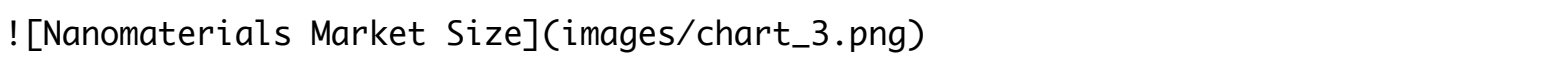
# Nanomaterials Market Size & Share Analysis - Growth Trends and Forecast (2026 - 2031)

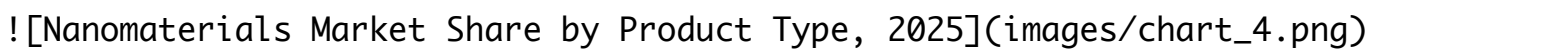
> **Industry:** Advanced Materials & Composites (Chemicals & Materials)
> **Source:** [https://www.mordorintelligence.com/industry-reports/nanomaterials-market](https://www.mordorintelligence.com/industry-reports/nanomaterials-market)
> **Scraped Date:** 2026-09-17

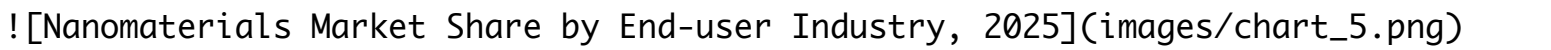
## Executive Market Summary

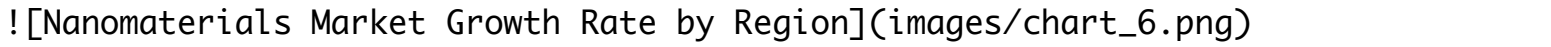
| Market Metric | Details |
| :--- | :--- |
| **Base Market Size** | USD 48.12 billion |
| **Projected Forecast (2031)** | USD 48.12 billion |
| **Growth Rate (CAGR)** | 19.91 % |
| **Largest Market Region** | N/A |
| **Fastest-Growing Region** | N/A |

## Market Visualizations & Infographics

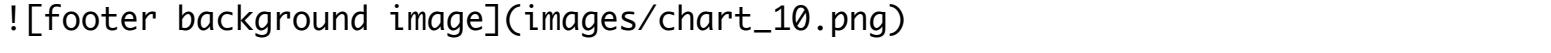


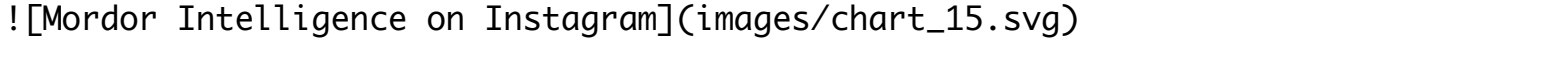



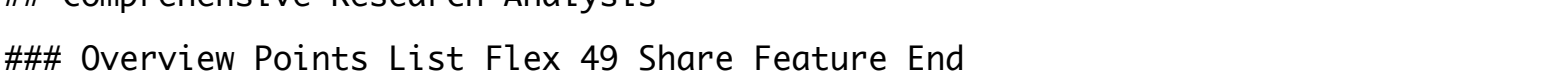







## Comprehensive Research Analysis

### Overview Points List Flex 49 Share Feature End

Market Overview

Study Period | 2021 - 2031 |
Market Size (2026) | USD 48.12 Billion |
Market Size (2031) | USD 119.29 Billion |
Growth Rate (2026 - 2031) | 19.91 % |
Fastest Growing Market | Asia Pacific |
Largest Market | North America |
Market Concentration | Low |
Major Players*Disclaimer: Major Players sorted in no particular order

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### Market Overview

Nanomaterials Market Analysis by Mordor IntelligenceThe Nanomaterials Market size is projected to be USD 40.13 billion in 2025, USD 48.12 billion in 2026, and reach USD 119.29 billion by 2031, growing at a CAGR of 19.91% from 2026 to 2031. This momentum stems from coordinated investment in sub-3 nm semiconductor fabs that require defect-free CMP slurries, the mass-production of lipid-nanoparticle vaccines, utility-scale deployment of nano-enabled reverse-osmosis membranes, and the commercialization of silicon-nanowire battery anodes. Rising demand for nano-clay cement additives under decarbonization mandates, together with government incentives tied to domestic semiconductor supply chains, is widening the application base. At the same time, suppliers with inline particle-size analytics and ISO 14644 cleanroom capacity are consolidating share because end users impose stringent purity specifications. Capital inflows are therefore shifting from commodity nano-oxides toward engineered, surface-functionalized grades that offer higher margins and longer customer lock-in periods.

Key Report Takeaways

* By product type, nanoparticles captured 66.78% of the nanomaterials market share in 2025. Nanotubes are forecast to expand at a 21.43% CAGR through 2031, the fastest rate among product types.
* By structure type, non-polymer organic nanomaterials accounted for 55.12% of demand in 2025. Polymeric nanomaterials are forecast to register a 20.05% CAGR through 2031.
* By material category, carbon-based grades accounted for 41.08% of demand in 2025. Lipid-based grades are projected to expand at a 21.89% CAGR during 2026-2031.
* By end-user industry, electronics commanded 33.25% of the nanomaterials market size in 2025 and is advancing at a 20.18% CAGR through 2031.
* By geography, North America nanomaterials market share accounted for 38.78% of demand in 2025. Asia-Pacific is expected to expand at a 22.32% CAGR over 2026-2031.

