

Big Science: Global Markets

https://marketpublishers.com/r/BA4AD51E5BB9EN.html Date: April 2021 Pages: 108 Price: US\$ 2,750.00 (Single User License) ID: BA4AD51E5BB9EN

Abstracts

Report Scope:

The report covers the following materials and technologies used in big science projects

Fusion power.

Generation IV reactor.

Quantum computing.

DNA sequencing.

Fuel cell.

Shape memory alloys.

Cryogenic-treated metals and alloys.

Metal foams.

Single crystals, glass and transparent ceramics.

Superplastic alloys.

Elastomers.

Hypereutectic alloys.



Magnetorheological fluids.

Report Includes:

72 tables

An overview of the global market for big science

Estimation of the market size and analyses of global market trends, with data from 2019, 2020, and projections of compound annual growth rates (CAGRs) through 2025

Highlights of the new technological developments and discussion on advanced materials used for big science projects such as metals and alloys, polymers and transparent materials

Identification of market drivers, restraints and other forces impacting the global market and description of regulatory and environmental developments

Analysis of important big science projects including international thermonuclear experimental reactor (ITER), and magnetic confinement fusion (MCF) project

Details of major advances in technologies and products, ongoing activities and information on organizations and contractors of big science industry

Comprehensive profiles of major organizations and contractors of the industry



Contents

CHAPTER 1 INTRODUCTION

Study Goals and Objectives Reasons for Doing This Study Scope of Report Information Sources Methodology Geographic Breakdown Analyst's Credentials BCC Custom Research Related BCC Research Reports

CHAPTER 2 SUMMARY AND HIGHLIGHTS

Summary Highlights

CHAPTER 3 OVERVIEW

Industry Structure Opportunities Challenges and Risks Public Trust Enormous Investment Management Tasks Procurement Procedures

CHAPTER 4 GLOBAL MARKET FOR BIG SCIENCE

Aerospace Artemis Program Chang'e Project Energy Generation IV Reactors Nuclear Fusion Physics and Astronomy Facility for Antiproton and Ion Research

Big Science: Global Markets



International Linear Collider Circular Electron Positron Collider Square Kilometre Array European Spallation Source Extremely Large Telescope (ELT) Other Industries

CHAPTER 5 GLOBAL MARKET FOR ADVANCED MATERIALS FOR BIG SCIENCE PROJECTS

Metals and Alloys in Big Science Cryogenic Treated Metals and Alloys Fuel Pellet Materials for Generation IV Reactors Metal Foam Reduced-Activation Ferritic/Martensitic Steel Shape Memory Alloys Superconductor and Superconducting Magnets Superplastic Alloys Tungsten-Based (W-Based) Materials Polymers **Engineered Plastics** Elastomers **Transparent Polymers High-Performance Polymer Films Transparent Materials Transparent Ceramics Neodymium Glass Fused Silica** Potassium Dihydrogen Phosphate (KDP) Crystal and Potassium Dideuterium Phosphate (DKDP) Crystal

CHAPTER 6 BIG SCIENCE ORGANIZATIONS

CHAPTER 7 BIG SCIENCE CONTRACTORS

CHAPTER 8 APPENDIX: ABBREVIATIONS AND ACRONYMS



List Of Tables

LIST OF TABLES

Summary Table: Global Market for Big Science and Advanced Materials, Through 2025 Table 1: Global Market for Big Science, by Sector, Through 2025 Table 2: Global Market Shares for Big Science, by Sector, 2019 Table 3: Global Market for Big Science, by Region, Through 2025 Table 4: Global Market for Big Science Aerospace Projects, Through 2025 Table 5: Global Market for Big Science Aerospace Projects, by Region, Through 2025 Table 6: Global Market for Big Science Energy Projects, by Energy Type, Through 2025 Table 7: Global Market for Big Science Energy Projects, by Region, Through 2025 Table 8: Global Market for Gen IV Projects, by Reactor Type, Through 2025 Table 9: Global Market for Nuclear Fusion, by Project, Through 2025 Table 10: Global Market for Big Science Projects for Physics and Astronomy, by Region, Through 2025 Table 11: Global Market for Big Science Projects for Other Industries, by Region, Through 2025 Table 12: Key Big Science Genome Projects Table 13: Global Market for DNA Sequencing Services, by End Use, Through 2025 Table 14: Sequencing Technology Development, 1990-2020+ Table 15: Single Human Genome Sequencing Cost, 2001-2019 Table 16: Global Market for Big Science, by Material Type, Through 2025 Table 17: Global Market Share for Big Science, by Material Type, 2020 Table 18: Global Market for Cryogenic Metals and Alloys for Big Science, Through 2025 Table 19: Global Market for Cryogenic Treated Metals and Alloys, Through 2025 Table 20: Global Market for Cryogenic Treatment Services, by Application, Through 2025 Table 21: Global Market for Cryogenic Treatment Services, by Material Type, Through 2025 Table 22: Global Market for Cryogenic Treatment Services, by Material, Through 2025 Table 23: Global Market for Cryogenic Treatment Equipment and Services, Through 2025 Table 24: Fuel Pellet Materials for Gen IV Reactors Table 25: Global Market for Uranium, through 2050 Table 26: Global Market for Metal Foam and Big Science, Through 2025 Table 27: Global Market for Metal Foams, by Material, Through 2025 Table 28: Global Market for Metal Foams, by Application, Through 2025 Table 29: Global Market for Metal Foams, by End Use, Through 2025



