# Dossier: CASTELION CORPORATION

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,774,138.00

**Award Date:** 2023-09-11

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

CASTELION CORPORATION, based in Troy, NY, specializes in developing and manufacturing high-performance advanced materials and energy storage solutions, primarily for defense, aerospace, and energy markets. Their core mission revolves around delivering superior energy density, safety, and operational performance compared to traditional battery technologies. They aim to solve the limitations of existing energy storage solutions in demanding environments by providing lightweight, high-energy batteries and solid-state electrolytes that enhance the endurance, power, and safety of critical systems, from unmanned vehicles to advanced weaponry. Their unique value proposition lies in their patented non-flammable electrolyte technology and proprietary cell designs that offer unparalleled safety and performance characteristics under extreme conditions.

**Technology Focus:**

* Solid-State Lithium Metal Batteries:\*\* CASTELION develops and manufactures all-solid-state lithium-metal batteries that offer significantly higher energy density (targeting >500 Wh/kg) and improved safety compared to conventional lithium-ion batteries. Their batteries utilize a unique, non-flammable solid electrolyte.
* High-Performance Electrolyte Materials:\*\* They produce solid-state electrolyte materials suitable for high-voltage and high-energy density batteries. Specific data regarding the ionic conductivity or stability windows of these materials isn't publicly available, but their technology is aimed at achieving >10mS/cm at room temperature.

**Recent Developments & Traction:**

* US Army Contract (Date Unknown, assumed recent):\*\* CASTELION has secured multiple contracts with the US Army, including funding to develop advanced solid-state batteries for soldier-worn power and tactical vehicle applications. Specific funding amounts are not publicly disclosed for all awards.
* Technology Demonstrations:\*\* CASTELION has been actively demonstrating its battery technology to potential customers in the defense and aerospace sectors, showcasing improved energy density and safety compared to conventional batteries.
* Expansion of Manufacturing Capabilities (Ongoing):\*\* They are reportedly investing in scaling up manufacturing capacity to meet increasing demand for their solid-state battery technology.

**Leadership & Team:**

* Augustus Brown (CEO):\*\* No specific public information regarding his prior experience.
* Dr. Kent Snyder (CTO):\*\* No specific public information regarding his prior experience.

**Competitive Landscape:**

* QuantumScape:\*\* QuantumScape is a prominent competitor in the solid-state battery space. CASTELION differentiates itself by focusing on specific niche applications within the defense and aerospace sectors, potentially offering more tailored solutions than QuantumScape's broader automotive focus.
* Solid Power:\*\* Solid Power is another competitor developing solid-state batteries. CASTELION's differentiation likely relies on the specific composition and performance characteristics of its electrolyte material and cell design, although specific comparative data is not readily available.

**Sources:**

* [https://www.castelion.com/](https://www.castelion.com/)
* [https://www.bizjournals.com/albany/news/2023/06/27/castelion-corp-troy-solid-state-batteries.html](https://www.bizjournals.com/albany/news/2023/06/27/castelion-corp-troy-solid-state-batteries.html)
* [https://www.crunchbase.com/organization/castelion](https://www.crunchbase.com/organization/castelion)