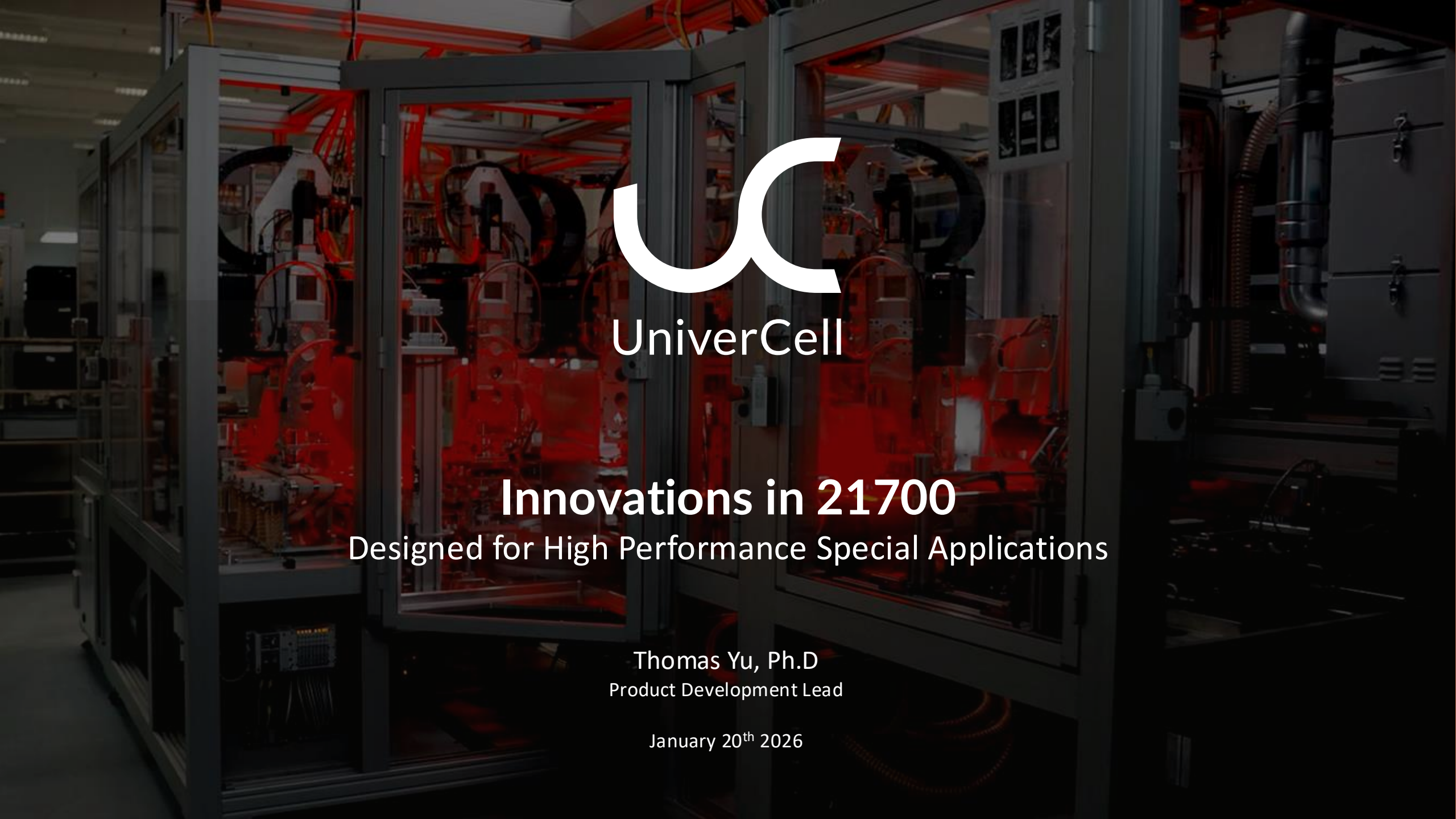


UniverCell

Innovations in 21700

Designed for High Performance Special Applications

Thomas Yu, Ph.D
Product Development Lead

January 20th 2026

Company

Flintbek & Moorsee,
Kiel, Germany

HQ in Flintbek and newly factory expansion in Moorsee, offices in South Korea and USA.

