Breaking barriers in battery technology

Alkegen, a leading maker of advanced specialty materials, showcases its latest battery technology development in a technical presentation and exhibit at the The Battery Show and Electric & Hybrid Vehicle Technology Expo in Novi, Michigan. The company's SiFAB™ Silicon Fiber Anode Battery Technology brings to the market increased performance in multiple battery systems. Uniquely structured for high-capacity performance, SiFAB enables significantly higher energy density in lithium-ion battery systems, according to Bruce Zoitos, senior scientist and manager at Alkegen.

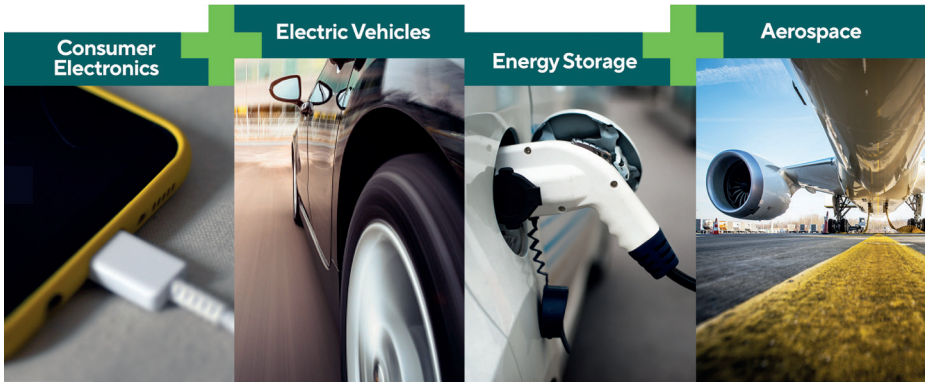
The Alkegen (formerly Unifrax) name has long been associated with leading technologies in the materials space, dating back to its early development of the Fiberfrax® ceramic fiber product. In 1996, the company took on the Unifrax name, and continued its trajectory as a developer of high-performing materials for a variety of industries and applications. Today, Alkegen's work is driven by a global workforce of over 2,700 people across 37 manufacturing facilities in 12 countries.

The latest development emerging from the company's research and development strategy is the SiFAB™ Silicon Fiber Anode Battery Technology, showcased in September 2021 showcased at leading industry events including The Battery Show and Electric & Hybrid Vehicle Technology Expo. SiFAB has proven, thanks to advanced testing, its potential as a transformative product for a number of applications such as electric vehicles, portable electronics and power tools.

"Lithium-ion batteries are playing a pivotal role in our everyday life," said Bruce Zoitos, senior scientist and manager. "Along with greater energy density, SiFAB will provide faster charges and longer battery life for applications including electric vehicles, portable electronics, power tools, energy grid storage, and aerospace. With SiFAB, our recent testing shows our technology can provide a drop-in solution that can be incorporated as early as 2022, enabling better and longer-performing applications."

SiFAB delivered a robust performance in various electrode formulations, as well as a proven high-rate charge and discharge performance of up to 4C and high temperature performance at 45°C. Testing showed SiFAB features a reversible capacity greater than 1,000 mAh/g, enabling gravimetric energy density improvement over graphite up to 20 percent.

"Our data shows SiFAB delivers strong performance in realistic cell conditions and real-world applications", said Chad Cannan, senior vice president of research and development at Alkegen. "With SiFAB's promising performance, and Alkegen's ability to scale up manufacturing with our first SiFAB manufacturing line being built at our Indiana manufacturing site now, our plan is on track for producing tens of metric tons in early 2022 with hundreds of metric tons capacity planned for 2023, making SiFAB a reality for customers."



SiFAB

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