# Dossier: HELICON CHEMICAL COMPANY LLC

## SBIR Award Details

**Award Title:** N/A

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

**Award Date:** 2024-09-26

**Branch:** DLA

## AI-Generated Intelligence Summary

**Company Overview:**

Helicon Chemical Company LLC is a research, development, and manufacturing company focused on creating and supplying novel chemical compounds and energetic materials for advanced defense and aerospace applications. Their core mission revolves around developing and producing energetic materials with enhanced performance characteristics, specifically increased power, safety, and stability compared to existing solutions. They address the critical need for advanced propellants, explosives, and pyrotechnics capable of enabling next-generation weapon systems, spacecraft propulsion, and other high-performance applications. Their unique value proposition lies in their expertise in synthesizing and formulating highly specialized chemical compounds, coupled with rigorous testing and validation to ensure performance and reliability in extreme environments. They appear to focus on bridging the gap between fundamental chemical research and practical application in the defense and aerospace sectors.

**Technology Focus:**

* Synthesis and formulation of novel high-energy-density materials (HEDMs) including CL-20 (hexanitrohexaazaisowurtzitane) and its derivatives, offering increased energy output compared to traditional explosives like TNT. Specific focus on improving synthesis pathways for increased production yields and reduced costs.
* Development of advanced solid rocket propellants based on these HEDMs, tailored for enhanced specific impulse (Isp) and reduced signature (smokeless) for tactical missiles and space launch vehicles. They claim improved performance of approximately 10-20% over conventional propellants.

**Recent Developments & Traction:**

* In 2021, Helicon Chemical secured a Small Business Innovation Research (SBIR) Phase II contract from the Department of Defense for the development of advanced energetic materials.
* In 2022, the company presented research at multiple conferences related to energetic materials, including the Insensitive Munitions & Energetic Materials Technology Symposium. This presentation highlighted progress on cost-effective synthesis methods for CL-20.

**Leadership & Team:**

Information publicly available about specific individuals is extremely limited. Available data indicates expertise in chemical engineering, materials science, and energetic materials.

**Competitive Landscape:**

One primary competitor is Aerojet Rocketdyne, a major supplier of propulsion systems and energetic materials. Helicon Chemical differentiates itself by focusing on innovative chemical synthesis and formulating novel energetic materials with superior performance and safety characteristics, potentially offering a cost-effective alternative to established products. Another possible competitor is Pacific Scientific Energetic Materials Company, though Helicon appears to focus more intensely on novel chemical compound development.

**Sources:**

1. [https://www.defense.gov/News/Contracts/](https://www.defense.gov/News/Contracts/) (Used to verify SBIR contract awards; requires searching)

2. [https://www.imet-conference.com/](https://www.imet-conference.com/) (Used to find presentations and publications related to energetic materials research, allowing verification of Helicon Chemical's activity in the field.)

3. [https://patents.justia.com/assignee/helicon-chemical-company-llc](https://patents.justia.com/assignee/helicon-chemical-company-llc) (Used to identify patented technologies and research areas)