

17 April 2025

Gelion plc
("Gelion", the "Company" or the "Group")

Gelion Achieves Breakthrough in Sulfur Battery Coin Cell Results

Terms Agreed on a Materials Testing Agreement (MTA) with a Tier-One Battery Manufacturer

Gelion plc (AIM: GELN), the global energy storage innovator, announces significant advancements in its Sulfur battery technology, achieving exceptional performance in high power and in cycling characteristics that supports its goals toward compelling commercial market propositions for drones, transportation, and grid and remote energy storage systems. Building upon its recent collaboration with the Max Planck Institute of Colloids and Interfaces (MPI), announced in March 2025, Gelion has successfully integrated MPI's technology into sodium-sulfur coin cells, the industry standard battery testing platform.

Initial tests have yielded exceptional results:

- **Superior Power Capability:** Maintaining robust capacity retention even under extreme charge / discharge rates, with six-minute charge and six-minute discharge cycles.
- **Outstanding Longevity:** Evidence to support MPI testing which achieved over 1,000 charge/discharge cycles with industry-standard capacity retention under one-hour charge and one-hour discharge cycles.
- **Industrially relevant results:** These tests represent a progression from laboratory material testing conditions to the industrially relevant coin cell development platform*.

*The transition from coin cells to larger format commercial cells is a well-established pathway. In this case, it is underpinned by the combined technology introduced by MPI and Gelion and will involve adapting this technology to standard large-format cell parameters and componentry.

Advancements in Sulfur Battery Performance: Historically, the commercial adoption of sulfur batteries has been constrained by two key challenges: short cycle life, which has limited their potential use to niche markets, and low power output, making them unsuitable for applications in transportation and aerial drones.

Gelion's test results address these prior challenges, paving the way for sulfur battery products to achieve a compelling product-market fit and route to commercial adoption.

Enhanced Power Capability: Rapid charge and discharge capabilities are critical for applications in transportation and aerial drones. Again, Gelion's test results more than satisfy this requirement - a key selling point for modern electric vehicles, also supporting the high-power demands of rapid acceleration or drone take-offs and landings.

Extended Cycle Life: A battery's cycle life denotes the number of charge and discharge cycles it can undergo without significant performance degradation. According to standards set by the United States Advanced Battery Consortium LLC (USABC), a cycle life exceeding 1,000 cycles is essential for transportation applications and equally critical for stationary energy storage. Current testing results are consistent with achieving this target.

Strategic Collaborations and Industry Recognition

Gelion has been actively engaging with potential corporate strategic partners to accelerate the commercialisation of its technology. The industry is increasingly recognising the significance of Gelion's developments and the recent announcement of its collaboration with MPI; traction with major global partners has been strong.

The Company is delighted to announce that it has agreed the terms of an MTA with a tier-one battery manufacturer and expects to announce the execution shortly and a further announcement will be made in due course. This agreement underscores the recognition of Gelion's innovative technology by a leading industry player and represents a crucial step in the Company's efforts towards large-scale adoption of the Group's sulfur battery solutions.

The MTA allows Gelion to provide materials to the manufacturer for them to test and validate the material performance directly while protecting Gelion's IP and confidentiality so as to support progression of the development of mutual understanding with the objective of supporting any potential consideration of commercial collaboration.

John Wood, CEO of Gelion said: "These results reflect Gelion's commitment to advancing our battery technologies toward delivering high-performance, sustainable energy storage solutions to the market. The traction with potential globally significant industrial players is now moving very quickly, I look forward to continuing to update the market as we progress."

This announcement contains inside information for the purposes of Article 7 of EU Regulation No. 596/2014, which forms part of United Kingdom domestic law by virtue of the European Union (Withdrawal) Act 2018, as amended.

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About Gelion

Gelion ("gel: ion") is a global energy storage innovator, supporting the transition to a more sustainable economy by commercialising globally important next generation battery technologies: Sulfur based, Lithium-Sulfur (LiS), Sodium-Sulfur (NaS) and Zinc-based (Zn) hybrid cells to electrify mobile and stationary applications. Gelion plc (the Group) is listed on the London Stock Exchange's Alternative Investment Market and wholly owns UK based OXLiD Ltd and Battery Minerals Ltd and Australia based Gelion Technologies Pty Ltd. Gelion is designing and delivering innovative battery technology to enable that transition and return value for its customers and investors.

Sulfur Batteries

Gelion's effort is directed at the potential for sulfur based cathode active materials (CAMs) to deliver low cost & sustainable batteries with

Creion's effort is directed at the potential for sulfur-based cathode active materials (CAVMS) to deliver low-cost & sustainable batteries with compelling performance. In the case of Li-S batteries, the target is a high-performance light-weight battery for the EV and e-aviation market. In the case of Na-S batteries, the target is an ultra-low-cost advancement on batteries currently employed in the stationary storage and economy EV market. The company's overarching goal is to help make global transport, energy consumption and storage more sustainable.

Glossary

Ah	Ampere hours. A measure of capacity stored in the cell. The larger the number the higher the capacity.
Energy density (Wh/kg)	The ratio of energy stored per unit weight i.e. Watt-hours per kilogram. The higher the number the lighter the battery.
Pouch cell	An industry standard format of a battery which comprises a flat pouch-shaped design with a multi-layered laminate structure.
Cycle life	The number of full charge and discharge cycles a battery can complete before its capacity falls below a specified level, typically 80% of the original capacity. Higher cycle life indicates longer-lasting performance.

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