Solid-statE lithium metal bAttery wiTh in situ hyBrid ELecTrolyte

Newsletter n°4

2nd quarter 2025

Generate a local EU industry that revolves around a cost-effective, robust **all-solid-state Li battery** comprising sustainable materials by 2026.

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Funded by the European Union

Funded by the European union. Views and opinions expressed are however 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. This project also contributes to the objectives of the Batt4EU Partnership under call topic ID: HORIZON-CL5-2021-D2-01-03(Advanced high-performance Generation 4a, 4b (solid-state) Li-ion batteries supporting electro mobility and other applications).

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GENERAL NEWS

≡ The D2.1 deliverable has been submitted on due time (April, 30th 2025): "Sustainable bio-based polymers", linked to the Work Package 2 ("In Situ Hybrid Electrolyte Innovation").

A new Milestone reached - BS

The very first SEATBELT pouch cells were assembled at BS facilities with a symmetric configuration using extruded lithium metal and extruded hybrid halide-polymer electrolyte. Several cells of about 25 cm² active area were sent to CNRS for deeper analyses on conductivity and cyclability but also for ageing and recycling purposes. Comparable observations can be made between these pouch cells and the lab-scale coin-cells without any optimization. Although the conductivity was found low, improvement can be achieved by activating the electrolyte film with pressure and temperature parameters. This foreshadows promising results ahead and is a great step forward for SEATBELT project. All partners are joining forces to improve the materials and the processes in order to achieve our KPIs.

RECENT EVENTS

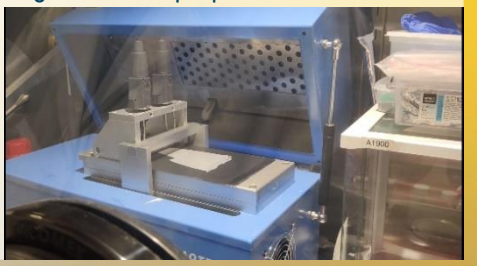
≡ Didier Devaux from CNRS presented the SEATBELT Project and its latest breakthroughs during the RTR 2025 conference in Brussels

≡ Irune Villaluenga (POLYMAT) spoke during the **SOLID4B** webinar about the academic research of polymer materials.

≡ Last PGA meeting has been held online on the 16 and 17th of June as a preparation of the Reporting Period Meeting, planned in end of September 2025.

UPCOMING EVENTS

≡ The release of the first SEATBELT video is coming soon. The purpose of this video is to explain the reason why research on batteries exploiting this technology is fundamental for society and environment.



Strengthening collaboration with Quintus Technologies (IAB)

📣 International Advisory Board Update 📣

◈ **Since October 2024**, Quintus Technologies has joined the SEATBELT's International Advisory Board (IAB), bringing their look and expertise during our Project General Assemblies.

◈ **Now**, we are proud to announce that we are strengthening our collaboration with Quintus Technologies by sending materials and samples to their Battery Application Center in Västerås, Sweden, to run tests and define assembly optimizations.

◈ **How**?
Thanks to their Warm Isostatic Pressing (WIP) technology (MIB 120 & QIB 180), which allows precise control over temperature, pressure, and hold time—key for advancing solid-state battery research.

Learn more about Quintus Technologies and their Battery Processing Systems: *www.quintustechnologies.com/batteries*