2019
Founded

64,000 m^2
Total facility size

1.5 GWh
Production capacity

approx. 100 employees
by end of 2025

Special Applications

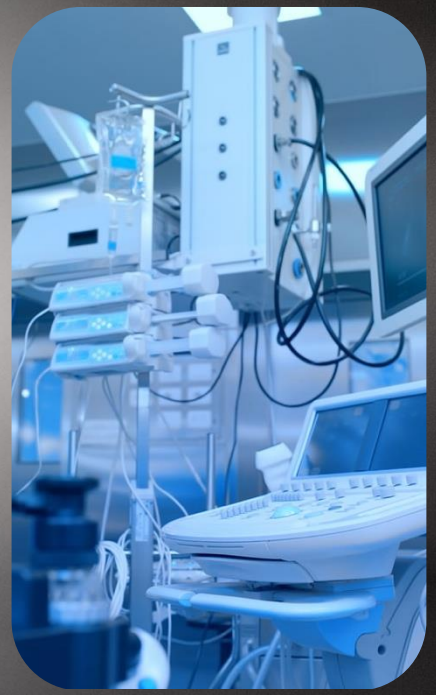
Tailored chemistry and cell designs

Power Tools

E-Mobility

Aerospace

Energy Storage

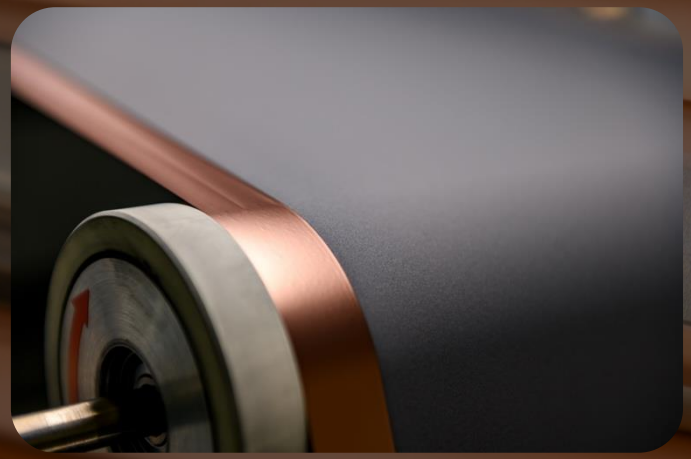


Medical

From concept to production of electrodes and cells for special applications

Slurries

Electrodes



Cells

Development, Production, and Testing all in Germany

2019

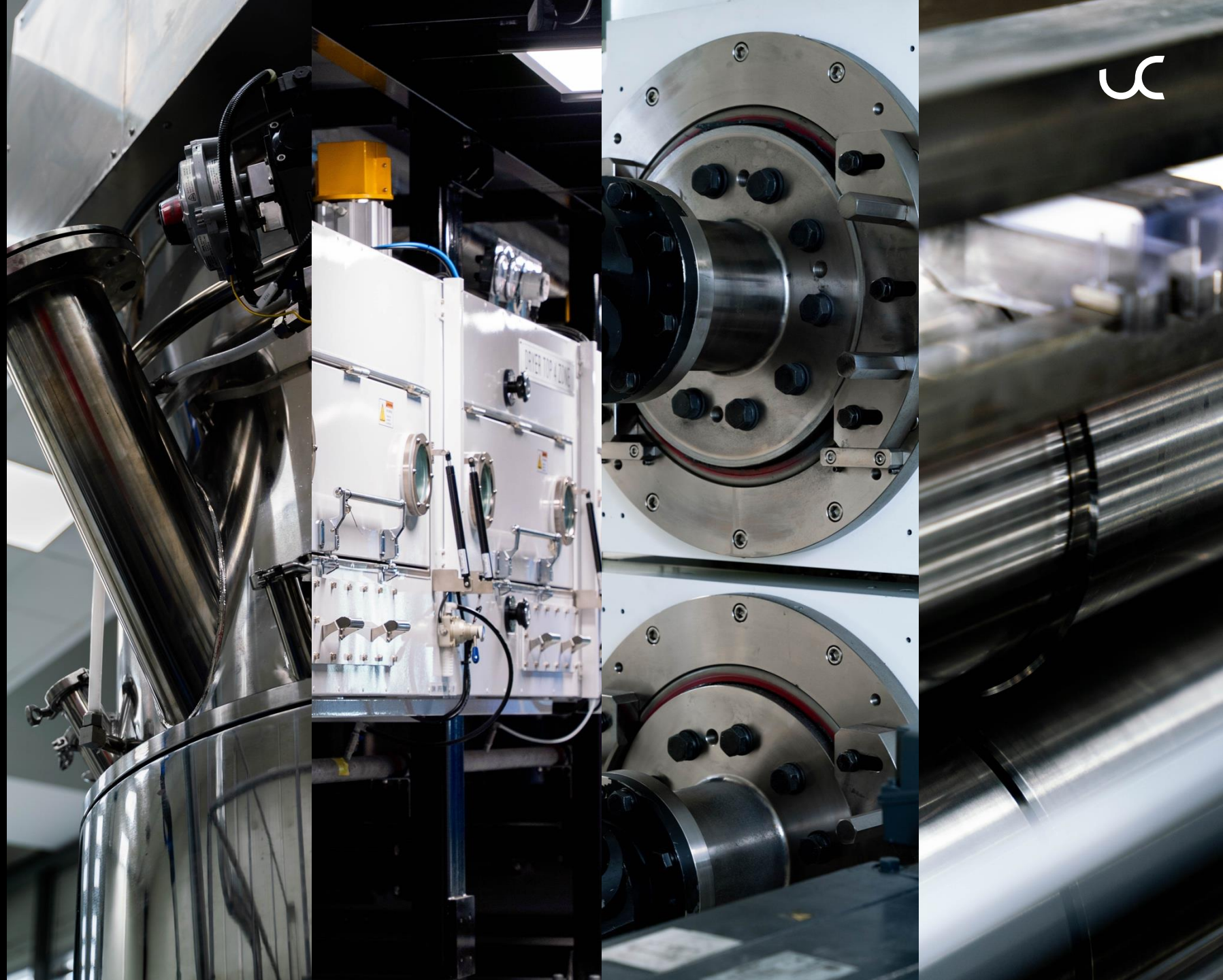
UniverCell’s founding – started with R&D laboratory and pilot-production line.

