# Dossier: POLYMATERIALS APP, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,933,395.00

**Award Date:** 2023-08-25

**Branch:** MDA

## AI-Generated Intelligence Summary

**Company Overview:**

POLYMATERIALS APP, LLC, a Delaware limited liability company, appears to be focused on the development and commercialization of advanced polymer materials, likely with applications in defense, aerospace, and potentially other high-performance industries. Their core mission seems to revolve around creating materials with enhanced properties such as increased strength, reduced weight, and improved thermal resistance, potentially offering tailored solutions that improve the performance and longevity of critical components and systems. The company likely aims to solve problems related to the limitations of traditional materials in extreme environments, offering a unique value proposition of creating custom-designed, high-performance polymer solutions with enhanced capabilities for applications such as aerospace components, protective coatings, and advanced structural materials.

**Technology Focus:**

* Development of custom polymer formulations tailored to specific performance requirements (e.g., high-temperature resistance, extreme weather protection, and superior mechanical strength.)
* Research and application of advanced material synthesis techniques to produce polymers with novel properties, focusing on durability, weight reduction, and chemical resistance.

**Recent Developments & Traction:**

* In November 2023, the company received an Army Small Business Technology Transfer (STTR) Phase I award titled "Abrasion Resistant Coating for Helicopter Rotor Blades". This award suggests a focus on developing durable coatings specifically for military applications. (Source 3)
* The company received a previous STTR Phase I grant in March 2022 from the National Science Foundation (NSF) for "Novel Processing of UHMWPE Nanofibers for High-Performance Composite Materials." This indicates prior success in securing government funding for innovative materials research. (Source 5)

**Leadership & Team:**

While specific leadership details are limited to what can be reliably gathered online, co-founders Dr. Alex Velázquez and Dr. Daniel Rentsch are named as principal investigators in several of the linked grants. Dr. Velázquez has a background in materials science and engineering, evidenced by his involvement in academic research and funded projects. Dr. Rentsch also appears to be a leading researcher with a similar expertise.

**Competitive Landscape:**

Identifying precise competitors is challenging without insider knowledge, however companies like Cytec Solvay Group (focused on advanced materials) and some divisions within larger entities like 3M that work on specialized coatings and polymers could be considered competitors. PolyMaterials APP's key differentiator likely lies in its agility as a small, research-focused entity, allowing for rapid development and customization of materials to meet specific client needs, particularly for government/military applications.

**Sources:**

1. [Delaware Division of Corporations - Business Search](https://icis.corp.delaware.gov/Ecorp/EntitySearch/NameSearch.aspx) - Used for basic verification of company existence.

2. [USASpending.gov - Search for PolyMaterials APP, LLC](https://www.usaspending.gov/#/search?hash=f90131e115b24d73342d6114c8611a00) - provides some details of federal spending to or grants to the company.

3. [SBIR.gov STTR Search](https://www.sbir.gov/sbirsearch/detail/2324119) - Description of Army STTR grant for Abrasion Resistant Helicopter Blade Coating

4. [NSF Award Search for Alex Velázquez](https://www.nsf.gov/awardsearch/advancedSearchResult?PIFirstName=Alex&PILastName=Velazquez&ActiveAwards=true&BooleanElement=ShowAll&AwardSort=Date&AwardOrder=Desc) - Demonstrates research record of Alex Velázquez and related grant activity

5. [NSF Award Abstract for Phase I SBIR Grant](https://www.nsf.gov/awardsearch/showAward?AWD\_ID=2146608&HistoricalAwards=false) - Abstract of NSF STTR Phase I Grant.