

Fullerene Market Report by Product (C60, C70, C76, and Others), Shape (Bucky Balls, Nanotubes (Single-Wall and Multiple-Wall), Nano-Rods), Production Method (CVD/CCVD Process, Arc Discharge Method, Laser Ablation of Graphite, and Others), End Use Industry (Electrical and Electronics, Pharmaceuticals, Medical, Aerospace and Defense, Energy, and Others), and Region 2024-2032

<https://marketpublishers.com/r/FAF24FC506CAEN.html>

Date: August 2024

Pages: 136

Price: US\$ 3,509.00 (Single User License)

ID: FAF24FC506CAEN

Abstracts

The global fullerene market size reached US\$ 489.5 Million in 2023. Looking forward, IMARC Group expects the market to reach US\$ 773.9 Million by 2032, exhibiting a growth rate (CAGR) of 5.1% during 2024-2032.

Fullerenes are a class of carbon allotropes that have a hollow core and can have a varying molecular structure, resembling a cylindrical tube, sphere or cube through their bonds. They are commonly utilized in the production of polymer electronics, antioxidants, biocatalysts, skin creams and biopharmaceuticals. Some fullerenes also have anti-viral properties that suppress the replication of Human Immunodeficiency Virus (HIV) and delay the onset of diseases such as AIDS. In photodynamic therapy, they are used as a non-toxic and light-sensitive compound that can specifically target malignant or altered cells.

Healthcare and cosmetics are among the key industries driving the growth of the fullerene market. There is a growing demand for spherical shaped and water-soluble derivatives of fullerenes in these sectors. Fullerenes are added to cosmetic products to prevent skin damage, premature aging and rashes caused by exposure to artificial

chemicals. In the healthcare and pharmaceutical sectors, the rising application of cancer imaging and therapy procedures is driving the demand for fullerenes. The distinct carbon structure of their polymers is proven to have extensive remedial properties in cancer treatment as well as for various other critical ailments. Additionally, the increasing adoption of solar energy systems is further boosting the market growth. Fullerenes and their derivatives can be used in organic photovoltaic (PV) cells as they act as electron acceptors and donor materials. Moreover, extensive applications across the electronics, automotive, aerospace and defense sectors, where fullerenes are used as an alternative to steel, are expected to drive the market further.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the global fullerene market report, along with forecasts at the global, regional and country levels from 2024-2032. Our report has categorized the market based on product, shape, production method and end use industry.

Breakup by Product:

C60

C70

C76

Others

Breakup by Shape:

Bucky Balls

Nanotubes (Single-Wall and Multiple-Wall)

Nano-Rods

Breakup by Production Method:

CVD/CCVD Process

Arc Discharge Method

Laser Ablation of Graphite

Others

Breakup by End Use Industry:

Electrical and Electronics

Pharmaceuticals

Medical

Aerospace and Defense

Energy

Others

Breakup by Region:

North America

United States

Canada

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined with some of the key

Fullerene Market Report by Product (C60, C70, C76, and Others), Shape (Bucky Balls, Nanotubes (Single-Wall and...

players being ApNano Materials Inc. (Nanotech Industrial Solutions), BuckyUSA, IoLiTec - Ionic Liquid Technologies GmbH, Mitsubishi Chemical Holdings, MTR Ltd., Nano-C, SES Research Inc. and TermUSA.

Key Questions Answered in This Report:

How has the global fullerene market performed so far and how will it perform in the coming years?

What has been the impact of COVID-19 on the global fullerene market?

What are the key regional markets?

What is the breakup of the market based on the product?

What is the breakup of the market based on the shape?

What is the breakup of the market based on the production method?

What is the breakup of the market based on the end use industry?

What are the various stages in the value chain of the industry?

What are the key driving factors and challenges in the industry?

What is the structure of the global fullerene market and who are the key players?

What is the degree of competition in the industry?

