Biomaterials and Medical Applications

Market Analysis

Nanotechnology 2020 Market Analysis

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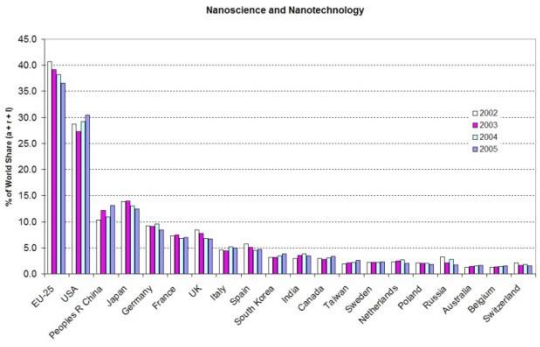
Market Analysis Report

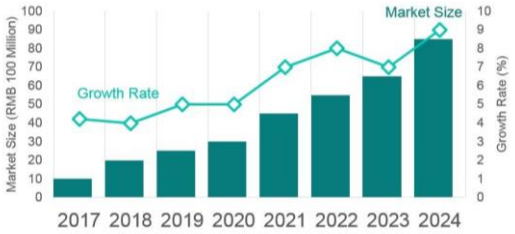
1. America Region:

By the year 2024, the global nanotechnology market is expected to exceed a net value of approximately $124 billion USD1. As the applications of this area of science continue to increase within the electronics, energy, biomedical, cosmetic, defence, automotive and agricultural industries, the rise in government support and private sector funding to improve this technology is also expected to rise. Within the United States, the National Nanotechnology Initiative (NNI), which was established in 2001, is a collaboration of 20 federal departments and agencies with interests in nanotechnology research, development, and commercialization. Since its inception, the NNI has not only improved the research and development of nanotechnology within the United States but also on the global stage through its impressive collection of publications in various high impact journals, particularly over the last ten years. One of the most significant challenges that the science community, not only in the U.S., faces in regards to nanotechnology advances is the ability to integrate Nano scale materials into new devices and systems following the discovery of their novel properties at this Nano-level. Within the NNI exists several agencies, such as the Nano manufacturing and Small Business Innovation Research (SBIR) programs, that are specifically focused on improving the manufacturing and measurement technologies needed to transfer newly developed nanotechnologies into products for both commercial and public use. The NNI's National Nanotechnology Coordination Office (NNCO) has also increased the number of outreach activities available to the private sector to improve this transition period. America region is well known for the Nanotech hub. Market growth and currency is good in USA region.



2. Europe Region:

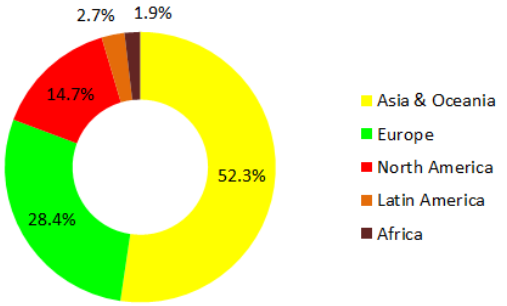
Every so often the winds of change affect the surrounding climate in a way that shapes the future. An example of this in the field of science and engineering is nanotechnology. Nanotechnology has impacted the world of science and engineering to the extent that it has changed way researchers think, influencing future technologies and solutions. The impact is so strong that new topics of study are necessary to fully understand the possibilities and risks, e.g. Nano medicine and Nano toxicology. The European Commission estimates the sector to be worth in excess of USD 1 trillion, and is considered to be growing. Between 2007 and 2011, the EU alone invested approximately EUR 896 million in nanotechnology related research. The worldwide investment in nanotechnology is estimated to be close to a quarter of a trillion USD, with both China and the USA investing upwards of USD 2 billion. With so much focus and investment it is understandable that nanotechnology is continuing its growth. A larger number of manufactured nanomaterials are produced, with large numbers already included in products present on the European market, e.g. coatings (paints, lacquers), anti-bacterial clothing, cosmetics, and food products. European market is expanding day by day. Countries are independent on their production as well as in buying and selling.



3. Asia Region:

Asia-Pacific is the most attractive market for the new entrants along with industry players on account of the increasing demand for nanomaterials. The growing number of industries and increased expenditure towards nanotechnology research is expected to provide significant opportunities to the industry players. Nanomaterials is an extensively research & development based industry. Most of the nanomaterials commercially available in the market are at the initial stage of the product life cycle. Across the globe, industry players are investing significantly along with government institutions to find commercial applications for this wide range of nanomaterials. The Federal Budget, has recently allotted a total funding of more than $1.4 billion for the National Nanotechnology Initiative (NNI), which is a U.S. Government research and development (R&D) initiative, for the year 2017; the total spending is around $24 billion cumulatively, since the inception of NNI in 2001. Over the years many new and emerging applications for nanomaterials have been found with government funding and support such as in field emission display, body armors, water purification, drug delivery, bio fuel cell, wind turbine blades, and others. Nanomaterials Market was valued at $14,741.6 million in 2015, and is expected to reach $55,016 million by 2022, supported by a CAGR of 20.7%. Nanomaterials can be defined as the materials with at least one external dimension in the size range of approximately 1 to 100

nanometres. Asian region is the largest region among all to start business. Many developing countries like India, Srilanka, Bangaladesh, Indonesia are the main business hub for Asian region.



4. Middle East region

The market was esteemed at USD 4,097.17 million out of 2015. The market is relied upon to achieve USD 11,252.76 million by 2020, at a CAGR of more than 22% amid the gauge time frame 2017-2022. The market has been divided in view of the end-client industry into Electronics, Health-mind, vitality and power, aviation, water filtration and some other real end-clients. The gadgets fragment is required to represent the most noteworthy offer in the market, representing around 30% of the worldwide piece of the overall industry. The aviation segment is relied upon to be the quickest developing division amid the estimate time frame, with the expanding utilization of nano-metals, polymer nano-composites and hostile to consumption coatings in the flying machine fabricate. Middle East market mostly depends upon UAE, Turkey, Israel, Iran, and Kuwait. These countries are highly developed in Nanotechnology and Nano engineering fields.

Nanotechnology and Nano engineering Industries across the World:

- 10 Angstroms, USA
- 3D Systems, USA
- 3DIcon, USA
- Agar Scientific, UK
- Ancon, UK
- Leadernano, China
- Nanoseedz, China
- Advanced Nano Products Co., Ltd., South Korea
- AnyGen, South Korea
- Nanoshel, India
- Curiox Biosystems, Singapore
- Omniyo, Singapore

Nanotechnology and Nano engineering Associations across the World:

- National Cancer Institute, USA
- Alliance for Nanotechnology in Cancer, USA
- National Institutes of Health, USA
- Nano medicine Roadmap Initiative, USA
- American National Standards Institute Nanotechnology Panel, USA
- National Institute for Nanotechnology, Canada
- Waterloo Institute for Nanotechnology, Canada
- Centre for Nano and Soft Matter Sciences, India
- Indian Association for the Cultivation of Science, India
- S.N. Bose National Centre for Basic Sciences, India
- Iranian Nanotechnology Laboratory Network, Iran
- Collaborative Centre for Applied Nanotechnology, Ireland
- Russian Nanotechnology Corporation, Russia

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