



Electrode factory for next-generation fast-charging lithium-ion batteries in Zurich

Dübendorf, ZH (CH) April 21, 2021 – [Battrion AG](#), a Swiss company, active in the field of lithium-ion batteries, has built up a 20MWh/year small scale production facility in Dübendorf, Zurich and started production of advanced fast-charging electrodes for automotive customers in addition to existing non-automotive customers.

With a total investment of 3 Million Swiss Francs, the facility uses a novel production process based on Battrion's "Aligned Graphite® technology". The proprietary process reduces the electric vehicle charging time associated with standard lithium-ion batteries significantly. Solving the technical challenge of fast charging plays a key role in accelerating consumers and businesses to switch to electric vehicles.

Dr. Martin Ebner, co-founder and CTO, states: "The successful production of electrodes in this manufacturing facility is key as it proves the process for manufacturing Aligned Graphite® electrodes at a relevant scale, de-risking the widespread use of the technology. This is great news for our automotive customers. With this technology we can reduce the charging time of batteries dramatically. For EVs this means, charging 400km of fresh range in 15 minutes instead of 25 minutes for the best vehicles today. This is possible because full charging power can be applied three times longer before it is reduced."

The facility in Dübendorf further demonstrates the advantages of the technology in regard to sustainability and cost reduction potential. The technology allows for the use of lower cost, less processed flake graphite, an environmentally friendly substitute that avoids a wasteful process step called "graphite spheronization". Dr. Max Kory, co-founder and COO of Battrion adds: "Operating the facility, we are demonstrating how this technology can be used to reduce the CO₂-footprint of lithium-ion batteries. We follow a clear path to enable the production of the negative electrodes for lithium-ion batteries at strongly reduced CO₂-emissions. Using less processed flake graphite, a CO₂-reduction of around 10'000t per GWh battery capacity can be achieved."

Markus Vollstedt, CEO of Battrion, reinforces the commercial relevance of the production facility: "Our customers use the electrodes we're producing in cells and modules, and soon in battery packs for electric vehicles."

Battrion's next step is a ramp-up to GWh capability for the technology. For this, Battrion works on the implementation of technology with leading cell manufacturers and OEMs in different markets.

About Aligned Graphite® Technology

Aligned Graphite® technology is a fabrication technology for lithium-ion batteries that controls the orientation of flake graphite particles in the negative electrode. Orienting the flakes vertically leads to short effective lithium-ion transport distances. This has several advantages:

- Shorter charging times
- Lower cell resistance which leads to more power and less heat generation
- Higher environmental compatibility
- Decrease in raw material costs

About Battrion

Founded in 2015, Battrion is a spin-off of the Swiss Federal Institute of Technology (ETH Zurich). Battrion operates a research lab and production facility in Dübendorf, Zurich where it develops its Aligned Graphite® technology, a fabrication technology for lithium-ion batteries that improves the microstructure of negative electrodes. The technology significantly increases the charge- and discharge performance of lithium-ion batteries and is particularly suited for EV and high-performance applications. Battrion produces and markets standardized and customized negative electrodes with Aligned Graphite® and additionally offers its technology on a license basis. More information can be found at: <http://www.battrion.com>

Press contact Battrion AG:

Max Kory, PhD

COO

Phone +41 44 585 1420

mkory@battrion.com