Contents

1 PREFACE

2 SCOPE AND METHODOLOGY

- 2.1 Objectives of the Study
- 2.2 Stakeholders
- 2.3 Data Sources
 - 2.3.1 Primary Sources
 - 2.3.2 Secondary Sources
- 2.4 Market Estimation
 - 2.4.1 Bottom-Up Approach
 - 2.4.2 Top-Down Approach
- 2.5 Forecasting Methodology

3 EXECUTIVE SUMMARY

4 INTRODUCTION

- 4.1 Overview
- 4.2 Key Industry Trends

5 GLOBAL FULLERENE MARKET

- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact of COVID-19
- 5.4 Market Forecast

6 MARKET BREAKUP BY PRODUCT

- 6.1 C60
 - 6.1.1 Market Trends
 - 6.1.2 Market Forecast
- 6.2 C70
 - 6.2.1 Market Trends
 - 6.2.2 Market Forecast
- 6.3 C76

- 6.3.1 Market Trends
- 6.3.2 Market Forecast
- 6.4 Others
 - 6.4.1 Market Trends
 - 6.4.2 Market Forecast

7 MARKET BREAKUP BY SHAPE

- 7.1 Bucky Balls
 - 7.1.1 Market Trends
 - 7.1.2 Market Forecast
- 7.2 Nanotubes (Single-Wall and Multiple-Wall)
 - 7.2.1 Market Trends
 - 7.2.2 Market Forecast
- 7.3 Nano-Rods
 - 7.3.1 Market Trends
 - 7.3.2 Market Forecast

8 MARKET BREAKUP BY PRODUCTION METHOD

- 8.1 CVD/CCVD Process
 - 8.1.1 Market Trends
 - 8.1.2 Market Forecast
- 8.2 Arc Discharge Method
 - 8.2.1 Market Trends
 - 8.2.2 Market Forecast
- 8.3 Laser Ablation of Graphite
 - 8.3.1 Market Trends
 - 8.3.2 Market Forecast
- 8.4 Others
 - 8.4.1 Market Trends
 - 8.4.2 Market Forecast

9 MARKET BREAKUP BY END USE INDUSTRY

- 9.1 Electrical and Electronics
 - 9.1.1 Market Trends
 - 9.1.2 Market Forecast
- 9.2 Pharmaceuticals

- 9.2.1 Market Trends
- 9.2.2 Market Forecast
- 9.3 Medical
 - 9.3.1 Market Trends
 - 9.3.2 Market Forecast
- 9.4 Aerospace and Defense
 - 9.4.1 Market Trends
 - 9.4.2 Market Forecast
- 9.5 Energy
 - 9.5.1 Market Trends
 - 9.5.2 Market Forecast
- 9.6 Others
 - 9.6.1 Market Trends
 - 9.6.2 Market Forecast

10 MARKET BREAKUP BY REGION

- 10.1 North America
 - 10.1.1 United States
 - 10.1.1.1 Market Trends
 - 10.1.1.2 Market Forecast
 - 10.1.2 Canada
 - 10.1.2.1 Market Trends
 - 10.1.2.2 Market Forecast
- 10.2 Asia Pacific
 - 10.2.1 China
 - 10.2.1.1 Market Trends
 - 10.2.1.2 Market Forecast
 - 10.2.2 Japan
 - 10.2.2.1 Market Trends
 - 10.2.2.2 Market Forecast
 - 10.2.3 India
 - 10.2.3.1 Market Trends
 - 10.2.3.2 Market Forecast
 - 10.2.4 South Korea
 - 10.2.4.1 Market Trends
 - 10.2.4.2 Market Forecast
 - 10.2.5 Australia
 - 10.2.5.1 Market Trends

- 10.2.5.2 Market Forecast
- 10.2.6 Indonesia
 - 10.2.6.1 Market Trends
 - 10.2.6.2 Market Forecast
- 10.2.7 Others
 - 10.2.7.1 Market Trends
 - 10.2.7.2 Market Forecast
- 10.3 Europe
 - 10.3.1 Germany
 - 10.3.1.1 Market Trends
 - 10.3.1.2 Market Forecast
 - 10.3.2 France
 - 10.3.2.1 Market Trends
 - 10.3.2.2 Market Forecast
 - 10.3.3 United Kingdom
 - 10.3.3.1 Market Trends
 - 10.3.3.2 Market Forecast
 - 10.3.4 Italy
 - 10.3.4.1 Market Trends
 - 10.3.4.2 Market Forecast
 - 10.3.5 Spain
 - 10.3.5.1 Market Trends
 - 10.3.5.2 Market Forecast
 - 10.3.6 Russia
 - 10.3.6.1 Market Trends
 - 10.3.6.2 Market Forecast
 - 10.3.7 Others
 - 10.3.7.1 Market Trends
 - 10.3.7.2 Market Forecast
- 10.4 Latin America
 - 10.4.1 Brazil
 - 10.4.1.1 Market Trends
 - 10.4.1.2 Market Forecast
 - 10.4.2 Mexico
 - 10.4.2.1 Market Trends
 - 10.4.2.2 Market Forecast
 - 10.4.3 Others
 - 10.4.3.1 Market Trends
 - 10.4.3.2 Market Forecast

