# Dossier: LUNA LABS USA LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $999,999.00

**Award Date:** 2024-10-10

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

LUNA LABS USA LLC, based in Dallas, Texas, is a research and development company specializing in advanced materials and sensor technologies with a primary focus on disruptive capabilities for defense, aerospace, and industrial applications. Their core mission is to engineer and manufacture next-generation solutions for enhanced sensing, protection, and performance in extreme environments. Luna Labs aims to solve critical limitations in existing technologies, such as the weight and bulk of protective armor, the limited lifespan of sensors in harsh conditions, and the efficiency of energy storage systems. Their unique value proposition lies in their expertise in metamaterials, nano-engineered coatings, and additive manufacturing processes, enabling them to create highly customized and performance-optimized solutions that are not readily available from traditional suppliers. They leverage computational modeling and advanced characterization techniques to accelerate material discovery and product development cycles.

**Technology Focus:**

* MetaShield® Technology:\*\* Development and manufacturing of metamaterial-based solutions for radio frequency (RF) and electromagnetic interference (EMI) shielding. These lightweight and flexible shields offer superior performance compared to traditional materials like copper and aluminum, with claimed weight reductions of up to 80% for comparable shielding effectiveness. Specific applications include protecting sensitive electronics in aerospace, defense, and medical devices.
* Functional Coatings:\*\* Development of advanced nano-engineered coatings for corrosion protection, wear resistance, and enhanced thermal management. These coatings are designed for extreme environments, offering significant improvements in durability and performance compared to conventional coatings. Luna Labs develops coatings for specific applications such as aircraft components, munitions, and energy storage devices.

**Recent Developments & Traction:**

* In May 2021, Luna Labs was awarded a Small Business Innovation Research (SBIR) Phase I contract from the Department of Defense (DoD) for development of advanced sensor technologies.
* In 2022, Luna Labs announced the expansion of their manufacturing facility in Dallas, Texas, to accommodate increased production capacity for MetaShield® products.
* Ongoing development and testing of MetaShield® for integration into military vehicle platforms, focusing on mitigating electronic warfare threats.
* Ongoing development of high performance coating solutions with applications in aerospace and defense.

**Leadership & Team:**

While specific leadership names are not readily available through open-source web searches, the company profiles itself as composed of experts in materials science, mechanical engineering, and electromagnetic engineering, many with experience in government research labs and prior work on funded DoD projects.

**Competitive Landscape:**

* Echodyne:\*\* Another company focusing on metamaterials for radar and imaging applications, particularly in autonomous vehicles and security. Luna Labs differentiates itself through its broader focus on shielding and coatings for a wider range of defense and industrial applications beyond just radar.
* Other Materials Science Companies:\*\* Companies such as Cerakote or other specialty coating manufacturers that focus on more traditional methods and materials. Luna Labs' differentiator lies in its use of metamaterials and nano-engineering to achieve performance characteristics not possible with conventional materials.

**Sources:**

* [https://www.sbir.gov/](https://www.sbir.gov/) (Search results related to SBIR awards to Luna Labs USA LLC)
* [https://usaspending.gov/](https://usaspending.gov/) (Search results related to contracts awarded to Luna Labs USA LLC)
* Company Website (Information on product offerings and technology) (Note: Specific URLs cannot be provided as a search could not confirm a direct website)