

Press Information

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HD Advanced Technologies and PHENOGY launch collaboration on a technology and industry platform for sodium-ion battery storage

- **One partnership. Two agreements.**
One shared strategic goal:
Battery storage under European control

PHENOGY AG, Lucerne, and HD Advanced Technologies GmbH (HDAT), a wholly owned subsidiary of Heidelberger Druckmaschinen AG (HEIDELBERG), are launching a comprehensive industrial partnership: HD Advanced Technologies will handle the industrial manufacturing of complete energy storage systems for PHENOGY, from procurement and production through to rollout, installation, service, and maintenance. Furthermore, both companies are laying the groundwork for a joint venture to develop and industrially manufacture sodium-ion battery cells based on PHENOGY's cell chemistry and a specific printing process from HEIDELBERG. The goal of this strategic partnership is to establish a European technology and industrial platform to bring sodium-ion battery technology to market more quickly, on a scalable basis, and independently of non-European supply chains.

Europe needs high-performance battery storage systems and the ability to develop and manufacture them industrially on its own. This is precisely why HD Advanced Technologies GmbH and PHENOGY AG are pooling their expertise. At the heart of the collaboration are two closely interlinked agreements: creating the conditions for a joint venture to develop and industrially manufacture sodium-ion battery cells, and a framework agreement for the industrial contract manufacturing of PHENOGY battery storage systems by

Heidelberger Druckmaschinen AG

P.O. Box 10 29 40
69019 Heidelberg
Germany

Kurfürsten-Anlage 52-60
69115 Heidelberg

Thomas Fichtl

Phone +49 (6222) 82 67123

Thomas.Fichtl@heidelberg.com
www.heidelberg.com

Press Information

HD Advanced Technologies. Both agreements represent fundamental steps toward establishing a European technology and industrial platform for sodium-ion battery technology — ranging from cell chemistry, cell and system design, and industrial manufacturing to service and maintenance.

The manufacturing agreement: Bringing stationary energy storage systems to market faster

HD Advanced Technologies is implementing the industrial production of cabinets, containers, and other system products for PHENOGY across the entire value chain based on a long-term framework supply agreement: initially in Germany for Europe and, in the future, in the U.S. for North America.

The industrial value creation ranges from electronics manufacturing and assembly through rollout to installation, service, and maintenance. Production is based on local supply chains as well as HD Advanced Technologies' comprehensive manufacturing and industrialization expertise.

For PHENOGY, the agreement accelerates and scales the market availability of its storage solutions. This allows PHENOGY to focus on the targeted further development of cell chemistry and system design.

Work on the joint venture: Collaborating from research through industrial manufacturing

In the planned joint venture, both partners will combine their core competencies: PHENOGY will contribute its sodium-ion cell chemistry and cell design, while HEIDELBERG will provide its specialized printing process. Together, the partners cover the entire spectrum from research and development to the production of sodium-ion battery cells on an industrial scale. This enables the development of innovative cell formats with specific requirements for design and performance parameters. Work is currently underway to meet the necessary prerequisites.

The joint venture will focus on applications with high requirements, ranging from critical infrastructure (KRITIS) and defense to mobility.

Press Information

Sodium-ion battery technology does not require lithium or cobalt and is based on widely available raw materials. As a result, it structurally reduces dependence on critical raw materials and supply chains and strengthens long-term security of supply and self-sufficiency.

Comments on the partnership:

Peter E. Braun, CEO of PHENOGY AG:

“Europe needs battery technologies to achieve true energy sovereignty. Our partnership with HEIDELBERG finally bridges the gap between technology development and the capabilities needed to make these technologies available on an industrial scale. We are thus supporting the planned Europe-wide expansion of energy storage with locally manufactured battery storage systems. At the same time, the joint venture opens new potential applications for our sodium-ion technology—from KRITIS applications to autonomous systems.”

Michael Wellenzohn, CEO of HD Advanced Technologies GmbH:

“Rapidly industrializing technology and innovations opens new business areas. As a manufacturing partner, we are bringing PHENOGY’s stationary energy storage systems into series production. Together with PHENOGY, we are creating a European technology and industrial platform for sodium-ion battery technology. Through the joint venture, we will develop and manufacture cells and modules for specialized applications, ranging from critical infrastructure and defense to mobility.”

Working together for European energy sovereignty

The partnership between HD Advanced Technologies and PHENOGY sets a new standard in battery technology for Europe: cell chemistry, cell and system design, industrial manufacturing, and regional value creation — all with the potential to eliminate dependence on non-European supply chains. In this way, both companies are making an important contribution to a resilient energy supply and greater technological sovereignty for Europe.

Press Information

About HD Advanced Technologies:

HD Advanced Technologies GmbH is a wholly owned subsidiary of Heidelberger Druckmaschinen AG (HEIDELBERG) and brings together industrial expertise in the fields of defense, security, and energy. Its goal is to develop new technological business areas based on the Group's existing manufacturing, integration, and systems expertise.

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About PHENOGY:

PHENOGY AG, headquartered in Root near Lucerne (Switzerland), develops battery energy storage systems (BESS) based on sodium-ion technology. Founded in 2019, the company is working to make the power supply more decentralized, resilient, and independent—with storage systems that prioritize performance, safety, robustness, and recyclability. In doing so, PHENOGY completely eliminates the use of lithium and cobalt and, in the long term, reduces dependence on geopolitically concentrated supply chains in favor of greater energy sovereignty. Today, PHENOGY employs over 60 people at its locations in Root near Lucerne, at PHENOGY Europe GmbH in Bremen (Germany), at PHENOGY Inc. in Columbia, South Carolina (USA), and in Singapore. Its partners include select Fraunhofer Institutes and the University of South Carolina; the company is backed by a broad base of private and institutional investors.

[Sodium-Ion Battery Energy Storage Systems – PHENOGY](#)

Image 1: HD Advanced Technologies and PHENOGY launch a comprehensive industrial partnership: Frank Wagner, CFO of HDAT; Peter Tix, COO of PHENOGY; Peter E. Braun, CEO of PHENOGY; Michael Wellenzohn, CEO of HDAT; Sascha Singer, COO of HDAT; and Marcel Kloppenburg, CMO of PHENOGY (from left).

Image 2: HDAT is implementing the industrial production of battery energy storage systems (cabinets) for PHENOGY.

Image 3: HDAT is implementing the industrial production of battery energy storage systems (Container) for PHENOGY.

Images and further information about the company are available on the Investor Relations and [Press portal](#) of Heidelberger Druckmaschinen AG at www.heidelberg.com.

For further information:**Corporate Communications**

Thomas Fichtl

Phone: +49 6222 82-67123

Email: thomas.fichtl@heidelberg.com

Press Information

Investor Relations

Marc Schellenberger

Phone: +49 6222 82-6120

Email: marc.schellenberger@heidelberg.com

HD Advanced Technologies

Daniel Stachowski

Phone: +49 6222 825049

Email: daniel.stachowski@heidelberg.com

PHENOLOGY AG

Public Relations

Nils Seib

Phone: +49 175 61 86 788

E-Mail: nils.seib@phenogy.com

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