# Dossier: IBC MATERIALS AND TECHNOLOGIES, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $99,925.00

**Award Date:** 2024-08-07

**Branch:** DLA

## AI-Generated Intelligence Summary

**Company Overview:**

IBC Materials and Technologies, LLC (IBCMT) is a specialty materials company focused on the development, manufacturing, and commercialization of advanced materials, particularly Beryllium Oxide (BeO) and Copper-Beryllium Oxide (CuBeO) composites, for high-performance thermal management and structural applications in demanding sectors such as defense, aerospace, microelectronics, and high-energy physics. Their core mission revolves around enabling higher power, smaller size, and more robust performance in critical systems by addressing the challenges associated with heat dissipation and structural integrity in extreme environments. IBCMT's unique value proposition lies in its ability to produce high-quality, custom-engineered BeO and CuBeO materials with superior thermal conductivity, mechanical strength, and electrical insulation properties compared to conventional materials, enabling significant performance gains for its customers' products.

**Technology Focus:**

* Beryllium Oxide (BeO) Ceramics: IBCMT produces high-purity BeO ceramics known for their exceptional thermal conductivity (up to 300 W/m·K), enabling efficient heat dissipation in high-power electronics and other applications. They offer various grades tailored to specific thermal, mechanical, and electrical requirements.
* Copper-Beryllium Oxide (CuBeO) Composites: IBCMT offers CuBeO composites that combine the thermal performance of BeO with the mechanical properties of copper. These composites are designed for applications requiring both efficient heat spreading and structural support, achieving thermal conductivity in the range of 200-250 W/m·K depending on composition.
* Metal Matrix Composites: Using powder metallurgy methods, IBCMT fabricates advanced materials and components that are tailored to application needs.

**Recent Developments & Traction:**

* May 2023:\*\* IBC Materials and Technologies Awarded $1 Million from U.S. Department of Energy. Funding will be used to develop an environmentally responsible extraction process for beryllium.
* February 2023:\*\* IBC Materials & Technologies, LLC was featured in the February 2023 issue of Metal Powder Report (MPR), discussing the capabilities and history of the company.
* January 2022:\*\* IBC announced its new CEO, Ray Benza. Benza, an experienced business executive, assumed responsibility for the company's strategic direction and operations.
* November 2021:\*\* IBC Materials and Technologies received a contract from the U.S. Army to supply Beryllium Oxide (BeO) components for advanced electronic systems. The specific value and details of the contract were not publicly disclosed.

**Leadership & Team:**

* Ray Benza, CEO: An experienced business executive.
* The company has a technical team with expertise in materials science, ceramic engineering, and powder metallurgy.

**Competitive Landscape:**

* Materion Corporation: A key competitor in advanced materials, including BeO. IBCMT differentiates itself through its focus on custom-engineered solutions and potentially more agile response to specific customer requirements.
* CoorsTek: A global ceramics manufacturer that offers a wide range of advanced ceramic materials, including some with thermal management properties. IBCMT's focus on BeO and CuBeO gives them a specialized expertise in these specific materials.

**Sources:**

1. [https://www.ibcadvancedalloys.com/news/ibc-materials-and-technologies-awarded-1-million-from-u-s-department-of-energy](https://www.ibcadvancedalloys.com/news/ibc-materials-and-technologies-awarded-1-million-from-u-s-department-of-energy)

2. [https://www.linkedin.com/posts/ibc-materials-technologies\_in-the-news-ibc-materials-technologies-llc-activity-7030573354499581953-7nQh?utm\_source=share&utm\_medium=member\_desktop](https://www.linkedin.com/posts/ibc-materials-technologies\_in-the-news-ibc-materials-technologies-llc-activity-7030573354499581953-7nQh?utm\_source=share&utm\_medium=member\_desktop)

3. [https://www.ibcadvancedalloys.com/ibc-materials-and-technologies-llc](https://www.ibcadvancedalloys.com/ibc-materials-and-technologies-llc)

4. [https://www.powder metallurgy review.com/ibc-materials-technologies-llc-beryllium-oxide-purity/](https://www.powder metallurgy review.com/ibc-materials-technologies-llc-beryllium-oxide-purity/)