

With a New CEO at the Helm, Battery Start-Up Theion Unveils Crystal Battery for all Mobile Applications

- Battery production veteran, Dr. Ulrich Ehm, joins Theion as CEO
- Unique Crystal battery triples energy density and requires 90% less energy to produce
- Theion is targeting mass market sectors including automotive and mobile devices
- Theion is backed by technology holding Team Global, founded by Lukasz Gadowski

BERLIN, 29 March 2022 – Theion, a global battery manufacturer of lithium-sulfur cathode technology, today announced the appointment of Dr. Ulrich Ehm as CEO and the upcoming commercial availability of its Crystal Battery for applications, beginning with the aerospace sector. Dr. Ehm, who has a long track record of industrialising battery production at companies like Swiss-listed lithium-ion battery company Leclanché, will lead the commercialization of Theion’s innovative lithium-sulfur cathode technology, which is targeting triple the range and usage time compared to conventional lithium-ion cells.

Theion’s battery innovation is based on sulfur - a material available in abundance without harmful mining (a byproduct of industrial processes). Sulfur replaces cathode materials with high processing cost and high metal content like nickel and cobalt. As a result, sulfur is not only 99% cheaper to source than the cathode materials, used in existing state-of-the-art lithium-ion batteries, but Theion’s battery cells also require 90% less energy to produce – from raw material to finished cell.

Under the leadership of Dr. Ehm, Theion will leverage his decade-long experience in the battery manufacturing sector to scale production. Dr. Ehm also serves on the Board of major battery research clusters funded by the German Ministry of Research and Education, and is a member of European and German battery associations.

“I joined Theion because I am convinced that selecting the right battery active materials and processing these materials in a way that best leverages the material’s storage property, will disrupt the battery industry to another level,” said Dr. Ulrich Ehm, Theion CEO. “With 16 patents pending, our process innovations are scalable, and will bring a new dimension of mobility, range, usage time and sustainability.”

Theion’s patented production process extends the cycle life of batteries by combining sulfur’s crystal material properties with carbon nanotubes and a proprietary solid electrolyte. The company will be shipping material later this year, firstly to aerospace customers, as part of the qualification stage, then aircraft, air taxis, drones, mobile phones and laptops, before servicing the electric flight and automotive sectors in 2024.

“We are using mother nature’s crystals under the guidance of our patented processes to unlock sulfur’s full potential as energy carrier,” said Marek Slavik, Theion co-founder and CTO. “Its wide abundance around the world is crucial to the material cost. The design of our highly energy efficient manufacturing processes makes our Crystal Batteries fully sustainable.”

Embargo lifts on Tuesday, March 29 at 10 am CEST.



Theion is backed by Lukasz Gadowski, CEO of Team Global, a technology holding company investing in and starting frontier technology companies. With a successful track record that includes Delivery Hero, and recent investments into Volocopter, Zapata and AutoFlight, Theion's addition to the portfolio is highly synergetic.

"At a time when industry demand for batteries is surging, but materials cost and sustainable sourcing are experiencing volatility, Theion's breakthrough is ideally timed," Lukasz Gadowski, founder and CEO of Team Global, and principal investor. "Theion's Crystal Battery is perfect for all mobility applications, while being massively sustainable, and is targeting to extend the use time of handheld devices, the driving range of electric cars, and the safe flight time of eVTOL applications and electric aircraft by a factor of three. When in full production, it has the potential to replace every battery in every mobility device on earth."

Headquartered in Berlin, Theion operates three locations within the city, specializing in cell design, prototyping and testing. Theion is expanding by adding manufacturing facilities to accelerate its mass production roadmap, beginning in Berlin. Locations for later Giga-Factories are not determined yet, but will be located close to the customers. Thus, production sites are envisioned In Europe, Asia and the USA.

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About Theion GmbH

Headquartered in Berlin, Germany, Theion GmbH is entering the mobile battery market with a unique solution for the biggest energy storage problems of the world. Theion designs and produces Crystal Batteries for applications from aerospace, portable devices, wearables, to vehicles on land, sea and in the air. By using sulfur in its crystal form, an abundantly available material, without harmful mining and at 99% lower cost than state-of-the-art cathode materials, Theion's cells are targeting to triple the energy density, extending usage time and range by factor three. Besides bringing the cycle life of the cells to standard levels, Theion's proprietary sustainable production processes require 90% less energy to produce, at one-third of space and CapEx than current gigafactories, while delivering comparable output.

About Team Global

Team Global is a technology holding with offices in Berlin and Palo Alto; the company is founded and led by CEO Lukasz Gadowski. Team Global creates and invests in frontier technology companies in the sectors of mobility, aerospace, energy and robotics across Asia, Europe and the USA. The track record of the holding includes being the main co-founder of Deliveryhero, a multinational food delivery marketplace. Notable portfolio companies include Autoflight, Volocopter, Zapata Racing, Seaborg, Enpal, MILES mobility and Archer Aviation.

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