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Alkegen Introduction

Battery Business Unit

Ana Kiricova

Feb, 2022


UNIFRAX
+
Lydall
ALKEGEN

Alkegen is a leading global supplier of high-performance specialty materials

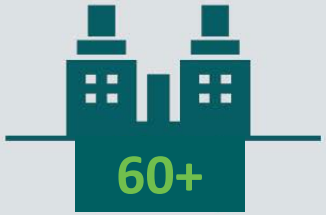
*Alkegen is a global leader in developing and manufacturing **high-performance specialty materials** used in advanced applications for industries including filtration and catalysis media**, battery technology** and energy storage, and insulation for fossil fuel reduction.*

Alkegen products are designed with the ultimate goal of saving energy, reducing pollution and improving fire safety for people, buildings and equipment.

Breathe easier, live greener, and go further than ever before.

Quality Certifications: **ISO 9001:2015, IATF 16949:2016**

Employees worldwide

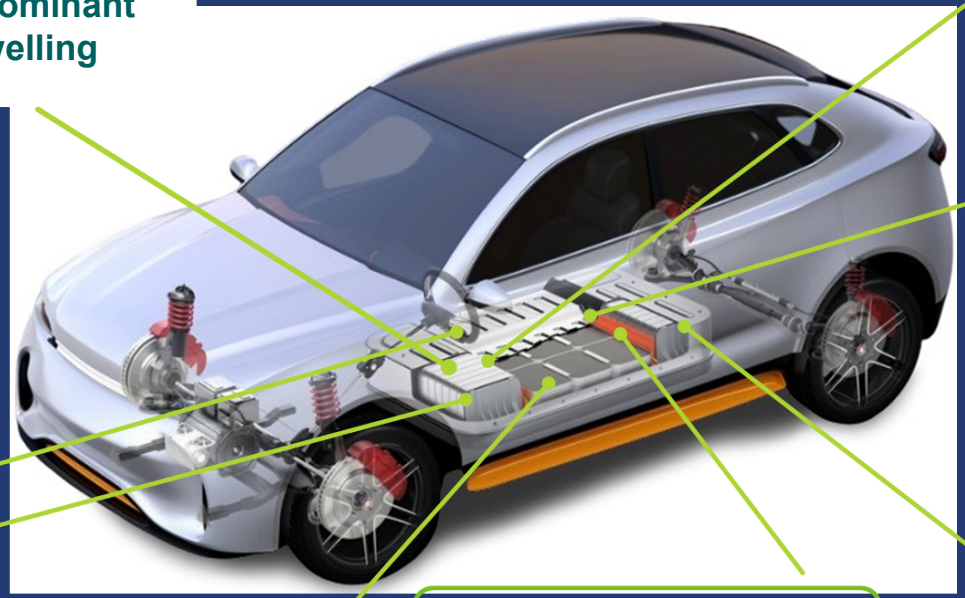


Manufacturing facilities

Years of global service and support

Battery at Alkegen

SiFAB
High capacity, silicon dominant anode resistant to swelling



inovion
LiB Battery Separator

Battery Pack Passive Fire Protection

FyreWrap LiB
Films & Coatings

Heat Shielding

Cell-to-Cell Thermal Runaway Propagation Barriers

Module Passive Fire Protection

A Simple, Novel, Scalable Approach to Silicon Anode.

High performance fiber…

- Ultra high-capacity silicon dominant anode
- Unique geometry allows drop-in use to anode slurries
- Allows better particle-particle contact
- Offers better options for anode microstructure

Nanostructured…

- 30% open volume to accommodate swelling
- Controlled high surface area to facilitate Li transfer
- Short internal diffusion distances to minimize swelling stress

Highly scalable…

- Manufacturing process uses established, large scale methods
- Unifrax has a 75-year track record of supplying specialty fibers
- Tested in Roll 2 Roll

