

RECOVER, REINTEGRATE, REUSE – DIRECT RECYCLING OF LITHIUM-ION BATTERIES

RecyLIB aims to establish sustainable, low-energy and highly efficient manufacturing and recycling chains for lithium-ion batteries. The project thus makes an important contribution to the European Commission's Green Deal and to creating a closed, economically viable battery supply chain.

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Partners

Fraunhofer ISC | Ghent University | Hutchinson | ImpulsTec | Bavarian Research Alliance | CEPA

Four partners and two associated partners are bringing their knowledge together in the RecyLIB project to improve and validate the recycling and re-use of recycled functional materials: with new manufacturing processes, improved separation technologies and recycling-friendly design.



Facts

Project Title:
RecyLIB (Direct Recycling of Lithium-Ion Batteries)
Topic:
Recycling and Re-use of End-of-Life products and assets
Total Budget: 1.1 Mio €
Duration:
36 months, May 01, 2022 – April 30, 2025
Coordinator:
Fraunhofer Institute for Silicate Research ISC
Consortium:
6 partners, 3 countries (Germany, Belgium, France)

Contact us

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RecyLIB



RecyLIB



RecyLIB
DIRECT RECYCLING OF LITHIUM-ION BATTERIES

RECOVER – REINTEGRATE – REUSE

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The international consortium of RecyLIB will:

- strengthen the raw materials circular economy in the European Union by developing a sustainable, low-energy and highly efficient direct recycling process for lithium-ion batteries,
- reduce the dependency of battery materials manufacturers on foreign critical raw materials,
- provide an alternative eco-friendly cathode production route to minimize the use of toxic solvents improving the ecological footprint of lithium-ion battery production,
- demonstrate the successful reuse of recycled electrode material in the production of new lithium-ion batteries.

Technologies

Solventless Electrode Fabrication | Cell Manufacturing | Electrochemical Benchmarking | Cell Dismantling | Removal of Electrode Binder | Classification of Black Mass with Advanced Centrifuge Technologies | Active Material Regeneration

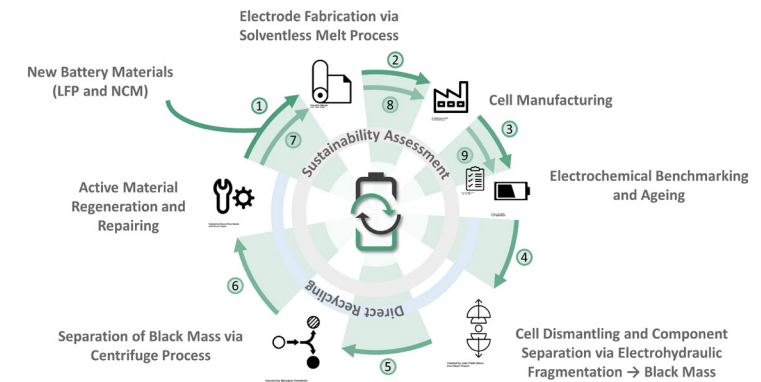
Integrated approach for sustainable vehicle batteries

RecyLIB project focuses on efficient use of recycled materials in lithium-ion battery production

Electromobility continues to gain momentum. Accelerated by high fuel prices, more and more buyers are switching to hybrid or pure electric vehicles, as shown by the latest statistics of new registrations. As the number of traction batteries increases, the question of environmentally friendly manufacturing and recycling processes is also becoming louder. One key aspect is the function-preserving recycling of lithium-ion batteries. The „RecyLIB“ project launched in 2022 – funded via ERA-MIN by the European Union and national funding organizations – aims to set an example with new processes for battery electrode production, direct recycling and integrated functional material cycles.



RecyLIB battery cells – alternative processing for direct reuse of recycled battery materials
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