# Dossier: AMPRIUS TECHNOLOGIES, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,899,984.24

**Award Date:** 2024-07-11

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

Amprius Technologies, Inc. designs, develops, and manufactures high-energy and high-power lithium-ion batteries using its proprietary silicon nanowire anode technology. Their core mission is to develop battery solutions that significantly improve energy density, power, charging rates, safety, and lifespan compared to conventional lithium-ion batteries, thereby enabling next-generation applications in electric vehicles (EVs), aviation (electric vertical takeoff and landing – eVTOL), and high-performance defense systems. Amprius aims to solve the limitations of graphite anodes which restrict battery performance, offering a unique value proposition through their silicon nanowire technology which increases energy density and specific power.

**Technology Focus:**

* Amprius' core technology is its 100% silicon nanowire anode, which replaces graphite. This allows for significantly higher energy density (up to 450 Wh/kg and 1,150 Wh/L) compared to traditional graphite-based anodes.
* Their batteries are designed for fast charging capabilities and improved safety features, leveraging advanced electrolyte formulations and cell designs. The company also claims significant cycle life improvements.

**Recent Developments & Traction:**

* February 2024:\*\* Amprius announces purchase order from the U.S. Army's Rapid Capabilities and Critical Technologies Office (RCCTO) for its SiCore batteries to power defense applications.
* December 2022:\*\* Amprius goes public through a business combination with Kensington Capital Acquisition Corp. IV, raising approximately $230 million.
* October 2022:\*\* Amprius announces initial shipments of its high energy density cells (450 Wh/kg) to customers in the aviation industry.

**Leadership & Team:**

* Dr. Kang Sun, CEO:\*\* Holds a PhD in Materials Science and Engineering from Stanford University and has extensive experience in the battery industry.
* Jon Bornstein, President:\*\* Possesses a strong background in operations and manufacturing, driving scale-up efforts.

**Competitive Landscape:**

* Sila Nanotechnologies:\*\* A competitor also focused on silicon anode battery technology, targeting EV and consumer electronics applications. Amprius differentiates itself with its nanowire approach and early traction in aviation and defense markets.
* Enovix:\*\* Another advanced battery technology company. Amprius competes on energy density and targeted markets.

**Sources:**

1. [https://www.amprius.com/](https://www.amprius.com/)

2. [https://investors.amprius.com/](https://investors.amprius.com/)

3. [https://www.prnewswire.com/news-releases/amprius-announces-purchase-order-from-us-army-for-sicore-batteries-302064292.html](https://www.prnewswire.com/news-releases/amprius-announces-purchase-order-from-us-army-for-sicore-batteries-302064292.html)

4. [https://www.nasdaq.com/market-activity/stocks/ampx](https://www.nasdaq.com/market-activity/stocks/ampx)