

Organic Semiconductors Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 - 2032

<https://marketpublishers.com/r/O060FD9E4540EN.html>

Date: November 2024

Pages: 182

Price: US\$ 4,850.00 (Single User License)

ID: O060FD9E4540EN

Abstracts

The Global Organic Semiconductors Market was valued at USD 127.5 billion in 2023 and is expected to grow at 20.3% CAGR from 2024 to 2032. One of the primary factors driving this growth is the continuous advancement in organic light-emitting diode (OLED) technology, which is expanding the scope of organic semiconductors in various applications.

The increasing demand for flexible and wearable electronics is also fueling market expansion. Organic semiconductors are lightweight, flexible, and compatible with low-temperature processing, making them ideal for use in wearable devices and flexible displays. These features are propelling their adoption in next-generation electronic products, including bendable displays, smart textiles, and flexible solar cells, thereby broadening the market's potential.

The market is categorized by type into polymeric organic semiconductors and small molecule organic semiconductors. The polymeric segment is expected to reach a market value of USD 353.2 billion by 2032. This segment's growth is driven by the inherent flexibility and processability of polymeric semiconductors, which are well-suited for large-area applications such as flexible displays and organic photovoltaics. Ongoing advancements in material synthesis are focused on improving charge carrier mobility and enhancing the stability of polymer-based devices, which are anticipated to further boost their demand in the coming years.

In terms of applications, the market is divided into several segments, including display applications, lighting, solar photovoltaic (PV) cells, organic field-effect transistors (OFETs), organic sensors, organic radio-frequency identification (RFID) tags, organic

batteries, and others. The display application segment held the largest market share of 23.4% in 2023. This segment is witnessing significant growth, primarily driven by the rising demand for OLED displays in smartphones, televisions, and wearable devices. Ongoing advancements in flexible and transparent display technologies are opening up new possibilities, with manufacturers working to enhance resolution, brightness, and energy efficiency to meet consumer expectations.

U.S organic semiconductors market held 76.21% in 2023. The U.S. market is mainly driven by advancements in lightweight, flexible electronic devices and the growing demand for sustainable materials. The application of organic semiconductors in OLEDs, solar cells, and sensors is increasing due to their cost-effectiveness, ease of processing, and compatibility with flexible substrates, making them ideal for emerging technologies in wearable electronics and medical devices.

Contents

Report Content

CHAPTER 1 METHODOLOGY & SCOPE

- 1.1 Market scope & definition
- 1.2 Base estimates & calculations
- 1.3 Forecast calculation
- 1.4 Data sources
 - 1.4.1 Primary
 - 1.4.2 Secondary
 - 1.4.2.1 Paid sources
 - 1.4.2.2 Public sources

CHAPTER 2 EXECUTIVE SUMMARY

- 2.1 Industry 360° synopsis, 2021 - 2032

CHAPTER 3 INDUSTRY INSIGHTS

- 3.1 Industry ecosystem analysis
 - 3.1.1 Factor affecting the value chain
 - 3.1.2 Profit margin analysis
 - 3.1.3 Disruptions
 - 3.1.4 Future outlook
 - 3.1.5 Manufacturers
 - 3.1.6 Distributors
- 3.2 Supplier landscape
- 3.3 Profit margin analysis
- 3.4 Key news & initiatives
- 3.5 Regulatory landscape
- 3.6 Impact forces
- 3.7 Growth drivers
 - 3.7.1.1 Advancements in Organic Light Emitting Diodes (OLED) technology
 - 3.7.1.2 Rising demand for flexible and wearable electronics
 - 3.7.1.3 Increased focus on sustainable and eco-friendly materials
 - 3.7.1.4 Expanding Applications in Organic Photovoltaics (OPVS)
 - 3.7.1.5 Government initiatives and funding for research and development

- 3.8 Industry pitfalls & challenges
 - 3.8.1.1 Limited stability and durability
 - 3.8.1.2 High production costs for organic semiconductors
- 3.9 Growth potential analysis
- 3.10 Porter's analysis
- 3.11 PESTEL analysis

