

Gold Nanoparticles Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The Global Gold Nanoparticles market is expected to witness a CAGR of greater than 10% during the forecast period.

COVID-19 has negatively affected the market studied in receny times. The electronics industry which is a major consumer of gold nanoparticles was severely impacted by the pandemic. The global electronics shipments have fallen by 3.37 million units in 2020 compared to 2019. Due to the restrictions and the lockdown, many imports and exports were halted for a specified period. Further a lot of projects and plants were paused due to travel restrictions and social distancing protocols. Since the markets are opening, and the lockdowns being lifted in most of the countries, it will be an encouraging sign for the gold nano-particles market in coming years.

Key Highlights

Over the mid-term, the major factors driving the market studied are rising nanotechnology applications in the medical industry and rising demand from the high-end electronics sector.

On the flipside, volatility in the price of gold is expected to hinder the growth of the market studied.

Innovation in the field of electronics is likely to act as an opportunity for the market studied during the forecast period.

North America region is expected to dominate the global nanoparticles market; while North America is expected to register the fastest growth through the forecast period.

Gold Nanoparticles Market Trends

Targeted Drug Delivery to Dominate the Market

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The targeted drug delivery segment represents one of the largest application bases for the gold nanoparticles market.

Target drug delivery system is an advanced form of drug delivery system where the medication drug or a pharmacologically active agent is selectively delivered by the nanoparticles at an exact corresponding site of action or absorption, and not to the non-target organs, tissues, or cells.

The introduction of nanoparticles to the targeted drug delivery system has resulted in various benefits, such as high therapeutic efficacy, high targeting efficiency, and reproducibility.

Gold nanoparticles are used to deliver multiple drug molecules, vaccines, recombinant proteins, or nucleotides into their targets, and can also control the volume of drug released via biological stimuli (internal) or light activation (external).

In the United States in the year 2019, the amount spent on medicine was around USD 511 billion increasing by nearly 4% from USD 483.8 billion in 2018. Rising old age population and increasing health risk amongst individuals is only expected to drive the market for targeted drug deliveries and hence gold nanoparticles from this sector.

One of the other use of gold nanoparticles is that its surface can be modified using some specialty polymers, like polyethylene glycol (PEG). This is expected to result in increased stability of gold nanoparticles in different physiological conditions and also to provide a multiformity of combinations on gold nanoparticles. This is further expected to boost the usage of gold nanoparticles in treated drug delivery applications.

Therefore, all the above mentioned factors are expected to drive the demand for the market studied in coming years.

North America to Dominate the Market

North America region is expected to dominate the global gold nanopertocles market during the forecast period.

The medical technology of the United States continues to be one of the most vital and dynamic sectors of the region and a leading force in the revolution that is transforming the health care system.

The United States is a leading healthcare industry in the world, the expenditure on healthcare in United States accounted to 17% of its national GDP and reached a value of USD 3.8 trillion in 2019, a y-o-y growth of 4.6% from 2018. The growth is expected to continue further through the upcoming years too.

The medical technology of the country is one of the best globally and offers state-of-the-art life-saving and life-enhancing products. Fueled by huge research and development investments, the medical technology of the country set a standard on all relevant measures of growth, employment trends, production values, exports, global market share, venture capital financing. Additionally, apprximately 35% -40% of the total domestic medical device production is exported, and a similar share of the United States' domestic consumption is imported. Overseas sales account for approximately 40% - 50% of the overall revenues for United States medical device companies, including the foreign subsidiaries' revenue.

The American Hospitals Annually spend around USD 93 billion per year on service on the Medical devices lifecycle cost. The breakthroughs in areas, such as device miniaturization and nanotechnology, have created vast opportunities for the growth of the gold nanoparticles market in the United States.

Furthermore, owing to the rapid pace of innovation in the advancement of technology and R&D activities in the electronics industry, there is a high demand for newer and faster electronic products. There is a spur in the number of manufacturing plants and development centers in the United States that are focusing on high-end products, which is expected to boost the demand for gold nanoparticles over the forecast period.

