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Organic Electronics Market Research Report- Global Forecast to 2027

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Description:

Organic Electronics Market Size and Overview

Globally, the size of Organic Electronics Market is expected to grow at USD 159.11 Billion by 2027, at a CAGR of 21% driven by the rapid development in the consumer electronics industry.

Organic electronics is a specialized field of material science that deals with the synthesis, characterization, design, and application of organic polymers or molecules to show better electronic properties. For example, better conductivity. All the organic electronic materials are generally made of carbon-based organic molecules or polymers with the help of synthetic strategies. One of the most crucial benefits of organic electronics is the cost factor which is much lower than traditional electronics. Some of the significant properties of polymeric conductors include electrical conductivity and high mechanical flexibility. Some can have high thermal stability.

Organic electronic is environment-friendly and also provides better resource utilization. They are manufactured using various kinds of materials such as polymers, carbon-based molecular structures, nanotubes, hybrid materials, and more. One of the most common organic materials applications is the OLEDs-Organic Light-Emitting Diode which is used in smartphones.

The Global Organic Electronics Industry is projected to be highly impacted by portable solar cells, smartphone displays, colored light sources, applications in curved TVs, and more. This is a highly promising technology and expected to provide increased functionality and can help in dealing with power consumption challenges during the forecast period. Some of the potential applications of organic electronics materials are national security, biomedical research, environment health, IT, and more. The establishment of advanced systems is also relying on organic semiconductors, and this is projected to trigger Organic electronics market growth.

This Organic Electronics Market Forecast report highlights the organic electronic market growth potential from 2020 to 2027. Furthermore, the market report also shows the impact of the COVID-19 pandemic on the global organic electronics market and the drivers that are supporting the market growth. Besides, the report also gives a detailed insight into the market segment and different regional market conditions.

COVID-19 Analysis

As per the analysis, the COVID-19 pandemic has greatly affected the Global Organic Electronics Market. The reason behind this is disruptions in the supply chains. On the other hand, infection awareness, lockdowns, and travel restrictions have also hampered the global market demand and slowed the advancement process. Besides, the condition also has negatively influenced the electronic industry and companies.

The government proposed various strategies to support the growth of the organic electronics market. On the other hand, the key players are also adopting new strategies to overcome the current issues and stabilize the market. The market experts have predicted that the market would pick the pace by the end of 2021 and will start to grow at a decent CAGR rate.

Organic Electronics Market Dynamics

• Major Drivers of the Market

The global organic electronics industry is significantly driven by the rapid development in the

consumer electronics industry. Furthermore, the growing demand for high-quality flexible electronics as well as advanced and high-performance semiconductors is also driving the market. LED applications and the growing use of solar panels are also projected to stir up the growth during the forecast period.

As per the market analysts, the introduction of favorable government initiatives and improved performance of the products are also forecasted to trigger market growth. As the lockdown condition has lifted in different countries and companies have started their production process, it will create a positive effect on the market.

- **Opportunities**

It is forecasted that the rapid increase in R&D activities for different applications is projected to create a great organic electronic market opportunity. Over the years, the development of different eco-friendly technologies and their rapid adoption has picked up the highest rate. On the other hand, the utilization of clean energy, for example, biodegradable materials and organic batteries for various technological development, like OLEDs, increase the market demand.

On the other hand, the global healthcare sector uses organic semiconductors in skincare treatment, which increases the market demand. The number of prominent players in the market is also increasing rapidly, contributing to this market's growth. So, rising demand, growing industrialization, friendly government policies, and more will create better market opportunities.

- **Restraints**

Organic electronics also have few disadvantages, and those factors can affect the market growth. For example, the degradation of organic components over time. This will lower the functional efficiency of the equipment. It is witnessed that OLED TVs, after running for a period, tend to reduce the quality of display output. On the other hand, the COVID-19 pandemic also has dramatically affected the sales of organic electronics. For example, some other factors, incompatibility with conventional electronics and low efficiency of organic photovoltaics, are likely to affect the market growth.

Keeping these things in mind, the leading manufacturers are now taking different steps and implementing new market strategies to boost up the demand. They are currently utilizing advanced technologies to produce better products.

- **Growth Challenges**

Like other markets, the organic electronics industry has also faced different challenges. The Organic electronics market is full of different competent technologies, and organic electronics products are performing lower than those products. Besides, different technical limitations can also hinder the growth of the organic electronics market. To deal with such a situation, the global industry is now in need of a significant contribution from the leading players.

The prominent players should consider enhancing the product quality in order to create better customer demand. It may be noted that even though the market has faced challenges, the collaborative efforts from prominent market players have helped to maintain the market growth. They are now adapting better marketing strategies to boost up sales.

