

Nanocellulose: Global Markets

Market Research Report | 2022-11-14 | 238 pages | BCC Research

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Report description:

Description

Report Scope:

This report will cover the nanocellulose industry. Definitive and detailed estimates and forecasts of the global market are provided, followed by a detailed analysis of the regions and applications. Furthermore, the ongoing market trends, market growth drivers, and challenges impeding the market are discussed.

Market size and estimations will be provided in terms of volume and revenue considering 2021 as the base year. Market forecasts will be given from 2022-2027. The market size for different regions (regions by product, applications, and end use) will also be covered. The impact of COVID-19 was also considered when deriving market estimations.

Global markets, nanocellulose segments, and growth forecasts through 2027 are offered. Sales value estimates are based on prices in the supply chain. Market-driving forces and industry structure are examined. International aspects are analyzed for all global regions and profiles of major global manufacturers are presented.

This report considers the impact of COVID-19. In 2020, the growth rate of manufacturing industries around the world was severely affected by the pandemic. The COVID-19 pandemic halted progress in every regional economy. Various governments around the world are taking measures to contain the economic slowdown.

The nanocellulose market is further segmented by product type: nanofibrillated cellulose, nanocrystalline cellulose, and bacterial cellulose. By application, it is segmented into high-volume applications, low-volume applications, and emerging applications. By end use, the market is segmented into composites, paper processing, paints and coatings, food and beverages, pharmaceuticals and cosmetics, oil and gas, and others.

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The research scope of the nanocellulose market does not include the market share of microcellulose. Nanocellulose volume in the report depicts all active types and forms that are currently available on a commercial scale. We have considered actual demand instead of the potential market estimated by various organizations.

Report Includes:

- 76 data tables and 34 additional tables
- A comprehensive overview and up-to-date analysis of the current and future global markets for nanocellulose
- Analyses of the global market trends, with historic market revenue data for 2021, estimates for 2022, and projections of compound annual growth rates (CAGRs) through 2027
- Estimation of the actual market size for nanocellulose both in the value and volumetric terms, revenue forecasts, and corresponding market share analysis by product (nanocellulose) type, application, end use sector, and geographic region
- Identification of trends that will affect the use of nanocellulose and major end-use applications, in particular the high-volume applications
- In-depth information (facts and figures) concerning the major factors influencing the progress of the market (benefits, and industry-specific challenges) with respect to specific growth trends, upcoming technologies, prospects, and contributions to the overall industry
- Assessment of the long-term outlook for the nanocellulose industry, current competitive scenario, R&D activities, and the impact of COVID-19 on the worldwide industrial sector
- Analysis of the company competitive landscape for global nanocellulose market, and company value share analysis based on their segmental revenues
- Review of the recent patent grants on nanocellulose technologies
- Descriptive company profiles of the leading global players, including Asahi Kasei Corp., CelluForce Inc., GranBio, Nippon Paper Industries Co. Ltd., Oji Holdings Corp., and Sappi Ltd.

Executive Summary

Summary:

The global nanocellulose market totaled \$REDACTED in 2021 and \$REDACTED in 2022. Growing at a CAGR of REDACTED%, the market is expected to reach \$REDACTED in 2027.

Given the current state of ecological consciousness, it is challenging to disregard dangerous emissions from any industrial process or human activity due to their negative effects on the environment. Recently, several academics have expressed concern about the need to replace input materials with less- or non-toxic, environmentally friendly, or renewable raw materials. In the nanotechnology world, nanocellulose, a subset of nanomaterials made from cellulose, one of nature's most plentiful resources, has the potential to offer ecologically friendly, and creates renewable and sustainable building blocks with enhanced properties for a variety of applications.

Nanocellulose has emerged as a renewable, robust, stretchable, and economical material of the future. Due to the ongoing commercialization of nanotechnologies, the material is of immense significance. Researchers and industrialists are analyzing and exploring new manufacturing processes and applications for nanocellulose. The rising packaging sector along with the persistent need for sustainable packaging materials is likely to boost the nanocellulose market size over the projected timeframe. Stringent regulations imposed by regulatory bodies have prohibited non-biodegradable packaging material, particularly for the food and pharma industries, which is likely to drive demand for sustainable lightweight packaging material in the coming years.

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Common interest in biomaterials to reduce dependency on fossil fuels and provide friendly end-of-life disposal and product enhancement is escalating the consumption of nanocellulose. The supply chain for nanocellulose can be practically inexhaustible, and this is creating a lucrative opportunity to convert these agricultural wastes into advanced materials.

Nanocellulose possesses the potential to replace numerous petrochemical-based products and has been cost-effective compared to other nanoscale high-performance materials. According to a global greenhouse gas emissions study, REDACTED% of environmental pollution is due to industrial processes, whereas REDACTED% is due to fossil fuel retrieval, processing, and distribution. Nanocellulose results in a substantial reduction of carbon footprints. Increasing environmental concerns about global warming and regulations for environmental conservation will fuel the market in the coming years.

Nanocellulose (NC) comes in different forms, such as crystals or fibrils, and can be manufactured via different processes and from different raw materials like wood pulp. NC possesses some remarkable mechanical and chemical properties, for which it has gained much popularity in the past few years. For example, crystalline NC has high tensile strength and very high stiffness, comparable to that of Kevlar, the popular synthetic fiber used in personal armor. Some forms of NC are also gas and moisture impermeable and can therefore work as a barrier. Because of these outstanding properties, rapidly decreasing manufacturing costs, and a positive toxicological profile, NC is currently being employed in nearly unlimited applications and sectors, including paper products, packaging, auto and airplane parts, paints, electronics, biomedical devices, and many more.

Nanofibrillated cellulose held the highest share in the overall nanocellulose market in 2021. They possess exceptional properties including light weight, superior strength, rigidity, and transparency, which makes them viable for numerous commercial applications across composites, oil and gas, food and beverage, automotive, aerospace, and personal care industries. Owing to its low oxygen permeability, nanofibrillated cellulose could also be a future replacement for plastic films in composite packaging.

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 - CELLUCOMP LTD.
 - DAICEL CORP.
 - FPINNOVATIONS
 - GRANBIO
 - J. RETTENMAIER & SOHNE GMBH & CO.
 - KRUGER INC.
 - MELODEA LTD.
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