# Dossier: HT CrystalSolutions LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $179,965.00

**Award Date:** 2024-04-19

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

HT CrystalSolutions LLC is a US-based company specializing in the design, development, and manufacturing of high-temperature, high-performance single-crystal scintillators for demanding radiation detection applications. Their core mission centers on providing advanced crystal materials that enhance the sensitivity, resolution, and durability of radiation detection systems in harsh environments. They aim to solve the limitations of existing scintillator materials, such as poor performance at elevated temperatures, low light output, and susceptibility to radiation damage, thereby enabling more reliable and accurate detection in aerospace, defense, nuclear, and medical imaging applications. Their unique value proposition resides in their proprietary crystal growth techniques that produce single-crystal scintillators with superior performance characteristics compared to commercially available alternatives, especially concerning temperature stability and radiation hardness.

**Technology Focus:**

* Single-crystal scintillators grown using specialized techniques to achieve exceptional high-temperature performance (operational up to 200°C and beyond). These crystals exhibit high light output, fast decay times, and excellent energy resolution in harsh environments.
* Custom-designed scintillator arrays tailored to specific detector geometries and application requirements. They can provide both standard and custom sizes based on client needs, often including specialized dopants to enhance specific spectral sensitivities.

**Recent Developments & Traction:**

* In 2021, HT CrystalSolutions received a Phase II SBIR grant from the Department of Energy for the development of high-performance scintillators for nuclear security applications. (Source indicates continued government interest and funding).
* They secured multiple contracts in 2022-2023 (specific values not publicly available) to supply custom scintillator materials to leading aerospace and defense contractors, implying adoption and validation within the sector.

**Leadership & Team:**

Based on public information, the key leaders listed on their website include members with doctoral level backgrounds in material science and physics who are likely involved in the technology. However, precise roles like CEO, CTO, etc., are less clear without deeper research.

**Competitive Landscape:**

1. Saint-Gobain Crystals: Saint-Gobain is a dominant player in the scintillator market, offering a wide range of crystal materials. HT CrystalSolutions differentiates itself by focusing on niche high-temperature applications and custom solutions, whereas Saint-Gobain's strength is in mass production and broader market coverage.

**Sources:**

1. [http://www.htcrystalsolutions.com/](http://www.htcrystalsolutions.com/)

2. Accessed via third party site: [www.sbir.gov](http://www.sbir.gov) (search for 'HT CrystalSolutions') (Provides information on SBIR grants)