### Key Market Trends

Global Nanomaterials Market Trends and InsightsDrivers Impact Analysis*

| Drivers | (~) % Impact on CAGR Forecast | Geographic Relevance | Impact Timeline |
|---|---|---|---|
| Expansion of semiconductor fabs driving high-purity nano-slurries | +4.2% | North America, Asia-Pacific (Taiwan, South Korea, Arizona) | Medium term (2-4 years) |
| Rising integration of nanomaterials in mRNA vaccine platforms | +3.8% | North America, Europe | Short term (≤ 2 years) |
| Rapid adoption of nano-enabled water treatment systems | +3.5% | Global, with concentration in water-stressed regions (California, Singapore, Middle East) | Medium term (2-4 years) |
| Surge in EV battery production using nano-structured electrodes | +4.5% | Asia-Pacific core (China, South Korea), spill-over to Europe and North America | Long term (≥ 4 years) |
| EU CBAM incentivizing nano-clay low-carbon cement | +2.9% | Europe, early adoption in North America and select ASEAN markets | Long term (≥ 4 years) |

Source: Mordor Intelligence |

### Competitive Landscape

Competitive Landscape

The nanomaterials market is fragmented. Strategic themes include vertical integr ation, geographic diversification, and circular value chains. LG Chem’s 2025 joi nt venture with a European recycler targets the recovery of silicon nanowires an d nanotubes from spent EV packs. Nanocyl and Solvay co-develop epoxy prepregs th at meet aircraft flame-smoke-toxicity standards. Suppliers with REACH registrati ons and ISO 10808 analytics extract pricing premiums, creating a regulatory moat . University spin-outs exploring DNA-origami drug carriers and MOF gas sieves re main pre-revenue but are potential acquisition targets for incumbents seeking te chnology differentiation.

Nanomaterials Industry Leaders* BASF SE

* Evonik Industries AG

* Cabot Corporation

* LG Chem

* OCSiAl

* *Disclaimer: Major Players sorted in no particular order


### Scope Methodology P Space

Mordor Intelligence defines the nanomaterials market as the value generated from the sale of engineered substances whose primary dimension lies between 1 nm and 100 nm, covering carbon-based, metal-based, metal-oxide, ceramic, polymeric, an d hybrid forms used across construction, electronics, energy, healthcare, person al care, rubber, and allied industries worldwide.

We include only commercially produced, additive-grade, and device-grade nanomate rials sold in bulk or as masterbatches; research samples and in-house captive pr oduction kept for internal use are excluded.

Scope Exclusion: Natural nanoscale particulates formed unintentionally during co mbustion or erosion fall outside our study.

### Segmentation Container

* By Product Type* Nanoparticles* Nanometals* Gold
* Silver
* Platinum
* Titanium
* Aluminium

* Non-metal Oxides* Alumina
* Iron Oxide
* Titanium Oxide
* Silica
* Zinc Oxide

* Complex Oxides* Calcium Phosphate
* Rare-earth Metal Oxides
* Lithium Titanate
* Silica Hydride

* Nanofibers
* Nanotubes
* Nanoclays

* Nanowires

* By Structure Type* Non-polymer Organic Nanomaterials* Carbon Black
* Carbon Nanotubes
* Aptamers
* Small-molecule OLED Materials
* Activated Carbon
* Carbon Nanotube Composites

* Polymeric Nanomaterials* Coatings and Adhesives
* Transfection Reagents
* Diagnostic Reagents
* Drug-delivery Vehicles
* Fabric Treatments
* Optical Coatings
* Nano-porous Filtration Membranes
* Dielectric Films
* OLED Films

* By Material Category* Carbon-based
* Metal-based
* Metal-oxide and Ceramic-based
* Polymeric and Lipid-based

* By End-user Industry* Construction
* Electronics
* Energy
* Healthcare
* Personal Care
* Rubber
* Other End-user Industries

* By Geography* Asia-Pacific* China
* India
* Japan
* South Korea
* ASEAN
* Rest of Asia-Pacific

* North America* United States
* Canada
* Mexico

* Europe* Germany
* United Kingdom
* Italy
* France
* Rest of Europe

* South America* Brazil
* Argentina
* Rest of South America

* Middle-East and Africa* Saudi Arabia
* South Africa
* Rest of Middle-East and Africa

## Frequently Asked Questions

#### How large is the nanomaterials market in 2026?

The nanomaterials market size reached USD 48.12 billion in 2026 and is projected

to reach USD 119.29 billion by 2031 at a 19.91% CAGR.

#### Which product type currently dominates demand?

Nanoparticles hold 66.78% of 2025 revenue, driven by titanium dioxide and silica grades used in personal-care and coating applications.

#### What application area is expanding the fastest?

Electronics is advancing at a 20.18% CAGR through 2031 as quantum-dot displays, copper-nanowire interposers, and nanotube shields enter mass production.

#### Why are lipid-based nanomaterials growing so quickly?

Global vaccine programs and a pipeline of siRNA and mRNA therapeutics require ionizable and PEGylated lipids for delivery, lifting lipid-based grades at a 21.89% CAGR.

#### Which region offers the highest growth outlook?

Asia-Pacific is forecast to register a 22.32% CAGR to 2031, backed by large-scale graphene and nanotube capacity expansions and strong EV battery investment.

#### What is the main barrier to new entrants in the nanomaterials industry?

High CAPEX for precision synthesis tools such as atomic-layer-deposition reactors, coupled with stringent regulatory testing under REACH and ISO standards, limits market entry.