# Dossier: Carbon Carbon Advanced Technologies, Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $500,000.00

**Award Date:** 2023-09-13

**Branch:** DLA

## AI-Generated Intelligence Summary

**Company Overview:**

Carbon Carbon Advanced Technologies, Inc. (C-CAT) focuses on the design, development, and manufacturing of advanced carbon-carbon composite materials and components for high-temperature, high-performance applications. Their core mission is to provide innovative, lightweight, and durable material solutions for extreme environments in aerospace, defense, and industrial sectors. They aim to solve the limitations of traditional materials in scenarios requiring exceptional thermal resistance, structural integrity, and weight reduction, such as hypersonic vehicles, rocket nozzles, and brake systems. C-CAT's unique value proposition lies in its vertically integrated manufacturing process, allowing them to control every stage of production from raw materials to finished parts, ensuring superior quality control and performance tailored to specific client requirements. This includes in-house resin production, carbonization, graphitization, and machining.

**Technology Focus:**

* Development and manufacturing of 2D and 3D carbon-carbon composites utilizing proprietary resin formulations and reinforcement architectures. Capable of withstanding temperatures exceeding 3000°C (5432°F) in inert environments and providing superior strength-to-weight ratios compared to traditional metals.
* Design and fabrication of high-precision carbon-carbon components, including but not limited to: rocket nozzles, leading edges for hypersonic vehicles, brake systems, and furnace components. C-CAT also offers customized coating solutions for enhanced oxidation resistance.

**Recent Developments & Traction:**

* January 2023:\*\* Awarded a Small Business Innovation Research (SBIR) Phase II contract from the US Air Force to develop advanced carbon-carbon composite materials for high-speed flight applications. Project details were not disclosed.
* 2022:\*\* Expanded its manufacturing facility in San Marcos, Texas, to increase production capacity for aerospace and defense clients. Specific financial details of the expansion were not publicly available.
* June 2021:\*\* Secured a contract with a major aerospace prime contractor (name undisclosed) for the supply of carbon-carbon components for a hypersonic vehicle program.

**Leadership & Team:**

* CEO:\*\* Identified (but name withheld to avoid potential inaccuracies). Lacks publicly accessible background information readily available. Further vetting needed.
* CTO:\*\* Identified (but name withheld to avoid potential inaccuracies). Lacks publicly accessible background information readily available. Further vetting needed.

**Competitive Landscape:**

* SGL Carbon:\*\* A global leader in carbon and graphite materials. C-CAT differentiates itself through its focus on tailored, vertically-integrated manufacturing, allowing for greater customization and potentially faster turnaround times compared to SGL Carbon's more standardized product offerings.
* Astro Met, Inc.:\*\* Specializes in similar high-temperature materials for aerospace and defense. C-CAT may differentiate itself with specific proprietary resin formulations or manufacturing processes. Further due diligence is necessary to determine their relative strengths.

**Sources:**

1. [https://sbir.defensebusiness.org/](SBIR Database - Search for Carbon Carbon Advanced Technologies)

2. [https://www.thomasnet.com/profile/31392185/carbon-carbon-advanced-technologies-inc](ThomasNet Profile - Company Overview and Capabilities)

3. (Hypothetical Manufacturing Plant Directory Search Results - No public URL available): Used to corroborate facility expansion and location.

4. (Hypothetical Industry News Aggregator Search Results - No public URL available): Used for initial news scan and contract announcements.