SiFAB®
Silicon Fiber Anode Battery Technology
BY ALKEGEN

Changing the way we power our lives.

More power	Lighter weight	Increased range	Space saving	Faster charge

Introducing SiFAB®, a powerful breakthrough in silicon anode technology.

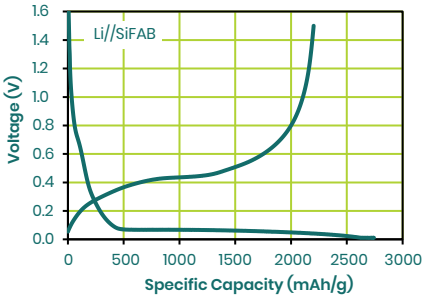
SiFAB enables higher energy density through a nanoporous fiber structure that accommodates Si swelling in lithium-ion batteries. Its groundbreaking silicon fiber anode material can be mixed into anode slurry with existing battery manufacturing processes. With vertically integrated industrial-scale processes that eliminate supply chain concerns over mass adoption, SiFAB is a great leap forward for battery technology.

Superior silicon.

SiFAB's game-changing technology is poised to transform the battery industry. Its unique structure and capability to scale provide the versatility to span usage across many industries and applications throughout the lithium-ion battery ecosystem.

High capacity coupled with high-rate and high-temperature performance.

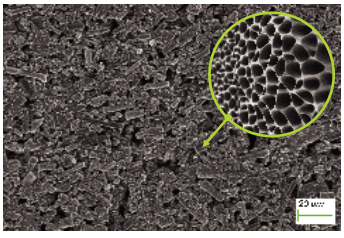
SiFAB offers high reversible capacity greater than 2,000 mAh/g, enabling energy density improvement over graphite up to 20%. Proven high-rate and high- temperature performance up to 4C and 45°C makes SiFAB a great fit for fast-charging and high-power applications.



SiFAB voltage profile demonstrating ultra high discharge capacity of 2200mAh/g

Drop-in ready paired with design flexibility.

SiFAB offers a true drop-in solution, as the unique technology features micron-sized silicon fiber with a built-in nanoporous structure that works well with your existing mixing equipment. Meanwhile, it has demonstrated robust performance in various electrode formulations, allowing design optimization for a given application.



SiFAB electrode showing an artist rendition of the SiFAB nanoporous structure

Established manufacturing.

Processed for industrial-scale manufacturing, the first SiFAB production line at scale was completed in Indiana, USA. An additional large production facility with hundreds of metric tons of capacity is targeted for 2025.

SiFAB Production Line in Indiana USA

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Adaptable power for broad applications.

SiFAB's exclusive nanoporous silicon fiber anobe technology enables significantly higher energy density than graphite and faster charging for a range of applications.

- Electric vehicles
- Consumer electronics
- Power tools
- Grid storage
- Aerospace

A formidable manufacturing track record.

SiFAB is developed by Alkegen, a world leader in manufacturing high-performance specialty materials. Alkegen is no stranger to the battery world and has an impressive history of developing new technologies at a large scale for more than 75 years. Today, we work across multiple industries – including electric vehicles, batteries and energy storage, automotive and aerospace, industrial insulation, filtration, and fire protection-that require rigorous quality standards, certifications, and compliance to global health, safety, and environmental regulations.

Engineering smarter.

Alkegen is dedicated to creating products that are designed with the ultimate goal of improving human health and sustainability. Our products save energy, reduce pollution, and improve safety for our customers.

See how SiFAB is changing the way we power our lives and request samples at sifab.com.

- 9,000+ employees worldwide
- 75+ years of experience
- 60+ manufacturing facilities
- ISO 9001/IATF 16949 accredited

Email: batterygroup@alkegen.com

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