2021

Automated production of 300 x 80 mm pouch cells with customizable chemistry and stack thickness

2022

Ramp up of mass production capability of >30 km per day with the addition of new electrode production line

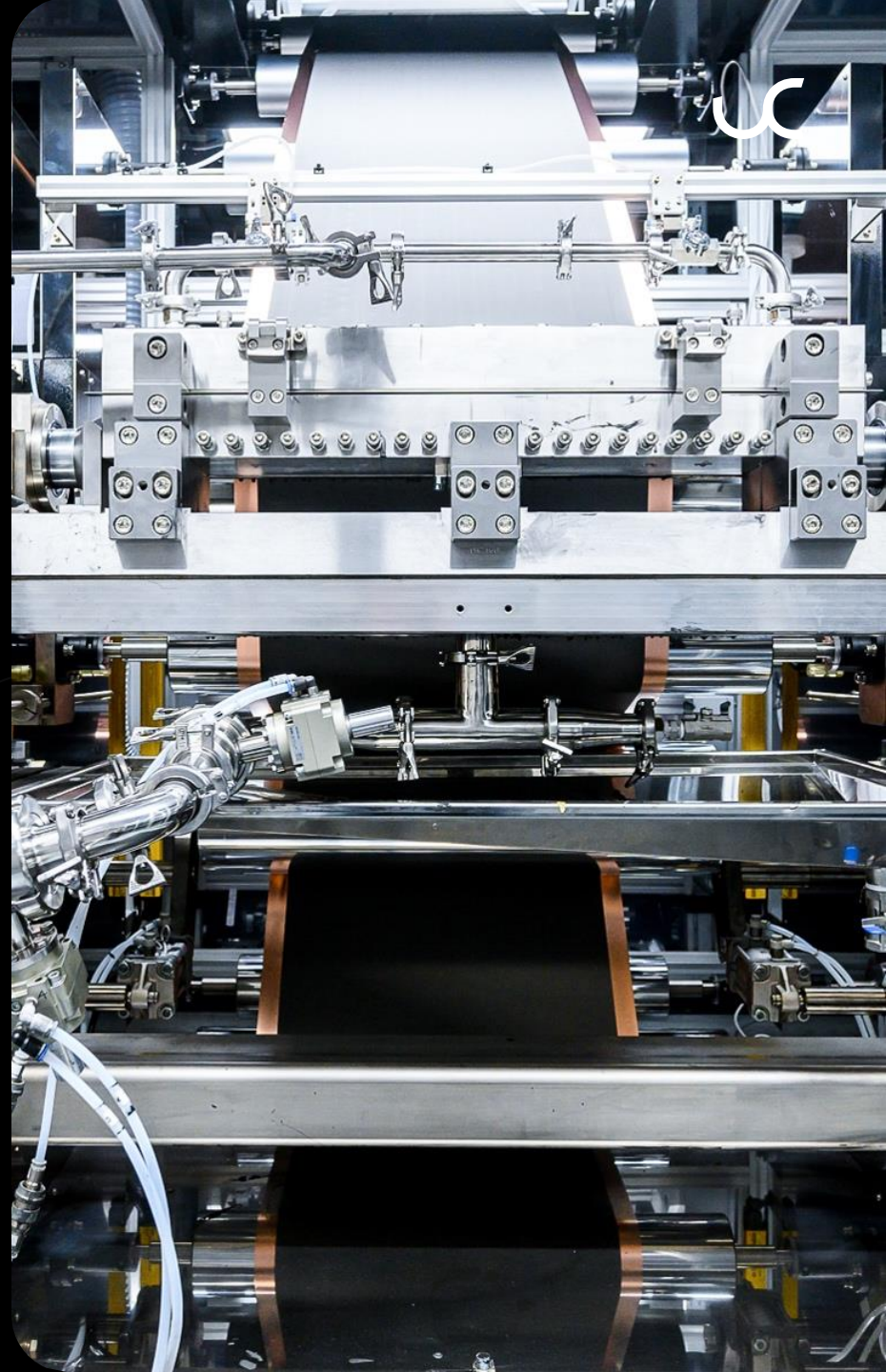


Today

Flexible and State-of-the-Art Production Facility

With a capacity of

1.5 GWh



Individual Recipes and Processes

For individual applications

- High-nickel NMC
- Graphite
- Graphite-silicon
- LFP & many more: LCO, LMFP, LMNO, LTO, XNO
- Well versed in planetary-dispersion, extrusion, and other industry-leading slurry/electrode processes
- Pilot production of dry-process electrode

Since 2023

Development of cylindrical cells as new product line

Customized electrode and cell designs are also possible

Key Innovative Features

Tabless Jellyroll

- High power output
- **Ultra-low** internal resistance
- Maximum efficiency & performance

Dry Coating Compatibility

- **27% lower energy** consumption per cell
- More efficient & sustainable production
- **In-house developed &** programmed machine

Lightweight Housing

- Significant weight reduction
- **Industry-leading** gravimetric energy density
- Enhanced thermal management
- **Patented design** for superior performance

