

Adionics : An exclusive technology to optimize Li Recycling from battery recycling

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European regulations impose the creation of recycling channels as part of resource management and the need to reduce the impact of industrial activity on the environment. Also it is essential to create subsidiaries specializing in the recycling of lithium-ion batteries for electric vehicles, as sales of electric vehicles are set to increase significantly in the years ahead.

Current and future methods for recycling lithium-ion batteries aims to efficiently extract lithium and transition metals such as cobalt, nickel, manganese, copper and aluminum, in order to generate high purity salts (>99.5%) that can be reused in the lithium-ion battery production chain.

Nevertheless, today's challenges are to reduce the costs associated with these methods and their impact on the environment. Lithium, which plays an essential role in lithium-ion technology, is mainly produced from salars and lithiniferous rocks of the spodumene type, as well as from used lithium-ion batteries processed hydrometallurgically after physical concentration stages. The unit operations of these lithium production processes result in significant lithium losses (15-20% loss in spodumene, recycling and treatment processes).

Adionics has developed a breakthrough technology for the production of lithium from brines applicable to effluents from battery recycling, which could be judiciously integrated into existing processes. This new technology permits to increase the rentability and enhances quality of the Lithium recovery. This process due to the limitation of add-on treatment has a tremendous impact on the cost production.

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