Factorial Partners with Battery Recycling Company Young Poong

June 27, 2023

The collaboration will promote research into lithium-metal battery recycling

WOBURN, Mass.--(BUSINESS WIRE)--Factorial Energy Inc. (Factorial), an industry leader in the development of quasi-solid-state battery technology for electric vehicle (EV) and storage applications, today announced a new partnership with Young Poong, a non-ferrous metal smelting and refining company in South Korea, to invest in research into lithium-metal recycling for solid-state batteries.

Factorial will provide Young Poong with excess lithium-metal material from its battery manufacturing process. Young Poong will use the material to develop a process for recycling lithium-metal that has the ability to be reused and integrated into Factorial's solid-state batteries, enabling a circular economy. The collaborative project will include the recycling of excess material from Factorial's current pilot manufacturing operations and future production and manufacturing facilities.

"Our core mission to advance sustainable mobility extends beyond EV battery manufacturing," said co-founder and CTO Alex Yu. "We are deeply invested in advancing technologies that foster a circular economy. Through our partnership with Young Poong, Factorial is poised to shape a future characterized by a resilient supply chain for solid-state batteries, thereby helping to drive the growth and sustainability of the EV industry."

Factorial's patented FEST ® powered lithium-metal solid-state batteries have the potential to revolutionize the battery industry by providing safer and up to 50% higher energy density batteries compared to lithium-ion batteries. The company has investments and joint development agreements with Mercedes-Benz, Stellantis, and Hyundai. With a lithium-metal anode, Factorial's batteries require a different recycling process than traditional lithium-ion battery recycling.

Today, it is estimated in the U.S., less than 10% of lithium batteries are recycled, with experts forecasting that in 2025, production scrap will account for 78% of the pool of recyclable materials from batteries. This partnership is expected to advance Young Poong's exploration into lithium-metal recycling, to create a novel recycling process for automotive-grade lithium metal solid-state batteries. The collaboration reflects Factorial's commitment to sustainability and consideration for the end-of-life of its batteries.

"We are pleased to be working with Factorial to advance our research into Lithium-metal recycling for solid-state rechargeable batteries, an industry first," said Mr. Kang In Lee, Representative of Business Division; Green Metal Division at Young Poong. "With lithium-metal recycling, we have the opportunity to establish a recycling process well in advance of the future decommissioning of solid-state batteries."

Young Poong's secondary battery recycling technology is the world's first pyrometallurgy process that can recover more than 90% of lithium and more than 95% of nickel, cobalt, and copper from used batteries. Through this partnership, Young Poong is the first in the global recycling industry to announce a project focused on next-generation solid-state batteries.

About Factorial Inc.
Based in Woburn, Massachusetts, Factorial Energy is developing breakthrough solid-state batteries that offer longer range per charge and increased safety and aim to be cost-competitive with conventional lithium-ion batteries. The company's proprietary FEST® (Factorial Electrolyte System Technology) leverages a solid electrolyte material, which has the potential to enable safe and reliable cell performance with high-capacity cathode and anode materials. FEST® has been scaled in 40Ah cells, works at room temperature, and is compatible with existing lithium-ion battery manufacturing equipment. The company has entered into joint development agreements with Mercedes-Benz, Stellantis, and Hyundai Motor Company. More information can be found at www.factorialenergy.com. © 2023 Factorial Inc. All rights reserved. Factorial, the Factorial logo and FEST are registered trademarks in the United States and/or other countries. Other trademarks are property of their respective owners.

Contacts

Media:

Antonio Hicks
Antenna for Factorial Energy
factorial@antennagroup.com