UniverCell High Energy

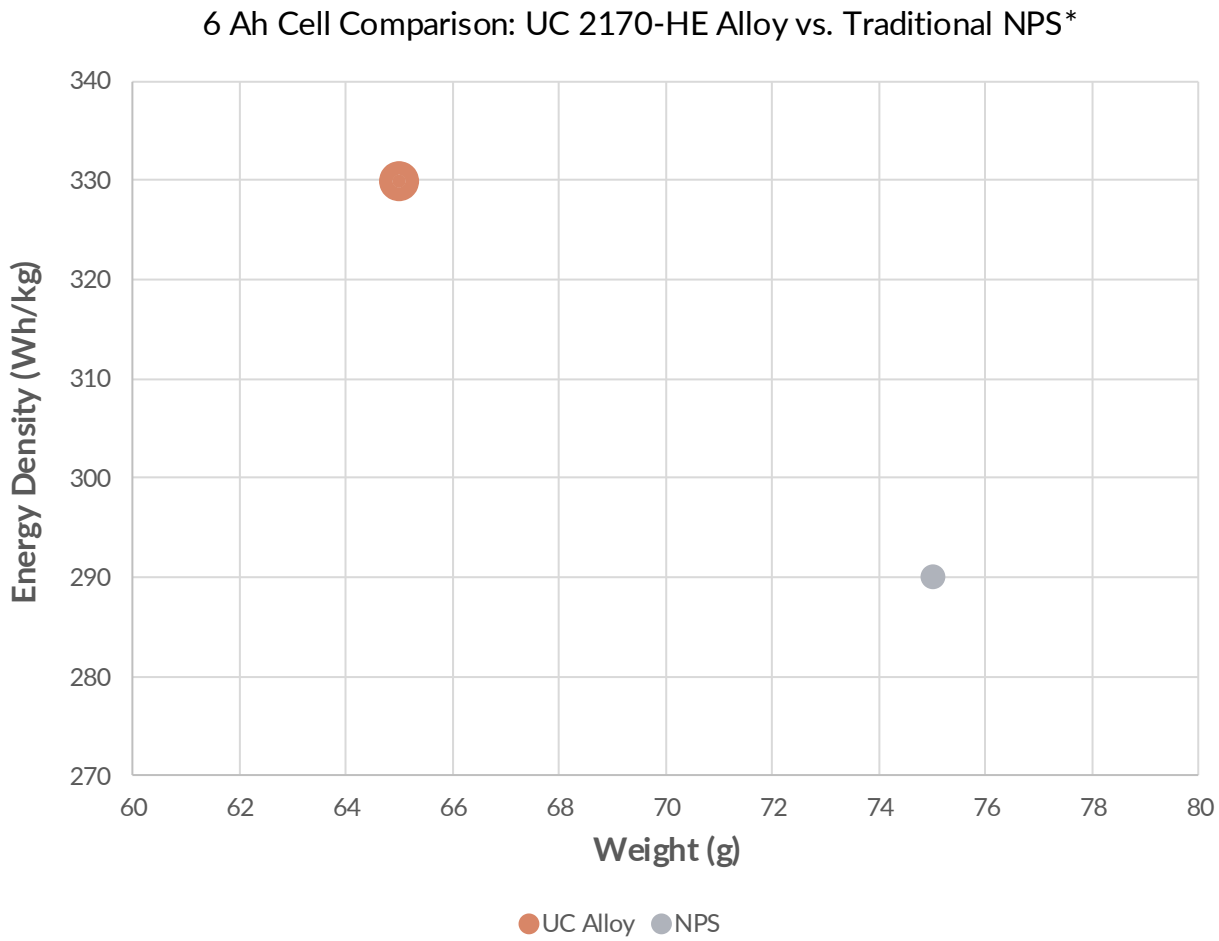
UC21700-HE

High nominal capacity with industry leading gravimetric energy density