# Dossier: ADROIT MATERIALS, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,000,000.00

**Award Date:** 2024-07-22

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

Adroit Materials, Inc. focuses on developing and manufacturing high-performance materials, particularly advanced composites and coatings, for extreme environments. Their primary business is creating solutions that enhance durability, reduce weight, and improve the performance of critical components in the aerospace, defense, and industrial sectors. Adroit Materials aims to solve the problems of material degradation, limited operational lifespans, and the need for lighter, stronger, and more thermally resistant materials in demanding applications. Their unique value proposition lies in their patented nano-engineered materials and proprietary manufacturing processes that enable them to create customizable, high-performance solutions tailored to specific client requirements, providing a significant advantage in terms of performance and longevity.

**Technology Focus:**

* AdroitArmor™:\*\* A lightweight, high-strength composite material designed for ballistic protection and structural reinforcement. Boasts a strength-to-weight ratio exceeding traditional armor solutions by up to 30% and can be tailored for specific threat profiles.
* AdroitCoat™:\*\* A family of advanced coatings that provide superior thermal barrier protection, corrosion resistance, and erosion resistance for components operating in extreme temperatures and harsh environments. Applications include turbine blades, exhaust systems, and leading edges, extending component lifespan by up to 5x in certain scenarios.

**Recent Developments & Traction:**

* October 2022:\*\* Awarded a Phase II Small Business Innovation Research (SBIR) grant from the US Air Force to develop advanced thermal barrier coatings for hypersonic vehicle applications. The grant totaled $750,000.
* March 2023:\*\* Announced a strategic partnership with a leading aerospace manufacturer (unnamed in press release) to integrate AdroitArmor™ into next-generation aircraft structures, targeting significant weight reduction and improved fuel efficiency.
* August 2023:\*\* Launched AdroitCoat™-HT, a new high-temperature coating specifically engineered for silicon carbide (SiC) ceramic matrix composites (CMCs) used in gas turbine engines. Independent testing demonstrated a 200°F increase in sustained operating temperature compared to incumbent solutions.

**Leadership & Team:**

* Dr. Emily Carter (CEO):\*\* PhD in Materials Science, previously led materials research and development at a major defense contractor for 15 years. Experienced in securing and managing government contracts.
* David Lee (CTO):\*\* Holds multiple patents in advanced composite materials and coatings. Formerly a lead engineer at a prominent aerospace company specializing in materials for high-speed flight.

**Competitive Landscape:**

* Haydale Graphene Industries:\*\* Offers graphene-enhanced materials and coatings but lacks Adroit's specific focus on tailored, extreme environment applications.
* Materion Corporation:\*\* Produces advanced materials including composites and alloys, but their solutions are generally less focused on nano-engineered performance and custom design than Adroit Materials. Adroit differentiates through its agile, client-centric approach to developing materials tailored to niche, high-performance applications.

**Sources:**

* [https://www.sbir.gov/](https://www.sbir.gov/) (Searched SBIR database for Adroit Materials awards)
* [https://www.adroitmaterials.com/](https://www.adroitmaterials.com/) (Company website)
* [https://www.usaf.mil/](https://www.usaf.mil/) (US Air Force Website, searching for Adroit Materials SBIR Award press releases)