CENATE SILICON NANO COMPOSITES

Your key to a smaller, lighter and cleaner battery

August 2025

Cenate develops and produces silicon based nano composites for the use in Lithium batteries



Has developed **world leading and patent pending silicon-based materials** to replace graphite in **lithium-ion batteries**, mainly for the rapidly growing EV battery market.

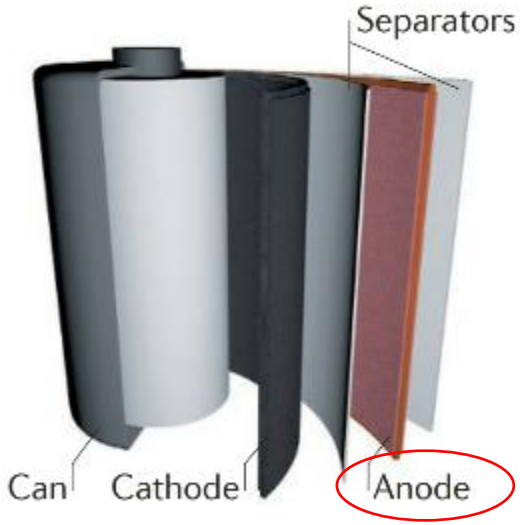
Building on Norway's **strong silicon industry competence**, being a spin-off company from Dynatec (Norwegian equipment producer, with co-founders from REC and IFE (Norwegian Inst. for Energy Technology).

Research at Forskningsparken, Oslo, Norway. **Pilot plant built** in Tomter, 35 min. south of Oslo.

CENATE

Cenate's materials allow for a smaller, cleaner and lighter battery

Higher energy density	1 kg Cenate Si-C **replaces 4-6 kg graphite**, thus **increasing battery energy density by up to 30%.** Higher energy density batteries obtain **higher battery prices**.
Increased production capacity with limited investments	Drop-in replacement materials leading to a **higher total number of GWh produced/yr without requiring significant capex**.
Lower battery production costs	Battery **production costs decrease on a kWh basis** due to higher factory output.
Improved CO_2 footprint	**93% lowered CO_2 emissions** compared to synthetic graphite. Additional indirect effects from the increased use of EVs. **Likely potential for recycling** of our material.
Improved fast charging	**Charging time is significantly reduced** due to silicon lithiation occurring at a lower voltage.



Internal tests and customer feedback from Global Tier 1 cell producers indicate that Cenate has a world leading silicon anode product for use in EVs.

Record high energy density and lower Lithium cost
Critical production processes already scaled

Record high energy density – record low Li/cathode cost:

- World leading first cycle **lithium efficiency** among silicon anode competitors. Thereby less of the costly Lithium and/or cathode can be applied.
- Superior **calendaring (compacting) properties** so that the anode becomes as thin as possible, and the energy density of the battery increases further.
- **Strong interest** from several of the world's absolute largest cell producers.
- Unique, strong and **independent IP platform** with freedom to operate.

Cost effective and scaled production process:

- Cenate produces its drop-in replacement materials in a unique and highly efficient way with very few process steps.
- The most critical processes are already successfully **scaled** to first commercial scale.

CO_2 footprint:

- Our simplified production process requires significantly **lower energy use** than the competitors.
- Cenate's potential for **recycling** of our material will further add to the low CO_2 footprint.



From small-scale reactor to pilot plant – next step is a large-scale factory



Small-scale reactor

- Development from 2012. Spin-off from Dynatec with company founding in 2015 – including co-founders from REC and IFE 2017.
- Construction of a small-scale reactor with containers welded together in 2020.
- First 3 product patents.



Pilot plant

- Full-scale pilot plant at Holtskogen, Norway completed 2022 where each process step is scaled to our 100 metric tons (MT)/yr equipment platform (~1 GWh).
- 3 out of 4 production processes scaled to commercial scale (the last is less critical).
- Two last process steps scaled up in 2024 and expansion project in preparation.
- 4 additional product patents (2022 and 2023).



Large-scale production

- Potential pilot plant expansion to 300 MT annual commercial production.
- U.S. large-scale factory with production capacity of 10k MT p.a. (stepwise increase from 2 k) – sufficient for 2 million EVs per year with silicon dominant anode.
- Financially strong investors in place to secure further growth and development with Nysnø (gvmt), Must, Bonheur and Vianode (Altor).

Management team with extensive industry and scale-up experience



Dr. ERIK SAUAR
Chief Executive Officer

CEO and co-founder. 25 years of international experience in bringing more than 10 new silicon-based technologies from idea to industrial commercialization.

PhD in physical chemistry
MSc Chemical Engineering
MA Anthropology
Norwegian University of Technology and Science.



Dr. WERNER FILTVEDT
Chief Operational Officer

COO and co-founder. 15 years of experience in equipment and process development.

PhD in silane processing from the Telemark University College.



Dr. MARTIN KIRKENGEN
Chief Technology Officer

CTO and co-founder. >13 years of experience in silicon for energy purposes. Former head of the battery department at IFE (Norwegian Institute for Energy Technology).

PhD in Physics from the University of Oslo.



OLAV LEREN MOEN
Chief Strategy Officer

>10 years of strategy & business development experience – mainly from materials industries.

MSc in Finance and Executive MBA in Strategic Management, both from Norwegian School of Economics.



DAG TEIGLAND
Executive Director, Head of commercial activities and financing

Broad international high-level management experience from various industries, board professional and strategic advisor.

BBA – Pacific Lutheran University, WA, USA
MBA – IESE, Spain
AMP – Harvard Business School, MA, USA.

Backed by strong owners/sponsors and a highly skilled board

KEY INVESTORS

Bonheur ASA

Vianode

DYNATEC

Must as

SAUAR INVEST

nysnø Climate Investments

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CENATE

THANK YOU



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