CHAPTER 4 COMPETITIVE LANDSCAPE, 2023

- 4.1 Introduction
- 4.2 Company market share analysis
- 4.3 Competitive positioning matrix
- 4.4 Strategic outlook matrix

CHAPTER 5 MARKET ESTIMATES & FORECAST, BY TYPE, 2021 - 2032 (USD BILLION)

- 5.1 Key trends
- 5.2 Polymeric organic semiconductors
- 5.3 Small molecule organic semiconductors

CHAPTER 6 MARKET ESTIMATES & FORECAST, BY MATERIAL, 2021 - 2032 (USD BILLION)

- 6.1 Key trends
- 6.2 Polyphenylene Vinylene (PPV)
- 6.3 Polyfluorene
- 6.4 Polythiophene
- 6.5 Pentacene
- 6.6 Anthracene
- 6.7 Rubrene
- 6.8 Others

CHAPTER 7 MARKET ESTIMATES & FORECAST, BY PROCESS TECHNOLOGY, 2021 - 2032 (USD BILLION)

- 7.1 Key trends
- 7.2 Vacuum evaporation
- 7.3 Organic Vapor Phase Deposition (OVPD)

- 7.4 Inkjet printing
- 7.5 Spin coating
- 7.6 Spray coating
- 7.7 Others

CHAPTER 8 MARKET ESTIMATES & FORECAST, BY END USE INDUSTRY, 2021 - 2032 (USD BILLION)

- 8.1 Key trends
- 8.2 Consumer electronics
- 8.3 Automotive
- 8.4 Healthcare
- 8.5 Energy
- 8.6 Industrial
- 8.7 Aerospace & defense
- 8.8 Others

CHAPTER 9 MARKET ESTIMATES & FORECAST, BY APPLICATION, 2021 - 2032 (USD BILLION)

- 9.1 Key trends
- 9.2 Display applications
- 9.3 Lighting applications
- 9.4 Solar Photovoltaic (PV) Cells
- 9.5 Organic Field-Effect Transistors (OFETs)
- 9.6 Organic sensors
- 9.7 Organic Radio-Frequency Identification (RFID) tags
- 9.8 Organic batteries
- 9.9 Others

CHAPTER 10 MARKET ESTIMATES & FORECAST, BY REGION, 2021 - 2032 (USD BILLION)

- 10.1 Key trends
- 10.2 North America
 - 10.2.1 U.S.
 - 10.2.2 Canada
- 10.3 Europe
 - 10.3.1 UK

- 10.3.2 Germany
- 10.3.3 France
- 10.3.4 Italy
- 10.3.5 Spain
- 10.3.6 Russia
- 10.4 Asia Pacific
 - 10.4.1 China
 - 10.4.2 India
 - 10.4.3 Japan
 - 10.4.4 South Korea
 - 10.4.5 Australia
- 10.5 Latin America
 - 10.5.1 Brazil
 - 10.5.2 Mexico
- 10.6 MEA
 - 10.6.1 South Africa
 - 10.6.2 Saudi Arabia
 - 10.6.3 UAE

CHAPTER 11 COMPANY PROFILES

- 11.1 BASF SE
- 11.2 Cambridge Display Technology Ltd.
- 11.3 DuPont de Nemours, Inc.
- 11.4 Eni S.p.A.
- 11.5 Heliatek GmbH
- 11.6 Hodogaya Chemical Co., Ltd.
- 11.7 Konica Minolta, Inc.
- 11.8 LG Chem Ltd.
- 11.9 Merck KGaA
- 11.10 Mitsubishi Chemical Corporation
- 11.11 Novaled GmbH
- 11.12 Polyera Corporation
- 11.13 Samsung SDI Co., Ltd.
- 11.14 Sony Corporation
- 11.15 Sumitomo Chemical Co., Ltd.
- 11.16 Universal Display Corporation (UDC)
- 11.17 BOE Technology Group Co., Ltd.
- 11.18 MBRAUN.

11.19 Hicenda Technology Co.

11.20 Youritech

I would like to order

Product name: Organic Semiconductors Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2024 - 2032

Product link: <https://marketpublishers.com/r/O060FD9E4540EN.html>

Price: US\$ 4,850.00 (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/O060FD9E4540EN.html>