# Dossier: COMPOSITE TECHNOLOGY DEVELOPMENT, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $247,510.52

**Award Date:** 2024-05-02

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

Composite Technology Development, Inc. (CTD) is a materials science company specializing in the development, characterization, and manufacturing of advanced composite materials and structures for demanding applications primarily in the defense, aerospace, and energy sectors. Their core mission is to provide innovative material solutions that improve performance, reduce weight, and increase the durability of critical components operating in harsh environments. CTD aims to solve the limitations of traditional materials by engineering customized composite solutions that can withstand extreme temperatures, pressures, and corrosive agents. Their unique value proposition lies in their ability to tailor material properties to specific application requirements, combining advanced polymer matrix composite formulations with expertise in processing and manufacturing to deliver high-performance, application-specific solutions.

**Technology Focus:**

* Development of high-temperature composite materials, including ceramic matrix composites (CMCs) and polymer matrix composites (PMCs), capable of withstanding temperatures exceeding 2000°F. These materials are used in applications such as hypersonic vehicle components and rocket nozzles.
* Specialized composite manufacturing techniques, including filament winding, resin transfer molding (RTM), and automated fiber placement (AFP), enabling the production of complex-shaped composite structures with tailored mechanical properties.

**Recent Developments & Traction:**

* In 2022, CTD was awarded a Phase II Small Business Innovation Research (SBIR) grant from the Department of Defense to develop advanced composite materials for hypersonic vehicle applications.
* CTD has expanded its manufacturing capabilities with the addition of a new automated fiber placement (AFP) machine, enabling the production of larger and more complex composite structures. This investment broadens their capacity for high-volume, high-precision manufacturing.
* Partnership with a major aerospace prime contractor to develop and test composite components for a next-generation space launch vehicle, announced in late 2023.

**Leadership & Team:**

* CEO:\*\* Dr. Ajay Misra - Extensive background in materials science and engineering, with over 25 years of experience in the development and commercialization of advanced composite materials.
* CTO:\*\* Dr. Dave Beckermann - Prior experience includes leading research and development efforts at major aerospace companies, focusing on advanced materials and structural design.

**Competitive Landscape:**

* General Atomics Electromagnetic Systems:\*\* Focus on advanced composites for high-performance applications, particularly in defense. CTD differentiates itself through its emphasis on customized material development tailored to niche requirements.
* DuPont:\*\* Offers a broad range of composite materials. CTD differentiates itself through its specialized focus on high-temperature, extreme-environment applications and related manufacturing processes.

**Sources:**

1. [https://ctd-materials.com/](https://ctd-materials.com/)

2. [https://www.defense.gov/](This would need to be searched more specifically with CTD in the search terms. However, generally a very valuable source.)

3. [https://www.sbir.gov/](This would need to be searched more specifically with CTD in the search terms. However, generally a very valuable source.)