

CYLIB | PORSCHE

Battery Recycling: Setting Up a Circular Economy in Europe

Cylib's proprietary sustainable recycling process has been tested with Porsche and Webasto.

THE CHALLENGE

While the number of waste lithium-ion batteries is increasing, locally produced raw materials remain scarce. Recycling remains the answer to both of these challenges. Webasto and Porsche both acknowledge the crucial role of recycling in electrifying the automotive market. As distributors of batteries, both partners are facing increasingly strict EU regulations and recycling quotas in upcoming years. Both Webasto as battery pack and module manufacturer and Porsche as an OEM aim to minimise their CO2 footprint with a sustainable disposal of production scraps, but also to ensure an easy recyclability of their batteries. Further, they consider it strategically important to secure access to locally produced and sustainable raw materials and therefore aim to develop a closed-loop concept.

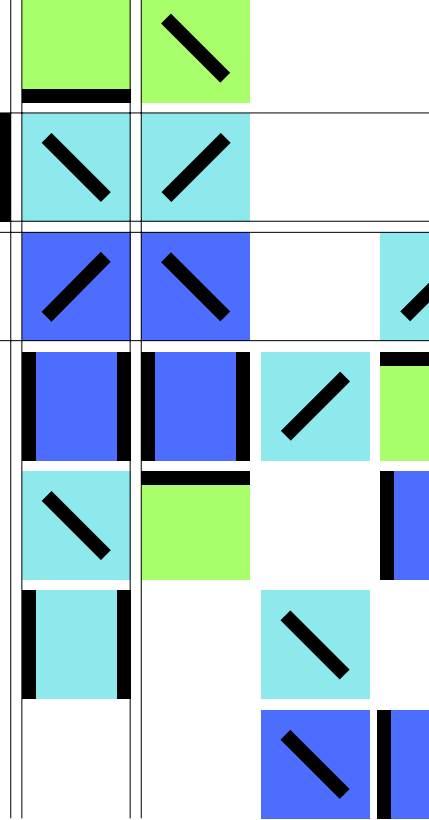
THE SOLUTION

Over many years of research at RWTH Aachen, cylib has developed a recycling process that enables recovering all elements from a lithium-ion battery with a lower carbon footprint than conventional processes. As part of their individual projects with cylib, Webasto and Porsche have delivered battery feedstock to cylib to test the technical feasibility of the process and gain insights into the recyclability of their batteries. Together with its partners, cylib deep dived into enablers and challenges in the recycling process and shared valuable "Design for Recycling" feedback.

THE OUTCOME

Cylib has successfully proven its technology on the batteries of Webasto and Porsche, with all the elements of the batteries being extracted in separate fractions. The reached yields are in line with all upcoming EU regulations. Furthermore, lithium and graphite were extracted water-based, resulting in a significantly lower CO2 footprint. New projects have been agreed on, focusing on developing a closed-loop concept where cylib's raw materials re-enter Porsche batteries.

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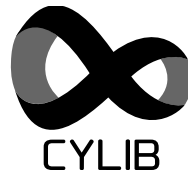
CYLIB

WEBSITE
cylib.de

FOUNDED
2022

HEADQUARTERS
Aachen, Germany

NO. OF EMPLOYEES
50+



Cylib secures sustainable raw material supply.

Cylib's technology gives access to locally produced battery raw materials by sustainably recycling End of Life batteries and production scraps.

ABOUT STARTUP AUTOBAHN

STARTUP AUTOBAHN powered by Plug and Play is an open innovation platform that provides an interface between innovative tech companies and industry-leading corporations. The basis of the program is the partnership that develops between startups and the corporate business units. The two entities hold an equal footing from the get-go: together they evaluate the potential for a joint venture, move forward to pilot the technology, and work to achieve the ultimate goal – a successful production-ready implementation. Designed with the intention to exceed startup acceleration, STARTUP AUTOBAHN powered by Plug and Play moderates a community for collaboration with a focus on implementable results. Over the years, the platform has successfully cultivated over 400 projects with more than 300 startups since its founding in 2016.

ACKNOWLEDGEMENTS

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