

The Global Market for Nanofibers

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Abstracts

The use of nanofiber membranes can capture 99.9% of viruses and bacteria as well as deactivate with a 99.9% efficiency. Their use can extend the usability and efficiency of face masks, even after washing. Innovation in nanofibers has increased significantly, with several producers increased their manufacturing capability in the fight against the COVID-19 pandemic.

Nanofibers have exceptionally high surface area-to-volume ratio and high porosity, which makes them attractive materials for a range of applications. They have wide-ranging morphologies, and are produced using a variety of materials such as:

Natural polymers.

Synthetic polymers.

Carbon nanomaterials (carbon nanotubes, graphene, carbon nanofibers)

Semiconducting materials

Composite materials.

Chitin

Wood and other pulp (cellulose nanofibers)

Techniques such as centrifugal spinning, electrospinning, meltblowing and bicomponent spinning have been studied extensively for the production of nanofibers with varying degrees of commercial success. There have also been several new synthesis methods

developed. The market for nanofibers generally encompasses polymer nanofibers, alumina nanofibers and to a lesser extent carbon nanofiber and cellulose nanofibers. Main applications of nanofibers are:

Air/water filtration (membranes).

Composites.

Bio medical (bone/skin regeneration, tissue scaffolds, hydrogel bandages for woundcare).

Protective textiles and wearable electronics.

Energy Storage (battery separators, conductive additives for batteries).

Textiles.

Report contents include:

Recent initiatives using nanofibers to aid the response to the COVID-19 pandemic.

Companies developing anti-viral filtration and face masks products.

Market volume for nanofibers, historical and forecast to 2030.

Current products.

Stage of commercialization for nanofiber applications by company.

Market drivers, trends and challenges, by end user markets.

End user market assessment for nanofibers in composites, textiles, medical and healthcare, electronics, filtration, batteries, sensors, acoustics etc.

In-depth market assessment of opportunities for nanofibers including potential revenues, growth rates, pricing, most likely applications and market challenges.

In-depth company profiles, include products, capacities, production processes and commercial activities. Companies profiled include Respilon, BIG-nano Corp, Inc., Nanovia s.r.o., Inovenso Ltd., Finetex Ene, Inc., NE, NXTNano, Verdex Technologies, N2Cell and many more.

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