Canadian consumer electronics industry experienced growth and grabbed new opportunities in the key product category, as Canadians value new product innovations. The factor driving the growth of this industry is the improved network connectivity in the country.

Hence, due to the aforementioned factors, the market for gold nanoparticles in the region is expected to witness high growth over the forecast period.

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Gold Nanoparticles Market Competitor Analysis

The gold nanoparticles market is partially consolidated in nature. The major companies of the market studied include Merck KGaA, BBI Solutions, Tanaka Holdings Co Ltd., Nanocomposix, and Cytodiagnostics Inc., among others.

Additional Benefits:

The market estimate (ME) sheet in Excel format 3 months of analyst support

Table of Contents:

- 1 INTRODUCTION
- 1.1 Study Deliverables
- 1.2 Study Assumptions
- 1.3 Scope of the Study
- 2 RESEARCH METHODOLOGY
- **3 EXECUTIVE SUMMARY**
- **4 MARKET DYNAMICS**
- 4.1 Drivers
- 4.1.1 Rising Nanotechnology Applications in the Medical Industry
- 4.1.2 Rising Demand from the High-end Electronics Sector
- 4.2 Restraints
- 4.2.1 Volatility in Price of Gold
- 4.2.2 Unfavorable Conditions Arising due to the Impact of COVID-19
- 4.3 Industry Value-Chain Analysis
- 4.4 Porter's Five Forces Analysis
- 4.4.1 Bargaining Power of Suppliers
- 4.4.2 Bargaining Power of Consumers
- 4.4.3 Threat of New Entrants
- 4.4.4 Threat of Substitute Products and Services
- 4.4.5 Degree of Competition
- **5 MARKET SEGMENTATION**
- 5.1 Application
- 5.1.1 Imaging
- 5.1.2 Targeted Drug Delivery
- 5.1.3 Sensors
- 5.1.4 In Vitro Diagnostics
- 5.1.5 Probes
- 5.1.6 Catalysis
- 5.1.7 Other Applications
- 5.2 End-user Industry

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- 5.2.1 Electronics
- 5.2.2 Healthcare
- 5.2.3 Chemicals
- 5.2.4 Other End-user Industries
- 5.3 Geography
- 5.3.1 Asia-Pacific
- 5.3.1.1 China
- 5.3.1.2 India
- 5.3.1.3 Japan
- 5.3.1.4 South Korea
- 5.3.1.5 Rest of Asia-Pacific
- 5.3.2 North America
- 5.3.2.1 United States
- 5.3.2.2 Canada
- 5.3.2.3 Mexico
- 5.3.3 Europe
- 5.3.3.1 Germany
- 5.3.3.2 United Kingdom
- 5.3.3.3 Italy
- 5.3.3.4 France
- 5.3.3.5 Rest of Europe
- 5.3.4 Rest of the World
- 5.3.4.1 South America
- 5.3.4.2 Middle-East

6 COMPETITIVE LANDSCAPE

- 6.1 Mergers & Acquisitions, Joint Ventures, Collaborations, and Agreements
- 6.2 Market Share (%)**/ Ranking Analysis
- 6.3 Strategies Adopted by Leading Players
- 6.4 Company Profiles
- 6.4.1 Aurion
- 6.4.2 BBI Solutions
- 6.4.3 Cline Scientific AB
- 6.4.4 Cytodiagnostics Inc.
- 6.4.5 Sona Nanotech.
- 6.4.6 Meliorum Technologies Inc.
- 6.4.7 Merck KGaA
- 6.4.8 nanoComposix
- 6.4.9 NanoHybrids
- 6.4.10 NANOPARTZ INC.
- 6.4.11 TANAKA HOLDINGS Co., Ltd.

7 MARKET OPPORTUNITIES AND FUTURE TRENDS

- 7.1 Innovation in the Field of Electronics
- 7.2 Other Opportunities

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