Table 30: Global Market for AHSS in Big Science, Through 2025 Table 31: Global Market for AHSS, by Product, Through 2025 Table 32: Global Market for Steel Used in Gen IV Projects, 2018-2050 Table 33: Global Market for Superplastic Alloys and Big Science, Through 2025 Table 34: Global Market for Shape Memory Alloys, by Material, Through 2025 Table 35: Global Market for Shape Memory Alloys, by End Use, Through 2025 Table 36: Global Market for Superconductors and Big Science, Through 2025 Table 37: Global Market for Superconductors, by Product, Through 2025 Table 38: Global Market for Superplastic Alloys and Big Science, Through 2025 Table 39: Global Markets for Superplastic Alloys and Parts, Through 2025 Table 40: Global Market for Superplastic Alloys, by Substrate Material, Through 2025 Table 41: Global Market for Superplastic-Alloy Parts, by Alloy Type, Through 2025 Table 42: Global Market for Superplastic Alloys, by End Use, Through 2025 Table 43: Global Market for Superplastic-Alloy Parts, by End Use, Through 2025 Table 44: Global Market for Superplastic Alloys, by Mechanism, Through 2025 Table 45: Global Market for Superplastic-Alloy Parts, by Mechanism, Through 2025 Table 46: Global Market for Superplastic Alloys, by Forming Method, Through 2025 Table 47: Global Market for Superplastic-Alloy Parts, by Forming Method, Through 2025 Table 48: Global Market for Tungsten Materials and Big Science, Through 2025 Table 49: Global Market for Tungsten Materials, by Product, Through 2025 Table 50: Global Market for Polymers for Big Science, by Product, Through 2025 Table 51: Global Market for Engineered Plastics, Through 2025 Table 52: Global Market for Elastomers, Through 2025 Table 53: Global Market for Elastomers, by Material Type, Through 2025 Table 54: Thermoset Elastomer Characteristics and Performance Table 55: Global Market Volume for Virgin Synthetic Rubber, by Product, Through 2025 Table 56: Global Market Volume for Ethylene Propylene Rubber Consumption, by Product, Through 2025 Table 57: Global Market for Rigid Transparent Plastics, Through 2025 Table 58: Global Market for Rigid Transparent Plastics, by Product, Through 2025 Table 59: Global Market for Polycarbonate, by Processing Method, Through 2025 Table 60: Global Market for Polymethyl Methacrylate, by Processing Method, Through 2025 Table 61: Global Market for High-Performance Films, Through 2025 Table 62: Global Market for High-Performance Films, by Material Type, Through 2025 Table 63: Global Market for Transparent Materials, Through 2025 Table 64: Properties of Transparent Ceramics, Transparent Glass-Ceramics and Glass Typical RIT Values for Common Transparent Ceramics

 Table 65: Global Market for Transparent Ceramics, by Application, Through 2025



Table 66: Global Market for Transparent Ceramics, by Material Type, Through 2025 Table 67: Global Market for Oxide Transparent Ceramics, by Material Type, Through 2025

 Table 68: Typical RIT Values for Common Transparent Ceramics

Table 69: Global Market for Neodymium-Doped Phosphate Glass, by Application, Through 2025

Table 70: Global Market for Fused Silica, by Application, Through 2025

Table 71: Abbreviations and Acronyms



List Of Figures

LIST OF FIGURES

Summary Figure: Global Market for Big Science and Advanced Materials, 2019-2025

Figure 1: Global Market for Big Science, by Sector, 2019-2025

Figure 2: Global Market Shares for Big Science, by Sector, 2019

Figure 3: Gen IV Reactor Roadmap, 2000-2035

Figure 4: Global Market for Big Science, by Material Type, 2019-2025

Figure 5: Global Market Share for Big Science, by Material Type, 2020



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