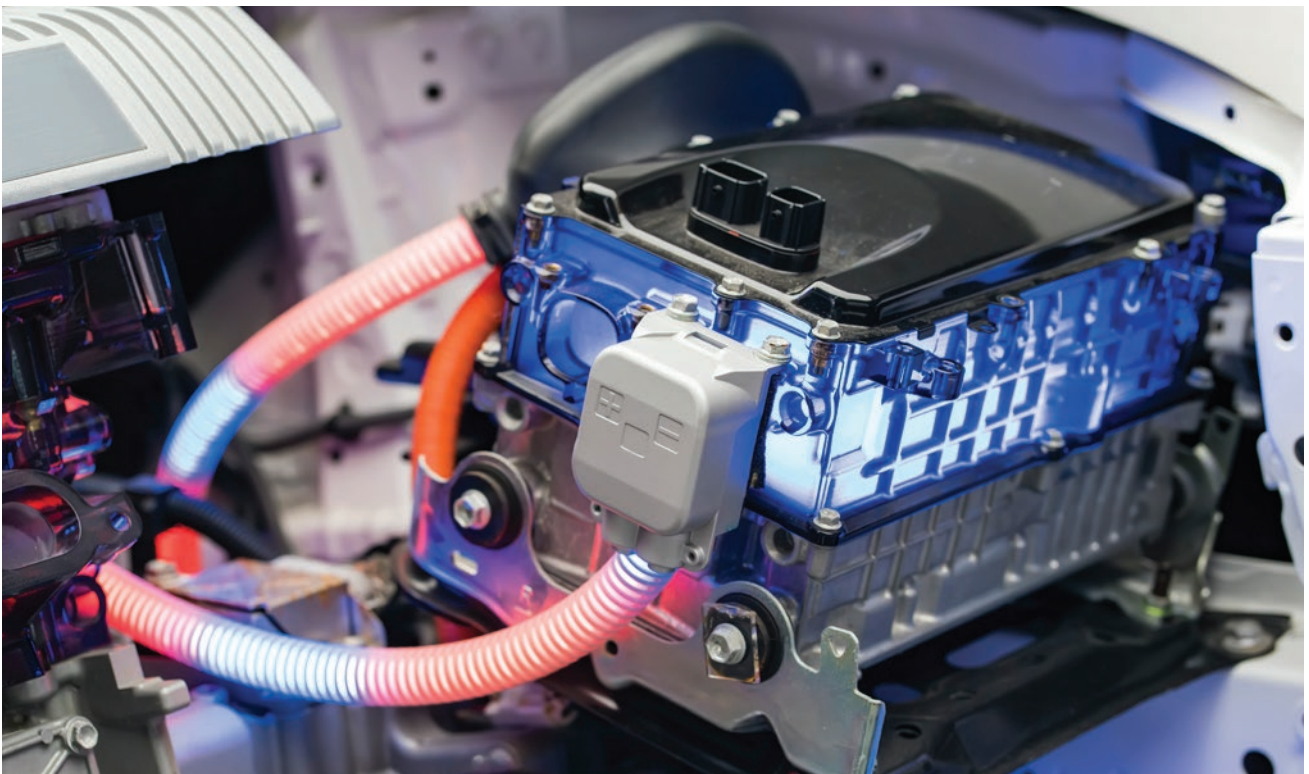


Battery recycling: Pilot plant goes into operation

Recovering valuable metals for electric vehicles

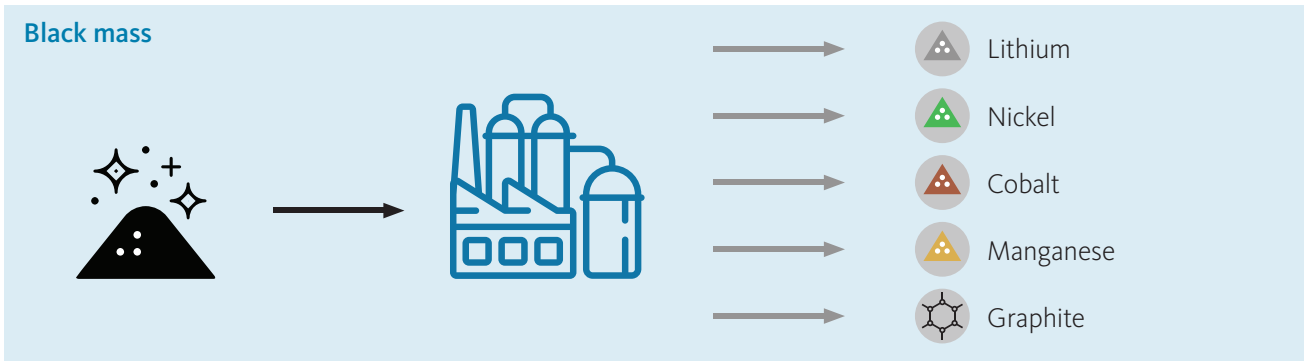
In March 2022, Aurubis commissioned an innovative pilot plant for battery recycling at the Hamburg site. Battery recycling will gain substantial importance in the years to come since the push for e-mobility will continue, causing demand for lithium-ion batteries and raw materials for their production to rise rapidly. Recycling can counter the expected shortage of valuable metals and fulfill the growing demand. The

pilot plant will extract metals such as lithium, nickel, cobalt, manganese, and graphite from so-called black mass in a hydrometallurgical process. Black mass is a powdery material that forms when battery modules and battery cells are mechanically recycled. The next step after the pilot plant is a feasibility study. The goal: in the next five years, Aurubis wants to commission an industrial-scale battery recycling plant.



Battery recycling as a sustainable driver of growth

Recycling is a strategic growth factor for Aurubis – and battery recycling plays a key role in this regard. Aurubis developed a special process to recover metals from black mass and registered it for a patent. The company plans a € 200 million investment for an industrial-scale battery recycling plant, which will contribute to an increase in the recycling rate and to the supply of crucial metals. Aurubis will integrate this plant into its own smelter network in order to recover and further process exceptionally high yields of significant battery metals such as lithium, nickel, cobalt, manganese, and graphite. This closes the cycle for lithium-ion batteries. Aurubis therefore makes an important contribution to securing the sustainable supply of raw materials. The responsible approach to resources and the goal of closing the cycle of valuable metals for electric vehicles are important factors for the investment decision.



Black mass

Black mass is the powdery content of used lithium-ion batteries that forms as a complex raw material when the batteries are recycled mechanically. Batteries are initially shredded and treated for this purpose. Black mass contains metals such as lithium, nickel, cobalt, and manganese, which can be recovered and subsequently used for new batteries or other products.



In addition to nickel (bottom center), Aurubis recovers cobalt (bottom left), lithium (bottom right), and graphite from black mass (top).

The project at a glance

<p>Closing the cycle sustainably</p>	<p>Integration into the smelter network</p>	<p>Metal recovery beyond legal standards</p>
<p>Products with battery quality</p>	<p>Focus on cost-efficiency</p>	<p>Patent application</p>

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