10.5 Middle East and Africa

10.5.1 Market Trends

10.5.2 Market Breakup by Country

10.5.3 Market Forecast

11 SWOT ANALYSIS

11.1 Overview

11.2 Strengths

11.3 Weaknesses

11.4 Opportunities

11.5 Threats

12 VALUE CHAIN ANALYSIS

13 PORTERS FIVE FORCES ANALYSIS

13.1 Overview

13.2 Bargaining Power of Buyers

13.3 Bargaining Power of Suppliers

13.4 Degree of Competition

13.5 Threat of New Entrants

13.6 Threat of Substitutes

14 PRICE ANALYSIS

15 COMPETITIVE LANDSCAPE

15.1 Market Structure

15.2 Key Players

15.3 Profiles of Key Players

15.3.1 ApNano Materials Inc. (Nanotech Industrial Solutions)

15.3.1.1 Company Overview

15.3.1.2 Product Portfolio

15.3.2 BuckyUSA

15.3.2.1 Company Overview

15.3.2.2 Product Portfolio

15.3.3 IoLiTec - Ionic Liquid Technologies GmbH

15.3.3.1 Company Overview

- 15.3.3.2 Product Portfolio
- 15.3.4 Mitsubishi Chemical Holdings
 - 15.3.4.1 Company Overview
 - 15.3.4.2 Product Portfolio
 - 15.3.4.3 Financials
 - 15.3.4.4 SWOT Analysis
- 15.3.5 MTR Ltd.
 - 15.3.5.1 Company Overview
 - 15.3.5.2 Product Portfolio
- 15.3.6 Nano-C
 - 15.3.6.1 Company Overview
 - 15.3.6.2 Product Portfolio
- 15.3.7 SES Research Inc.
 - 15.3.7.1 Company Overview
 - 15.3.7.2 Product Portfolio
- 15.3.8 TermUSA
 - 15.3.8.1 Company Overview
 - 15.3.8.2 Product Portfolio

List Of Tables

LIST OF TABLES

Table 1: Global: Fullerene Market: Key Industry Highlights, 2023 and 2032

Table 2: Global: Fullerene Market Forecast: Breakup by Product (in Million US\$), 2024-2032

Table 3: Global: Fullerene Market Forecast: Breakup by Shape (in Million US\$), 2024-2032

Table 4: Global: Fullerene Market Forecast: Breakup by Production Method (in Million US\$), 2024-2032

Table 5: Global: Fullerene Market Forecast: Breakup by End Use Industry (in Million US\$), 2024-2032

Table 6: Global: Fullerene Market Forecast: Breakup by Region (in Million US\$), 2024-2032