without compromises in cycle life and power capability.

Significant Increase in Energy Density

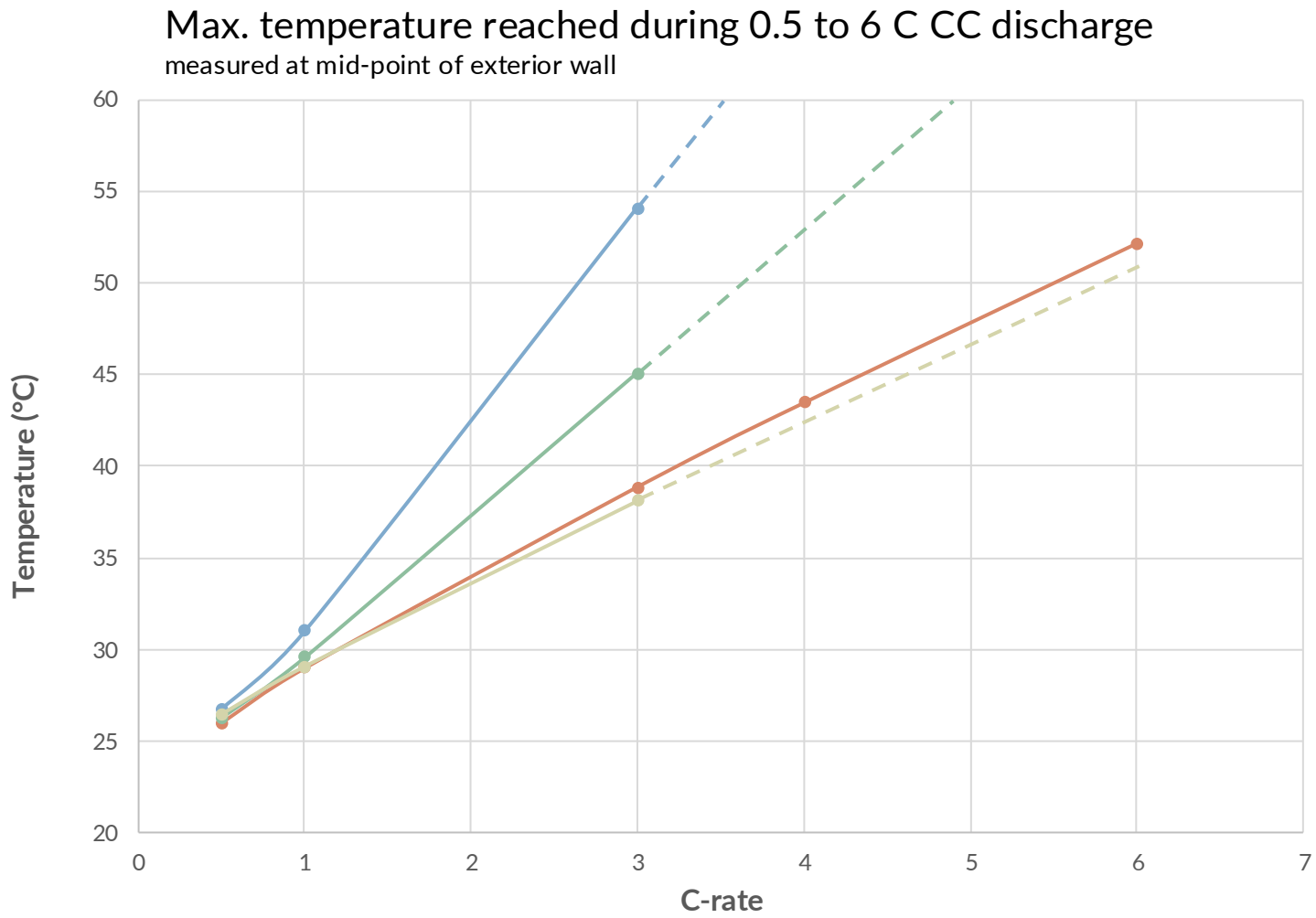
vs.

