

# Ceramic Matrix Composites and Carbon Matrix Composites: Technologies and Global Markets

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## Abstracts

Report Scope:

This report provides an updated review of CMC and CAMC technology, including materials and production processes, and identifies current and emerging applications for this technology.

BCC Research delineates the current market status for CMC-and CAMC-based products, defines trends and presents growth forecasts through 2027. The CMC and CAMC market is analyzed based on matrix material, application and region. Technological issues, including key events and the latest process developments, are also discussed.

The market analysis conducted by BCC Research for this report is divided into four sections.

First section: This provides an introduction to the topic and a historical review of CMC and CAMC technology, including an outline of recent events. Current and emerging applications for ceramic and carbon matrix composites are also identified and grouped into segments (i.e., aerospace and defense, electronics, energy and environmental, mechanical and chemical, medical and dental, sensors and instrumentation, transportation, others).

Second section: This provides a technological review of ceramic and carbon matrix composites. It offers a revised and detailed description of various types of ceramic composites, new and emerging materials for CMC and CAMC primary and secondary phases and typical fabrication methods and innovative

processes for ceramic and carbon matrix composites. It concludes with an analysis of the most important technological developments since 2013, including examples of recently issued or applied for patents, and highlights the most active research organizations operating in this field.

Third section: This entails the analysis of current CMC and CAMC revenue, followed by a detailed presentation of market growth trends, based on industry growth, technological trends and regional trends. It concludes by providing projected revenues for ceramic and carbon matrix composites within each segment, along with forecast compound annual growth rates (CAGRs) for the period from 2022 through 2027.

Fourth section: This covers the global industry structure. The report offers a list of the leading suppliers of ceramic and carbon matrix composites, along with descriptions of their products. The analysis includes a description of the geographical distribution of these firms and an evaluation of other key industry players. Detailed company profiles of the top players are also provided.

#### Report Includes:

95 data tables and 48 additional tables

An up-to-date review of the global markets for ceramic matrix composites (CMCs) and carbon matrix composites (CAMCs)

Analyses of the global market trends, with revenue/sales data for 2021, estimates for 2022, and projections of compound annual growth rates (CAGRs) through 2027

Highlights of the new technological developments in the fabrication of ceramic and carbon matrix composites, while outlining technical issues

Evaluation and forecast the actual market size for CMCs and CAMCs, projected growth trends, and corresponding market share analysis by matrix type, application, reinforcement type, and region

Review of existing fields of application for CMCs and CAMCs and investigate emerging applications

Technology assessment of the key drivers, restraints and opportunities that will shape the market over the next five years (2022 to 2027)

In-depth information on R&D investment, key technology issues, industry specific challenges, major types of end-user markets, and COVID-19 implications on the progress of this market

Assessment of patent grants for innovations in CMC and CAMC materials, fabrication methods, and applications across each major category

Descriptive company profiles of the leading global players, including 3M, Hitachi Chemical, Morgan Advanced Materials Plc, Kyocera Group, Saint-Gobain, Sumitomo Electric (SEI), and Ube Industries Ltd.

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