Battery research and development valletta

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Strengthening Europe as an industrial and research centre. VARTA has been ...

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VARTA has been intensively involved in basic research in the field of cell chemistry since 2009. To this end, VARTA Innovation was founded as a research spin-off of VARTA AG together with Graz University of Technology, one of the leading universities in the field of battery research in Europe. The long-standing cooperation between the technology group and the university enables effective collaboration and knowledge transfer for cutting-edge research in battery technology. VARTA Innovation is already an international leader in basic and materials research.

The new building houses one of the largest test laboratories for batteries in Europe. The expansion will be financed by a total investment of 33 million euros, of which around ten million euros will be provided by funding from an IPCEI project (Important Project of Common European Interest) by the Austrian Federal Ministry for Climate Protection (BMK). The funding emphasises the importance of battery research in Europe and underpins the EU"s efforts to strengthen expertise in this area within Europe. VARTA AG"s willingness to invest is also a clear commitment to Europe as a business location, to whose economic resilience in competition with Asia and the USA battery technology makes an important contribution.

VARTA Innovation is currently focussing in particular on the development of silicon-based electrodes. Stefan Koller, Managing Director and Head of Research at VARTA Innovation: "Silicon offers considerable development potential in the field of lithium-ion cells. It has three times the storage capacity for lithium ions than the graphite used today and is suitable for a wide variety of material combinations. We have already achieved our first major success here in Graz: The first generation of silicon-based electrodes in our small-format button cells can soon be transferred into mass production at VARTA AG"s headquarters in Ellwangen."

Less problematic raw materials, more recycling

In order to make energy storage more sustainable overall, the VARTA Innovation team is focusing intensively on research into the use of new materials, for example to reduce the use of cobalt or completely eliminate the use of this problematic raw material. The topic of recycling is also of particular importance in the work of VARTA Innovation. On the one hand, the aim is to reduce the use of raw materials, water and energy in the production of cells. On the other hand, the aim is to return production waste directly to the manufacturing process without chemical treatment. Such a solution will be particularly crucial in the field of electromobility and is in line with the aim of the EU Battery Passport, which requires battery manufacturers to use recycled

materials in future.

VARTA AG produces and markets a comprehensive battery portfolio ranging from microbatteries, household batteries and energy storage systems to customised battery solutions for a wide range of applications. Through intensive research and development, VARTA AG sets global standards in many areas of lithium-ion technology and microbatteries, making it the recognised innovation leader in the key growth markets for lithium-ion technology and primary hearing aid batteries. The VARTA AG Group currently employs around 4,000 people. With five production and manufacturing facilities in Europe and Asia as well as distribution centres in Asia, Europe and the USA, VARTA AG"s operating subsidiaries are currently active in over 100 countries worldwide.

Batteries play a key role in the ongoing shift from the use of fossil fuels towards sustainable transportation and renewable energy production. As an innovative R& D partner, we support you in developing high-performance, lightweight, safe, low-cost and sustainably sourced and manufactured batteries to store renewable energy and power electric vehicles.

We conduct experimental performance testing of cells, modules and packs as well as develop tools for battery system design, battery management and optimal operation to support the development and deployment of the systems.

Our goal is to increase the sustainability of batteries by developing new materials and manufacturing and recycling methods, and by increasing their lifetime and energy density.

We support the development and testing of novel battery materials and manufacturing processes in lab and pilot scale.

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