Left: UniverCell's proprietary aluminum housing and lid
Right: traditional steel housing



*6Ah MoliCel P60C data from About:Energy

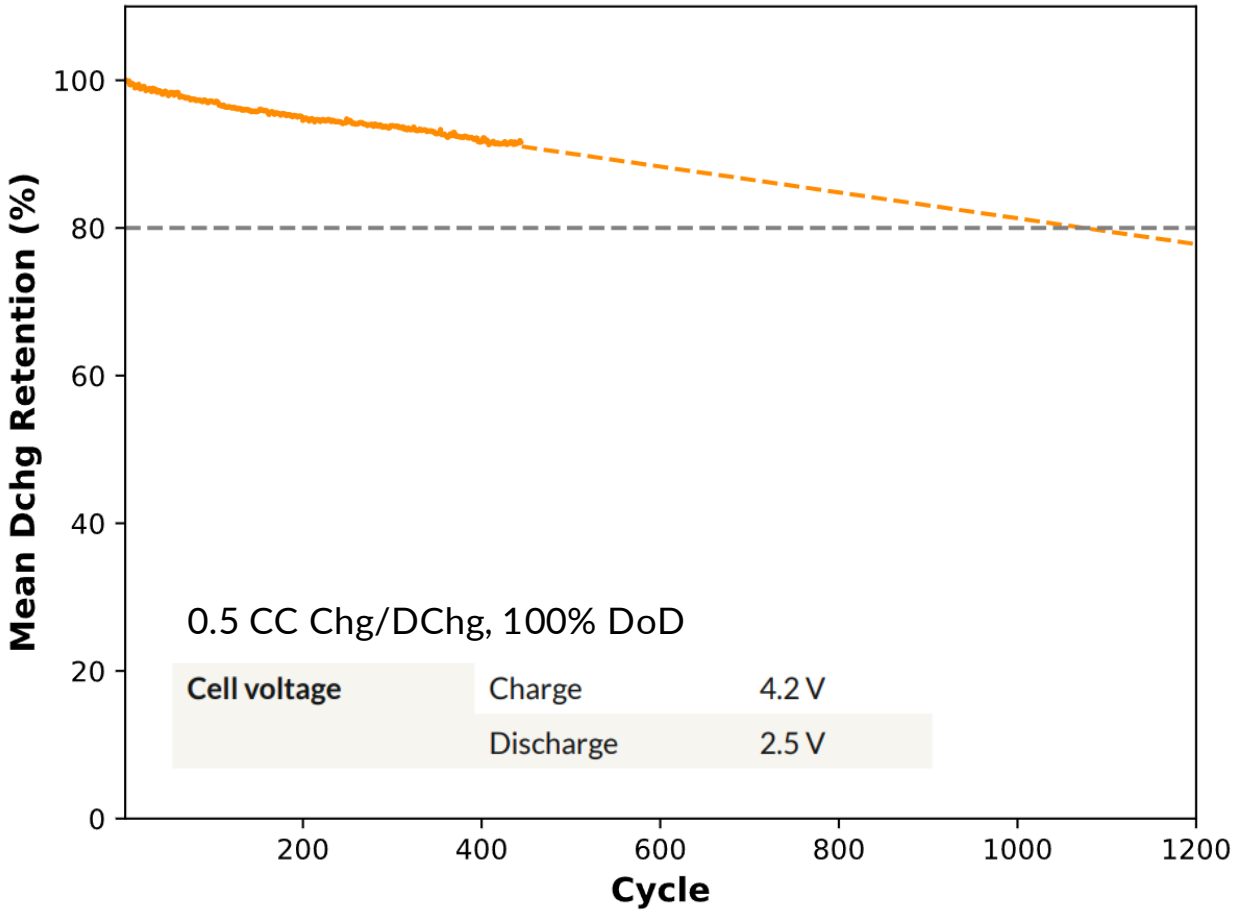
Enhanced Thermal Efficiency



Competitor data from independent tests by About:Energy

Long-term Cycle Life

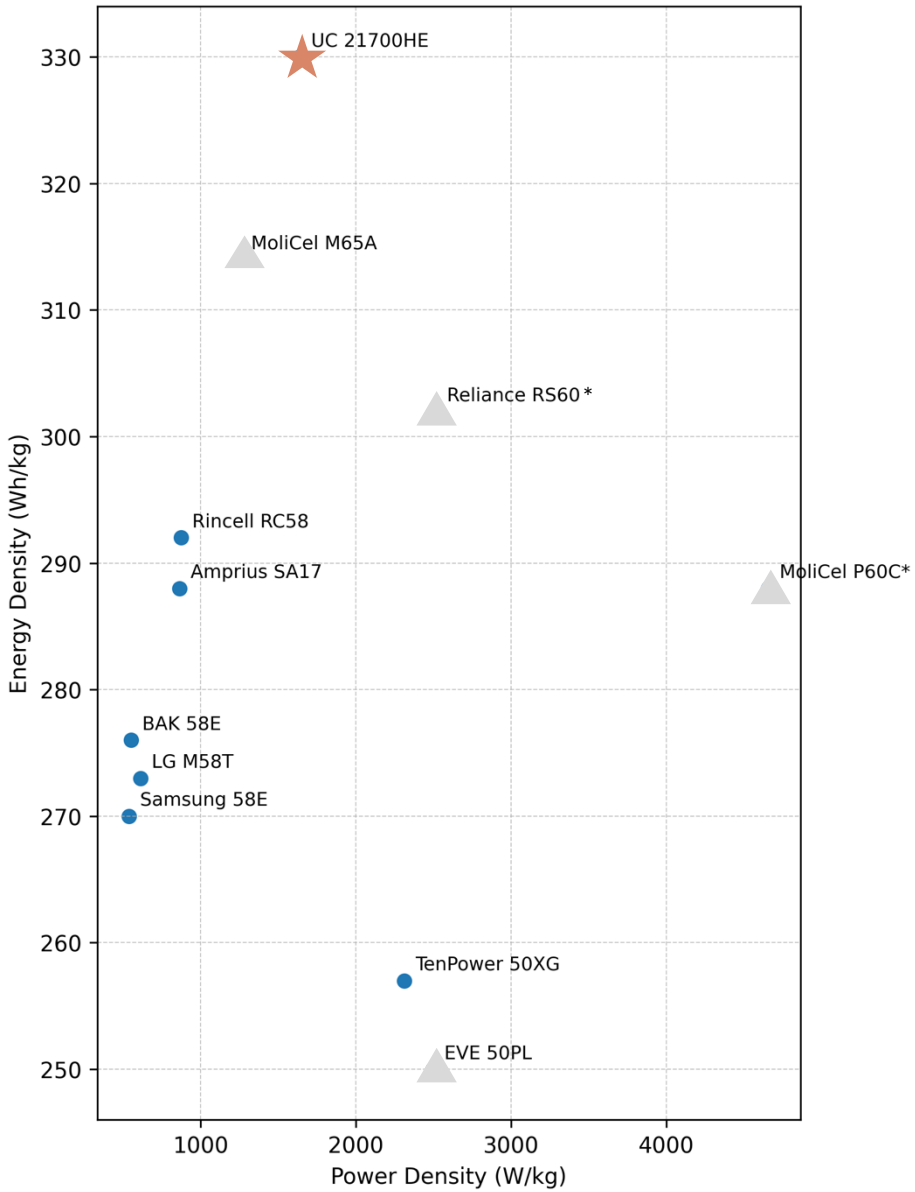
Result from initial 21700-HE pilot batch



Class-leading Performance

made in Germany

Cell Name	Tab Design	Nominal Capacity (Ah)	Dimensions (mm x mm)	Weight (g)	Energy Density (Wh/kg)	DCIR 50% SoC (mΩ)	Country of Origin
UniverCell 21700 HE	Tabless	6.0 Ah	21 x 70.5	~63	>330	≤10	Germany
MoliCel P60C	Multi-tab	6.0 Ah	21.35 x 70.13	75	284	12.8	Taiwan
MoliCel M65A	Multi-tab	6.5 Ah	21.70 x 71	74.5	314	≤25	Taiwan
Reliance RS60	Tabless	6.0 Ah	21.35 x 70.3	71.5	302	~10	China
EVE 50PL	Tabless	5.0 Ah	21.25 x 70.3	72	250	~10	China



Data from About:Energy or manufacturer spec sheets

*MoliCel P60C and Reliance RS60 power density based on manufacturer's claim, not verified under identical testing conditions.

