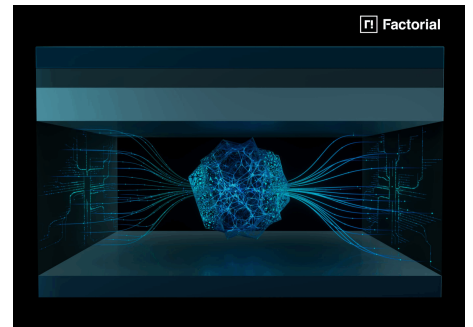




## Factorial Launches Gammatron™, AI-Enabled Digital Twin Platform to Accelerate Battery Innovation From Lab to Road

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*Internally developed to break through R&D bottlenecks, Gammatron™ enables advanced cycle life prediction, optimized charging protocols, and smarter electrolyte discovery across battery chemistries*



BOSTON--([BUSINESS WIRE](#))--Factorial Inc. ([Factorial](#)), a leader in solid-state battery technology, today announced the launch of **Gammatron™**, a proprietary **AI-driven simulation platform** designed to accelerate the development of next-generation batteries by improving how battery performance is predicted, validated, and optimized.

Born out of Factorial's own R&D experience, Gammatron™ was built as a necessity-driven tool to address critical delays in battery development. Unlike traditional AI platforms focused solely on system-level modeling, Gammatron™ fuses electrochemistry, thermodynamics, and high-fidelity lab data – to simulate and optimize battery behavior at both the material and cell-system level.

"Validating a new cell design can take years, but with Gammatron™, we've demonstrated that we can dramatically shorten that timeline—forecasting long-term performance from just two weeks of early testing, instead of the typical three to six months," said Siyu Huang, CEO of Factorial. "By combining automation with data-driven insights, we're accelerating development with greater speed and control."

Key capabilities of Gammatron™ include:

- **AI-driven digital twin for battery cells** that accurately delivers cell state of health predictions, and accelerates fast charging optimization that maximizes capacity, minimizes degradation and internal stress, while ensuring battery safety and longevity.
- **Accelerating electrolyte formulation** using molecular modeling and machine learning to engineer compositions for specific performance targets based on a deep understanding of molecular interactions.
- **Advanced physics-based modeling** to simulate internal battery behavior, including stress, heat, and degradation, that can't be directly observed in testing.

Used in Factorial's [joint development with Stellantis](#), Gammatron™ helped forecast battery performance before full test completion – a key factor in advancing the validation program ahead of its original schedule. In some cases, Gammatron™-enabled protocol tuning has doubled cycle life without altering cell chemistry.

"Batteries are complex dynamic chemical systems. Gammatron™ combines machine learning with scientific feature engineering. Where most platforms hit a wall with shallow machine learning, Gammatron™ goes deeper and shows engineers which material and design changes will unlock longer life and higher performance," said Raimund Koerver, VP of Business Development at Factorial. "It's not just about predicting outcomes – it's about enabling better ones."

Developed to strengthen Factorial's core focus on next-generation battery cells, this technology plays a critical supporting role in streamlining customer qualification, enhancing overall cell performance, and accelerating internal development. By integrating advanced capabilities such as material screening, battery cell digital twins, and cell manufacturing traceability, it enables more efficient, data-driven innovation across the battery lifecycle.

Initially launching as a tech-enabled service, Gammatron™ will be operated in-house for co-development with select partners. The platform is available for solid-state battery development and legacy lithium-ion programs.

Gammatron™ will be showcased at the upcoming [MOVE London](#) conference as part of Factorial's collaboration with Stellantis.

**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](http://www.factorialenergy.com).

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