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## A Breakthrough in Battery Recycling Helps Enable the Green Transition

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Graphmatech, Graphenea, and Northvolt have succeeded in up-cycling end-of-life EV batteries into graphene oxide at industrial pilot scale. This breakthrough uses the material left after Northvolt has extracted valuable metals and minerals. Until now, that remaining material has been waste.

Emma Nehrenheim, Chief Environmental Officer of [Northvolt](#), comments: “The upcycling of graphene oxide from recycled batteries represents a great development in our pursuit of a sustainable battery industry in Europe. Batteries contain an abundance of valuable materials which we can recover to reduce our dependence on mining and producing fresh materials. We are proud to have contributed to this development.”

Northvolt has supported Graphmatech by optimizing its recycling process at Northvolt Labs recycling plant to obtain a feed of graphite-based material for Graphmatech of sufficient purity to enable upcycling into graphene oxide.

Graphene oxide is a strategic material that European companies often source from outside the region. Graphmatech and Graphenea will now scale up production to deliver an ample European supply of graphene oxide.

[Graphmatech](#) uses modified graphene oxide in materials and products it delivers to support the green transition, including hydrogen pressure vessels and pipes that leak 40% less hydrogen than current technology.

Modified graphene oxide can be added to metals to create materials which are more conductive, stronger and tougher than alternatives, whilst reducing metal consumption, making it an attractive and useful material within the green transition.

“Producing graphene oxide from end-of-life batteries makes the entire graphene value chain more sustainable and cost effective,” comments Jesus de la Fuente, CEO of Graphenea Advanced Materials.

Mamoun Taher, CEO of Graphmatech, says “Securing our supply chain in collaboration with Northvolt and Graphenea is a dream come true. We’ll enable the green transition with recycled batteries.”

Read the [original article](#) on Graphmatech.