

## Nano-Composites Market projected to surpass US\$4,633.47 million by 2030 at a CAGR of 8.68%

The global nanocomposites market is expected to grow at a CAGR of 8.68%, reaching a market size of US\$4,633.47 million in 2030 from US\$3,056.72 million in 2025.



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2024 /EINPresswire.com/ -- As per a new study published by Knowledge Sourcing Intelligence, the global <u>nanocomposites market</u> is projected to grow at a CAGR of 8.68% between 2025 and 2030 to reach an amount of US\$4,633.47 million by 2030.

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Nanocomposites are materials consisting of a matrix, such as a polymer, metal, or ceramic, combined with nanometer-sized particles or fibers, usually less than 100 nanometers in size. These nanoparticles, for example, <u>carbon nanotubes</u>, graphene, or nanoparticles of metals and ceramics, are added to the base material to enhance its properties, such as strength, durability, thermal resistance, and electrical conductivity. Nanocomposites take advantage of the inherent properties of nanomaterials to enhance the final performance of the composite but retain its flexibility, low weight, and ease of processing.

Nanocomposites have experienced rapid growth across industries, including aerospace, automotive, electronics, and energy storage because they possess superior mechanical, thermal, and electrical properties. For instance, nanocomposites are being used in the development of advanced batteries, where high surface area and conductivity enhance performance. In the medical field, nanocomposites are being explored for <u>drug delivery systems</u>, which allow for controlled release and targeted delivery, demonstrating their versatility in both functional and structural applications.

With the emergence of the global nanocomposite market, many market players are launching

products and technologies to attract customers. For instance, in November 2023, Cabot Corporation launched its REPLASBLAK product family, which introduces a range of circular black masterbatches certified with sustainable materials. This move is particularly important for Cabot: the company will be coming out with three new offerings that are, to our knowledge, the first-ever ISCC PLUS certified black masterbatch offerings in the world. These products are backed by the company's EVOLVE<sup>®</sup> Sustainable Solutions technology platform, a system that is centered on creating sustainable products with dependable performance at an industrial scale.

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By material type, the global nanocomposite market is categorized into graphene, nanofiber, metal oxide, carbon nanotubes, and others. Carbon nanotube-based nanocomposites are expected to hold a major market share in the projected period, as they possess excellent electrical properties and are employed increasingly in electronics and semiconductors. Based on their electrical properties, carbon nanotubes-based nanocomposites are considered a novel alternative to traditional transparent conductors in IoT applications. Carbon nanotubes, when created as TCFs, provide a highly conductive, transparent, and less expensive option for flexible displays and touchscreens. Additionally, this excellent mechanical strength and toughness qualify them as suitable advanced wearable devices and other flex electronics technologies for more viable electronic components.

The global nanocomposites market is segmented by end-user into aerospace, electronics and semiconductor, energy, automotive, packaging, and others. The energy sector is projected to witness considerable growth, with solar cells, batteries, and fuel cells being the primary contributors to this growth, driven by increased demand for renewable sources and a greater emphasis on energy efficiency. Nanocomposites will be a crucial player in this growth, owing to their superior energy storage abilities, improved efficiency, and reduced costs. Their unique properties of high surface area and conductivity, among others, make them ideal for applications such as energy storage in batteries, lightweight and efficient solar panels, and advanced fuel cells with the potential to revolutionize energy systems and accelerate the transition to sustainable energy solutions.

Based on geography, the Asia Pacific region of the global nanocomposites market is growing significantly, as there are a large number of nanocomposite manufacturers and industries utilizing these materials. The advanced nanocomposites industry, coupled with strong demand from automotive and electronics & semiconductor sectors, particularly in China, is expected to fuel market growth. China stands out as the leading market in the region, where manufacturers are heavily investing in new material innovations and research and development activities to advance the nanocomposites sector.

As a part of the report, the major players operating in the global nanocomposite market have been covered as Zyvex Technologies, Powdermet Inc., Nanocor Inc., Arkema Inc., Nanocyl SA, Nanova Biomaterials, Nanospan, Nano Composix, AD Nano Technologies, 3M, and Asahi Kasei.

The market analytics report segments the global nanocomposites market as follows:

- By Material Type
- o Graphene
- o Nanofiber
- o Metal Oxide
- o Carbon Nanotubes
- o Others
- By End-User
- o Aerospace
- o Electronics and Semiconductor
- o Energy
- o Automotive
- o Packaging
- o Others
- By Geography
- North America
- o USA
- o Canada
- o Mexico
- South America
- o Brazil
- o Argentina
- o Others
- Europe
- o United Kingdom
- o Germany
- o France
- o Italy
- o Spain
- o Others

- Middle East and Africa
- o Saudi Arabia
- o UAE
- o Others
- Asia Pacific
- o China
- o Japan
- o India
- o South Korea
- o Australia
- o Others

## Companies Profiled:

- Zyvex Technologies
- Powdermet Inc
- Nanocor Inc.
- Arkema Inc.
- Nanocyl SA
- Nanova Biomaterials
- Nanospan
- Nano Composix
- AD Nano Technologies
- 3M
- Asahi Kasei

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