Customizable High-Performance Chemistry

Diversified supply chain

Validated multiple suppliers for all raw materials

100% material sourcing from EU and North America is viable

Cathode

NMC and other ternary CAMs up to 92 % Ni; mono and/or multi-crystal

Tunable for energy, power, and/or stability

Silicon anodes

+ 5 years development and production experience in SiC and SiO_x

Pilot and MP validation of Si recipes with over 6 different Si suppliers

Production-proven anode recipes up to **80 % SiC**

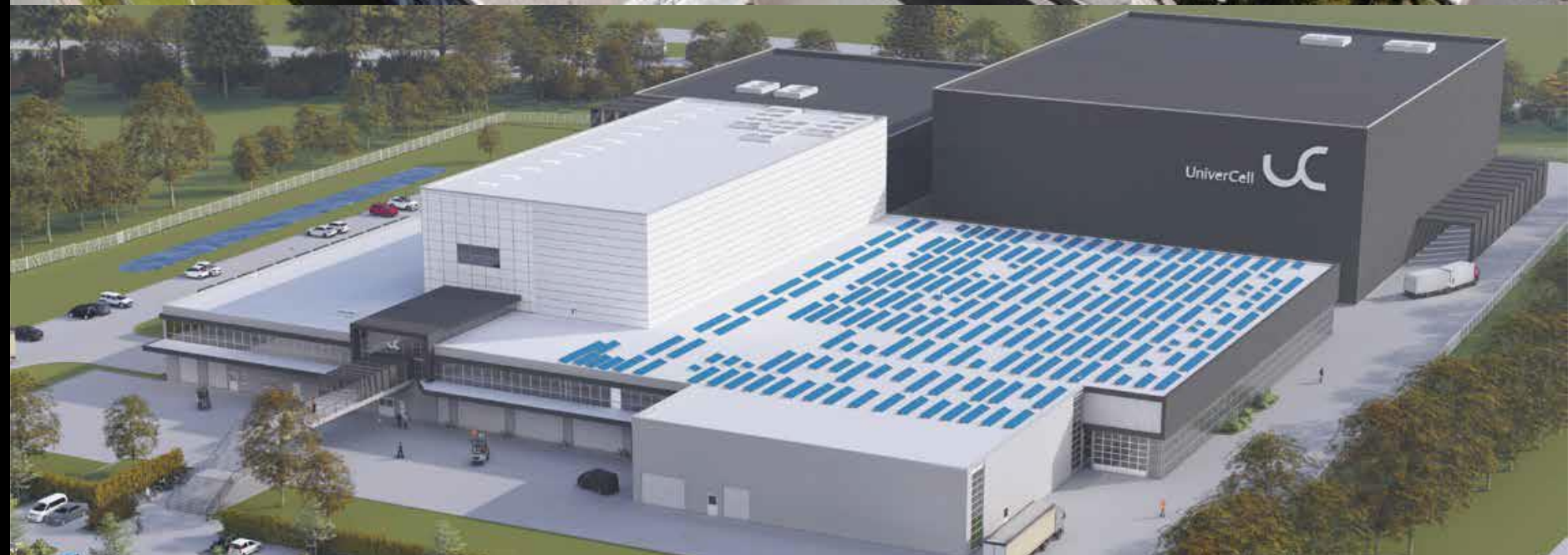
Up to **+1500 mAh/g** on electrode level

100s km of Si anode produced

Factory Expansion

Additional facility acquired. <10 minutes away from our existing production site.

Pre-existing infrastructure of new site allows for rapid conversion and achieving SOP.



Production Ramp-up

and Sample Availability

Local pre-production in Germany starts in **Q1 2026**.

Additional samples of 21700-HE available in **Q2 2026**.

21700-HP samples available by **Q3 2026**.

Ramp-up to +180 millions cells (approx. 4 GWh) per year by 2030.

Let‘s energize the future