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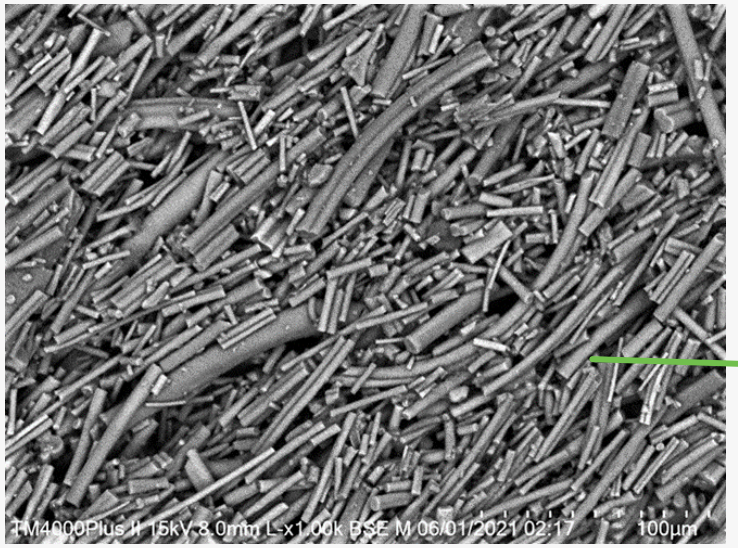
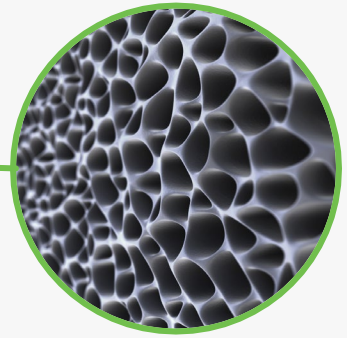
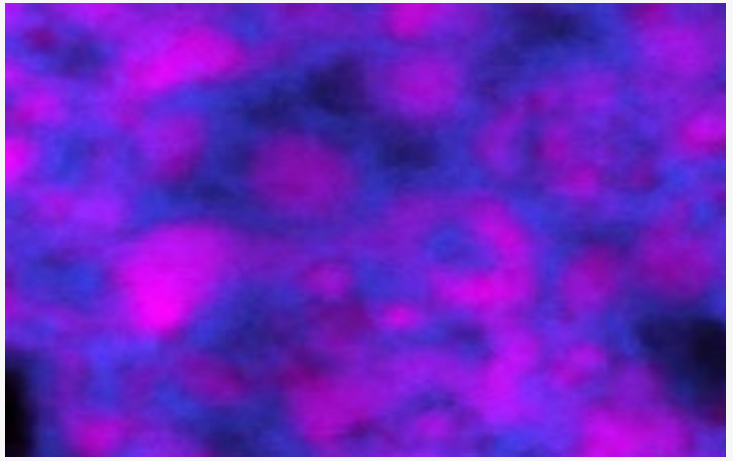
SiFAB Nano Porous Fiber Structure



