



Factorial Energy and SungEel Collaborate to Enable Sustainable Recycling Solutions for Solid-State Batteries

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New partnership aims to close the loop on next-generation battery materials, advancing sustainability and U.S. battery leadership

Boston, MA, June 10, 2025 – Factorial Inc. ([Factorial](#)), a leader in solid-state battery technology, today announced the signing of a Joint Development Agreement (JDA) with [SungEel HiTech](#) to advance next-generation lithium-metal battery (LMB) recycling. This partnership underscores both companies' commitment to building a circular battery economy and supporting the sustainable growth of electric mobility worldwide.



The partnership leverages SungEel's established expertise in lithium-metal battery recycling while focusing on adapting and validating these processes for Factorial's proprietary FEST® battery technology. By collaborating early, Factorial and SungEel are ensuring that next-generation solid-state batteries can be efficiently and sustainably recycled using SungEel's advanced methods. This initiative will help guarantee that production scrap and end-of-life cells from Factorial can be responsibly processed, supporting a truly closed-loop supply chain for advanced battery materials.

As next-generation solid-state and lithium-metal batteries move toward commercialization, the need for tailored recycling solutions is urgent. Lithium-metal batteries can contain up to 50% more lithium by weight than conventional lithium-ion cells, making efficient recovery of these critical materials both an environmental and economic imperative. Industry analysts project that by 2035, [up to 12%](#) of lithium used in new batteries could come from recycled sources, underscoring the vital role of advanced recycling in securing a sustainable battery supply chain.

"Building recycling solutions for lithium-metal batteries today is not just about preparing for the future – it's about shaping it," said Siyu Huang, CEO of Factorial Energy. "By partnering with SungEel, we're taking a bold step toward a truly sustainable battery ecosystem, where every cell can be recovered, reused, and returned to the value chain. Together, we're driving innovation that will reduce waste, conserve resources, and accelerate the transition to cleaner energy for electric vehicles and beyond."

SungEel HiTech also emphasized the importance of this collaboration. "Our experience with lithium-metal battery recycling has shown us the importance of tailoring solutions to each new generation of battery technology," said Mr. Jinwook Lee, CTO at SungEel HiTech. "Collaborating with Factorial gives us the opportunity to demonstrate the versatility of our process and ensure that even the most advanced solid-state batteries can be responsibly recycled."

Factorial's approach to sustainability is embedded in its technology roadmap. By proactively addressing recyclability, the company is not only meeting the expectations of customers and stakeholders, but also reinforcing its leadership as a responsible innovator in the battery industry. The JDA will enable both companies to evaluate and adapt recycling processes for FEST® lithium-metal anode cells, with a focus on recovering valuable metals and ensuring the highest standards of environmental stewardship.

The initial phase of the partnership will be conducted at SungEel's R&D lab in Korea, with future expansion to the U.S. and Europe under consideration. This collaboration is expected to benefit a range of markets, including electric vehicles, grid storage, aviation, and power tools, by ensuring that next-generation batteries are both high-performing and recyclable.

By working together, Factorial and SungEel are taking a significant step toward building a resilient, circular supply chain for solid-state and lithium-metal batteries, supporting the growth and sustainability of the EV industry and beyond.

About Factorial Inc.

Founded and headquartered in the United States, Factorial is at the forefront of solid-state battery development, offering safe, high-performance alternatives to traditional lithium-ion technologies. Its proprietary FEST® (Factorial Electrolyte System Technology) and Solstice™ platforms deliver greater energy density, enhanced safety, and compatibility with existing manufacturing systems. Factorial's commercial partnerships include global automotive leaders such as Mercedes-Benz, Stellantis, Hyundai Motor Company, and Kia Corporation. For more information, visit www.factorialenergy.com.

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About SungEel HiTech

SungEel HiTech is a South Korea-based global leader in lithium-ion battery recycling, recovering critical metals like nickel, cobalt, and lithium through advanced hydrometallurgy. Operating a closed-loop system across Asia, Europe, and North America, SungEel supports a sustainable battery value chain with eco-friendly material supply.

Media Contacts

Factorial Inc.

Kristin Ford-Glencross
factorial@antennagroup.com

SungEel HiTech

Jenna Lee
info@sungeelht.com