- **Cumulative Growth Analysis of the Market**

As per this comprehensive market report, the market players adopt new methods to increase their production and partner with other companies for their business analysis. The demand for organic electronic products is also growing.

Besides, they are also implementing different strategies to overcome the market condition that has been affected due to COVID-19.

- **Technology Analysis**

Some of the most impressive innovative applications of organic electronics are photovoltaic, displays, lighting, and other smart electronic systems. Rapid research & development activities are leading to the introduction of biomedical implants and RFID tags. Some other areas of exploration include application in microlenses, detectors, memory devices, optical fibers, batteries, consumer packaging, and photoconductors.

Market Segment Overview

- **By Application**

Based on the application, the global organic electronics market is divided into organic light-emitting diode lighting, solar batteries, displays, memory devices, photovoltaic cells, and others.

As per the expert, the display section will witness maximum growth due to smartphones and TVs' rising usage.

- **By Material**

The global organic electronics market has been segmented into conductors, dielectric, luminescent materials, and electrochromic materials based on materials.

As per the report, the conductor material segment will significantly contribute to the organic electronics market growth during the forecast period.

- **By Components**

On the basis of components, the organic electronics market is segmented into active components and passive components.

The active component segment is projected to witness more sales in the coming years due to IoT services' rapid utilization.

Regional Analysis

As per the report, the American market is the largest market among all the regional markets and is projected to grow from 2020 to 2027.

Another major country-based market for this organic electronics industry is Canada. Increasing purchasing power and technological advancement are propelling market growth in these regions.

Competitive Landscape

The prominent players in the global organic electronics market are:

- Asahi Kasei Corporation
- AU Optronics Corporation
- BASF SE
- Bayer Material Science AG
- Evonik Industries
- Fujifilm Dimatix
- Merck Kgaa
- Novaled
- Samsung Display

The major strategies used by these companies are product differentiation and product innovation. This is an emerging market, and companies are focusing on sharing their expertise through collaboration.

Recent Market Developments

- Scientists from the University of Oregon have made an effort to use organic molecules as a cheaper alternative to the traditional silicon-based conductor. (2018, 19th SEP)
- SmartLine's R&D team has reported around 8 percent efficiency for R2R printed organic photovoltaic cells using organic electronics equipment. (2018, 10th OCT)

Report Overview

- Market Overview
- COVID-19's Market Effect Analysis

- Market Dynamic Analysis
- Value Chain Analysis of the Market
- Discussion on Market Segmentation
- Competitive Landscape Analysis
- Recent Market Development

This market report informs about the Organic Electronics Market growth potential during the forecast period, i.e., from 2020 to 2027.

The Market Segmentation Table is as Follows

By Application

- Organic Light-Emitting Diode Lighting
- Solar Batteries
- Displays
- Memory Devices
- Photovoltaic Cells, And Others

By Materials

- Conductors
- Dielectric
- Luminescent Materials
- Electrochromic Materials

By Components

- Active Components
- Passive Components

By Region

- **Americas**
 - North America
 - US
 - Canada
 - Latin America
- **Europe**
 - Western Europe
 - Germany
 - France
 - UK
 - Italy
 - Spain
 - Rest Of Western Europe

- Eastern Europe

- **Asia-Pacific**

- Japan
- China
- India
- Australia
- South Korea
- Rest Of Asia-Pacific

- **Middle East & Africa**

- Middle East
- Africa

ORGANIC ELECTRONICS MARKET

As per the recently published reports, the Global Organic Electronics Market Size is forecasted to cross USD 159.11 Billion marks by the end of 2027. In the year 2019, the market was valued at USD 44.62 Billion. On the other hand, 21% of CAGR during the projected period 2020 to 2027.

BY COMPONENT

- Active
- Passive

BY MATERIAL

- Dielectric
- Conductor
- Luminescent

BY APPLICATION

- Display
- Solar battery
- Photovoltaic

BY REGION

- North America
- Europe
- Asia-Pacific
- Rest of the World

Global Organic Electronics Market Share, By Region,



DRIVERS:

- Rapid development in the consumer electronics industry.
- Growing demand for high-quality flexible electronics.
- LED applications and the growing use of solar panels.



RESTRAINT:

- Incompatibility with conventional electronics and low efficiency of organic photovoltaics.



KEY PLAYERS:

- Asahi Kasei Corporation
- AU Optronics Corporation
- BASF SE
- Bayer Material Science AG
- Evonik Industries
- Fujifilm Dimatix
- Merck Kgaa
- Novaled
- Samsung Display
- Sigma-Aldrich Corporation



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