# Dossier: TOUCHSTONE RESEARCH LABORATORY, LTD.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $179,999.00

**Award Date:** 2024-03-08

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Touchstone Research Laboratory, Ltd. is a materials science and engineering research and development company specializing in creating innovative solutions for challenging applications primarily within the aerospace, defense, and energy sectors. Their core mission is to develop and commercialize advanced materials and processes that improve performance, reduce costs, and enhance safety in critical systems. They focus on addressing problems related to high-temperature materials, lightweight structures, advanced coatings, and improved manufacturing processes. Their unique value proposition lies in their ability to rapidly transition research from the laboratory to prototype and, ultimately, to production-ready solutions by combining strong technical expertise with advanced characterization and testing capabilities. They emphasize practical applicability and scalable manufacturing of their solutions.

**Technology Focus:**

* Development and application of advanced high-temperature materials, including Ceramic Matrix Composites (CMCs) and Ultra-High Temperature Ceramics (UHTCs), with capabilities in material synthesis, processing, and performance testing up to 2200°C.
* Development of advanced coatings and surface treatments for protection against harsh environments, including thermal barrier coatings (TBCs), environmental barrier coatings (EBCs), and erosion/corrosion-resistant coatings.
* Innovative additive manufacturing (3D printing) processes for metals, ceramics, and composites, focusing on developing custom materials and manufacturing processes for complex geometries and high-performance applications.

**Recent Developments & Traction:**

* In 2022, Touchstone was awarded a Phase II Small Business Innovation Research (SBIR) grant from the Department of Defense (DoD) to develop novel ceramic matrix composite materials for hypersonic applications.
* In 2023, they announced a partnership with a major aerospace OEM to develop advanced thermal management solutions for next-generation aircraft engines. Specifics of the partner were not disclosed.
* Touchstone has actively presented research at leading materials science conferences, showcasing advancements in their high-temperature materials and additive manufacturing capabilities, increasing visibility and attracting potential clients.

**Leadership & Team:**

* Dr. Brian Joseph: President & CEO. Extensive background in materials science and engineering, including prior experience in developing and commercializing advanced materials for aerospace applications.
* Key Personnel: Information on other key personnel is not readily available in the public domain.

**Competitive Landscape:**

* Ultramet: Specializes in refractory materials and high-temperature solutions, particularly for aerospace applications. Touchstone differentiates itself with a broader range of materials, including CMCs and advanced coatings, and a stronger focus on additive manufacturing.
* General Electric Aviation: While a larger entity, GE Aviation competes in the high-temperature materials and coatings space for aerospace applications. Touchstone differentiates itself through agility, rapid prototyping capabilities, and a focus on specialized applications where larger companies may lack focus.

**Sources:**

1. [https://www.touchstoneresearch.com/](https://www.touchstoneresearch.com/) - Official company website.

2. [https://www.sbir.gov/](https://www.sbir.gov/) - SBIR database to search for awards received by the company. (Search for "Touchstone Research Laboratory")

3. [https://www.sam.gov/](https://www.sam.gov/) - System for Award Management for federal contract awards. (Search for "Touchstone Research Laboratory")