SiFAB on R-T-R anode

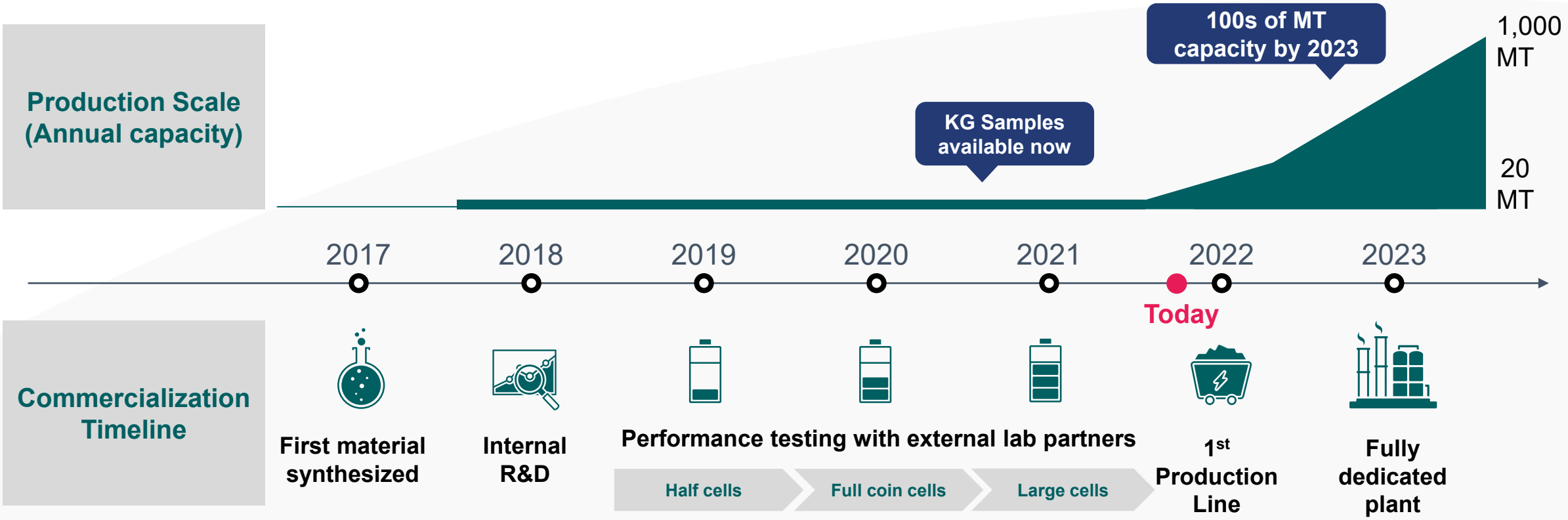


Artist rendition of SiFAB at nano scale



STEM of Si-C composite structure

We are rapidly scaling SiFAB production to hundreds of MT by 2023 following 5 years of product development



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SiFAB Manufacturing Line in Indiana- To Commission in Q1 2022

Widnes, England

Primary Fiber Production Plant

New Carlisle, Indiana

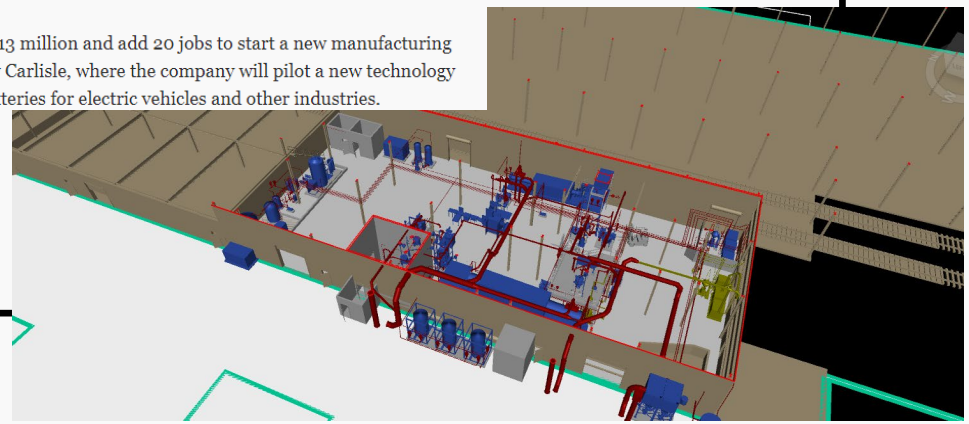
Secondary Process Facility Online 2022

New Carlisle plant could spend $13 million, add 20 jobs for new battery technology

Christian Sheckler South Bend Tribune

Published 5:00 p.m. ET Apr. 26, 2021

Unifrax plans to spend $13 million and add 20 jobs to start a new manufacturing line at its plant near New Carlisle, where the company will pilot a new technology for use in lithium-ion batteries for electric vehicles and other industries.



Process Design is Modular & Scalable

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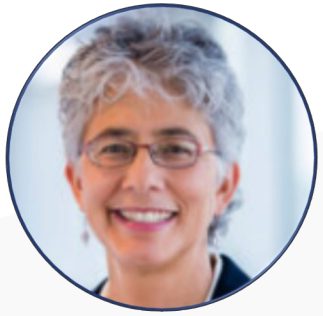
Battery Advisory Board

Dr. Prabhakar Patil

Former CEO, LG Chem Power and chief engineer of hybrid technologies, Ford Motor Company



Rita Lane

Former VP, Apple, Operations and SVP, Motorola, Integrated Supply Chain

Dr. Arumugam "Ram" Manthiram

Professor, University of Texas at Austin

Dr. Jennifer Rupp

Professor of electrochemical materials and group head, Massachusetts Institute of Technology (MIT)

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Thank you!

Ana Kiricova

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