Ampcera Selected to Receive $2.1 Million in Federal Funding to Develop More Efficient Solid-State Batteries for EVs

Supporting U.S. Domestic Development of Advanced Batteries to Make EVs More Adaptive and Accessible

DOE ARPA-E program officers visiting Ampcera in Tucson, AZ on Jan. 19, 2023

TUCSON, AZ, UNITED STATES, January 23, 2023 /EINPresswire.com/ -- Ampcera announced today that it has been selected to receive $2.1 million in funding from the U.S. Department of Energy Advanced Research Projects Agency-Energy (ARPA-E). The funding is part of the ARPA-E Electric Vehicles for American Low-Carbon Living (EVs4ALL) program, which seeks to develop more affordable, convenient, efficient, and resilient electric vehicle (EV) batteries.

The project titled "Thermally Modulated Solid-State Batteries for Ultra-Safe Fast-Charging Electric Vehicles" is a collaboration between Ampcera, EC Power, and Ford Motor Company to develop a fast-charging solid-state battery that can reach the goal of 15-minute charge at 0-80% capacity and operate at ambient temperatures below -20 °C with a battery based cold startup times of one minute or less when not being externally charged.

"We are grateful that the thermally modulated solid-state battery technology was selected for funding and look forward to working with ARPA-E and strengthening our partnership with EC Power and Ford through prototype development and testing for EV applications" said Emery Brown, Ampcera's Operations Manager, and Principal Investigator of the project.

The thermally modulated all-solid-state battery is a combination of Ampcera's patent-pending solid-state electrolyte and battery technology and EC Power's Thermally Modulated Cell Technology which has reached commercialization in conventional lithium-ion batteries.

“We are excited about the opportunity to apply thermal modulation to solid-state batteries; the two represent a natural pairing that promises the utmost in convenience and safety” said Eric Rountree, Chief Executive Officer of EC Power, and Co-Principal Investigator.

Ampcera logo

Ford will validate the performance of the thermally modulated solid-state battery using the United States Advanced Battery Consortium (USABC) testing protocols at Ford Ion Park in Dearborn, MI as a first step toward EV integration.

The all-solid-state thermally modulated battery comprises a high-capacity silicon anode and a high-voltage lithium nickel manganese cobalt oxide cathode which together can enable an energy density of ≥400 Wh/kg, doubling the current EV driving range. Its core solid-state electrolyte material is a proprietary formulation that is engineered for fast charging and longer cycle life.

> We look forward to working with ARPA-E and strengthening our partnership with EC Power and Ford through prototype development and testing for EV applications.”
>
> *Emery Brown, Principal Investigator of the project*

Ampcera secured $15 million in a recent funding round to scale up its solid-state electrolyte manufacturing capacity which will reduce material cost making next-generation battery technologies cost-competitive with conventional lithium batteries.

“By scaling up the solid-state electrolyte manufacturing we hope to reduce material cost which has been a bottleneck in solid-state battery development and market deployment,” said Hui Du, Ampcera co-founder and CTO. “Our new funding from both the private sector and the ARPA-E EVs4All program will allow technologies like the thermally modulated solid-state battery to reach the industry-wide cost goal of $80 to $60 per kWh sooner.”

To learn more about Ampcera and opportunities for partnership, please visit Ampcera.com.

About Ampcera Inc.
Ampcera is a U.S.-based innovator in the development and commercialization of high-performance solid-state electrolyte materials and scalable manufacturing processes for next-generation lithium batteries. Ampcera is headquartered in Silicon Valley in California with R&D and production facilities in Tucson, Arizona.

Media and Investor Contact:

Sumin Zhu, Ph.D., co-founder and CEO
info@ampcera.com

Sumin Zhu
Ampcera Inc.
szhu@ampcera.com
Visit us on social media:
LinkedIn