Table 7: Global: Fullerene Market: Competitive Structure

Table 8: Global: Fullerene Market: Key Players

List Of Figures

LIST OF FIGURES

- Figure 1: Global: Fullerene Market: Major Drivers and Challenges
- Figure 2: Global: Fullerene Market: Sales Value (in Million US\$), 2018-2023
- Figure 3: Global: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 4: Global: Fullerene Market: Breakup by Product (in %), 2023
- Figure 5: Global: Fullerene Market: Breakup by Shape (in %), 2023
- Figure 6: Global: Fullerene Market: Breakup by Production Method (in %), 2023
- Figure 7: Global: Fullerene Market: Breakup by End Use Industry (in %), 2023
- Figure 8: Global: Fullerene Market: Breakup by Region (in %), 2023
- Figure 9: Global: Fullerene (C60) Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 10: Global: Fullerene (C60) Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 11: Global: Fullerene (C70) Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 12: Global: Fullerene (C70) Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 13: Global: Fullerene (C76) Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 14: Global: Fullerene (C76) Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 15: Global: Fullerene (Other Product Types) Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 16: Global: Fullerene (Other Product Types) Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 17: Global: Fullerene (Bucky Balls) Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 18: Global: Fullerene (Bucky Balls) Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 19: Global: Fullerene (Nanotubes- Single-Wall and Multiple-Wall) Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 20: Global: Fullerene (Nanotubes- Single-Wall and Multiple-Wall) Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 21: Global: Fullerene (Nano-Rods) Market: Sales Value (in Million US\$), 2018 & 2023
- Figure 22: Global: Fullerene (Nano-Rods) Market Forecast: Sales Value (in Million US\$), 2024-2032
- Figure 23: Global: Fullerene (CVD/CCVD Process) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 24: Global: Fullerene (CVD/CCVD Process) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 25: Global: Fullerene (Arc Discharge Method) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 26: Global: Fullerene (Arc Discharge Method) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 27: Global: Fullerene (Laser Ablation of Graphite) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 28: Global: Fullerene (Laser Ablation of Graphite) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 29: Global: Fullerene (Others) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 30: Global: Fullerene (Others) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 31: Global: Fullerene (Electrical and Electronics) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 32: Global: Fullerene (Electrical and Electronics) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 33: Global: Fullerene (Pharmaceuticals) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 34: Global: Fullerene (Pharmaceuticals) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 35: Global: Fullerene (Medical) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 36: Global: Fullerene (Medical) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 37: Global: Fullerene (Aerospace and Defense) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 38: Global: Fullerene (Aerospace and Defense) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 39: Global: Fullerene (Energy) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 40: Global: Fullerene (Energy) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 41: Global: Fullerene (Other End Use Industries) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 42: Global: Fullerene (Other End Use Industries) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 43: North America: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 44: North America: Fullerene Market Forecast: Sales Value (in Million US\$),

2024-2032

Figure 45: United States: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 46: United States: Fullerene Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 47: Canada: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 48: Canada: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 49: Asia Pacific: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 50: Asia Pacific: Fullerene Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 51: China: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 52: China: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 53: Japan: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 54: Japan: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 55: India: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 56: India: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 57: South Korea: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 58: South Korea: Fullerene Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 59: Australia: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 60: Australia: Fullerene Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 61: Indonesia: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 62: Indonesia: Fullerene Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 63: Others: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 64: Others: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 65: Europe: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 66: Europe: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 67: Germany: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 68: Germany: Fullerene Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 69: France: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 70: France: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 71: United Kingdom: Fullerene Market: Sales Value (in Million US\$), 2018 &
2023

Figure 72: United Kingdom: Fullerene Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 73: Italy: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 74: Italy: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 75: Spain: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 76: Spain: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 77: Russia: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 78: Russia: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 79: Others: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 80: Others: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 81: Latin America: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 82: Latin America: Fullerene Market Forecast: Sales Value (in Million US\$),
2024-2032

Figure 83: Brazil: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 84: Brazil: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 85: Mexico: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 86: Mexico: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 87: Others: Fullerene Market: Sales Value (in Million US\$), 2018 & 2023

Figure 88: Others: Fullerene Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 89: Middle East and Africa: Fullerene Market: Sales Value (in Million US\$), 2018
& 2023

Figure 90: Middle East and Africa: Fullerene Market Forecast: Sales Value (in Million
US\$), 2024-2032

Figure 91: Global: Fullerene Industry: SWOT Analysis

Figure 92: Global: Fullerene Industry: Value Chain Analysis

Figure 93: Global: Fullerene Industry: Porter's Five Forces Analysis

I would like to order

Product name: Fullerene Market Report by Product (C60, C70, C76, and Others), Shape (Bucky Balls, Nanotubes (Single-Wall and Multiple-Wall), Nano-Rods), Production Method (CVD/CCVD Process, Arc Discharge Method, Laser Ablation of Graphite, and Others), End Use Industry (Electrical and Electronics, Pharmaceuticals, Medical, Aerospace and Defense, Energy, and Others), and Region 2024-2032

Product link: <https://marketpublishers.com/r/FAF24FC506CAEN.html>

Price: US\$ 3,509.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/FAF24FC506CAEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below
and fax the completed form to +44 20 7900 3970