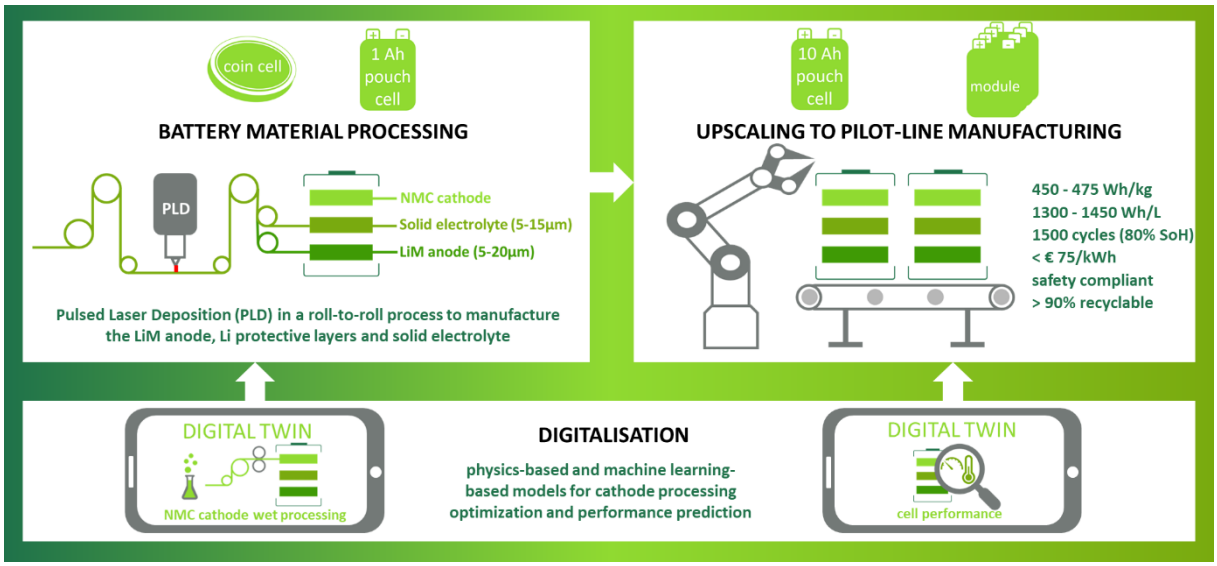
PUlsed Laser depoSition tEchnology for soLid State battery manufacturIng supported by digitalizatiON



Funded by the European Union

PULSELiON – GA no. 101069686

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Project PULSELiON has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101069686 (PULSELiON). Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.