GM and OneD Battery Sciences Collaborate on Silicon Anode Technology

2022-10-08

Collaboration focuses on increasing energy density and cost reduction in future GM EV batteries. GM Ventures participates in OneD's Series C $25 million funding round.

General Motors Co. and OneD Battery Sciences announced today the execution of a joint research development agreement focused on the potential use of OneD's silicon nanotechnology in GM's Ultium battery cells to drive significant increases in energy density for longer range and reduced cost. GM Ventures and Volta Energy Technologies also participated in OneD's Series C funding round, which the company recently closed at $25 million.

The focus of the collaboration is OneD's SINANODE platform, which adds more silicon onto the anode battery cells by fusing silicon nanowires into EV-grade graphite. Silicon can store 10 times more energy than graphite. Increasing energy density can open the door to smaller, lighter, more efficient battery packs that could achieve higher driving range at lower cost.

"GM designed Ultium to be a supremely flexible platform so we can continuously improve our cells as battery technology advances," said Kent Helfrich, GM chief technology officer, vice president of GM research and development, and president of GM Ventures. "Our collaboration with OneD will focus on efforts to continue advancements in EV range, performance and cost."

The collaboration on silicon anode technology is believed to be the first of its kind between two American companies. GM is rapidly scaling its Ultium EV Platform to reach 1 million units of annual EV manufacturing capacity in North America by 2025. Earlier this year, GM's first Ultium Cells joint venture battery plant began production in Ohio, with two additional U.S.

plants under construction and a fourth also planned.

At the same time, GM is building on more than a decade of advanced battery research and development with its new Wallace Battery Cell Innovation Center in Warren, Michigan, which was completed earlier this year to help significantly ramp up development and production of next-generation Ultium batteries, along with production methods that can quickly be deployed at battery cell manufacturing plants.

Fifteen years of OneD research and development has led to a portfolio of more than 240 granted patents. This enables OneD's business model to center on licensing the SINANODE technology to industrial partners and scale manufacturing faster and at a lower cost. Given a licensing business model and low operational costs, Series C funds will be used to continue SINANODE research and development, while advancing pilot production and providing OEMs and battery manufacturers a seamless integration into the manufacturing of EV batteries via licensed manufacturing partners.

"From day one, OneD has aimed to simplify silicon as the means to a completely new era of EVs. We believe that the winners of the EV race will be those who can effectively add more silicon to the battery cell, in a way that doesn't disrupt existing supply chains and processes," said Vincent Pluvinage, CEO, OneD Battery Sciences. "We're thrilled to collaborate with General Motors on our shared goal of accelerating mass EV adoption."

Read the original article on General Motors.