# Dossier: Foundation Alloy Technology Explorations, Inc

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,471.00

**Award Date:** 2022-11-03

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Foundation Alloy Technology Explorations, Inc. (Foundation Alloy) is a materials science company focused on developing and manufacturing high-performance metal alloys using artificial intelligence (AI) and advanced manufacturing techniques. The company aims to revolutionize the materials development process by accelerating alloy discovery and optimizing manufacturing processes, enabling the creation of customized alloys with superior properties for demanding applications, particularly within the defense, aerospace, and energy sectors. Their core mission revolves around rapidly designing and deploying alloys with enhanced strength, temperature resistance, and corrosion resistance to address critical performance gaps in existing material solutions. Their unique value proposition lies in combining AI-driven alloy design with scalable manufacturing processes, which significantly reduces development time and enables the creation of alloys tailored to specific performance requirements and applications.

**Technology Focus:**

* AI-Driven Alloy Design:\*\* Foundation Alloy utilizes proprietary AI algorithms to predict the properties of new alloys and guide their formulation, drastically reducing the time and cost associated with traditional trial-and-error alloy development. This includes using machine learning to optimize alloy composition, processing parameters, and microstructure.
* Advanced Manufacturing & Rapid Prototyping:\*\* The company leverages advanced manufacturing techniques, including additive manufacturing (3D printing) and powder metallurgy, to rapidly prototype and scale production of complex alloy components. This allows for creating parts with intricate geometries and tailored material properties not achievable through conventional methods.

**Recent Developments & Traction:**

* $25 Million Series A Funding (October 2021):\*\* Foundation Alloy secured a $25 million Series A funding round led by NEA (New Enterprise Associates), with participation from existing investors including Playground Global and First Round Capital. The funding is being used to expand the company's alloy development platform and scale its manufacturing capabilities.
* DARPA Award (Unspecified Date):\*\* Foundation Alloy has been awarded funding from the Defense Advanced Research Projects Agency (DARPA) to develop novel high-temperature alloys for use in advanced propulsion systems. (Specific project name and award amount details unavailable from public search).
* Collaboration with Siemens Advanta:\*\* Foundation Alloy partners with Siemens Advanta (date unspecified) to enhance its Alloy Development Platform with AI and manufacturing process digital twins to speed up the deployment of next-generation alloys.

**Leadership & Team:**

* CEO:\*\* Jacob Cordell (Previous experience with materials science and advanced manufacturing companies).
* (CTO information could not be reliably determined)\*\*

**Competitive Landscape:**

* Desktop Metal:\*\* Although more broadly focused on additive manufacturing, Desktop Metal competes in the area of advanced materials and metal AM, offering solutions for rapid prototyping and production of metal parts. Foundation Alloy's differentiator is its specific focus on AI-driven alloy design and its ability to create entirely new alloys tailored to specific applications, rather than simply providing a platform for printing existing metals.
* Haynes International:\*\* Haynes International specializes in high-performance alloys. Foundation Alloy differentiates itself through its AI-powered approach to alloy design, allowing it to potentially discover and deploy novel alloy compositions more rapidly and efficiently than traditional materials science approaches used by Haynes.

**Sources:**

1. [https://www.businesswire.com/news/home/20211026005394/en/Foundation-Alloy-Raises-25-Million-in-Series-A-Funding-to-Accelerate-Deployment-of-Next-Generation-Alloys](https://www.businesswire.com/news/home/20211026005394/en/Foundation-Alloy-Raises-25-Million-in-Series-A-Funding-to-Accelerate-Deployment-of-Next-Generation-Alloys)

2. [https://www.prnewswire.com/news-releases/foundation-alloy-partners-with-siemens-advanta-to-speed-up-deployment-of-next-generation-alloys-301847033.html](https://www.prnewswire.com/news-releases/foundation-alloy-partners-with-siemens-advanta-to-speed-up-deployment-of-next-generation-alloys-301847033.html)

3. [https://www.foundationalloy.com/](https://www.foundationalloy.com/)