

North America Nanotechnology In Energy Applications Market Forecast 2023-2032

Market Report | 2023-08-18 | 168 pages | Inkwood Research

AVAILABLE LICENSES:

- Single User Price \$1600.00
- Global Site License \$2200.00

Report description:

KEY FINDINGS

The North America nanotechnology in energy applications market is estimated to record a CAGR of 13.01% over the forecast period of 2023-2032. The market growth of the region is augmented by increasing customer demand for high-performance, longer-lasting products, the introduction of new standards and technologies, as well as evolving regulatory requirements.

MARKET INSIGHTS

Canada and the United States are evaluated for the North America nanotechnology in energy applications market growth assessment. Nanotechnology has the potential to enhance solar panels, making the conversion of sunlight into electricity more efficient and paving the way for cost-effective solar power in the future. Nanostructured solar cells could offer advantages in terms of affordability in manufacturing and simpler installation procedures. Moreover, nanotechnology is already playing a significant role in the advancement of various battery types. These batteries exhibit characteristics such as faster charging, improved efficiency, reduced weight, higher power density, and prolonged charge-holding capabilities.

Canada is progressively evolving into a mature market for sensor and electronics systems, consequently expediting the integration of nanodevices across the country. Furthermore, government bodies in the area are augmenting their investments in the enhancement of defense and military, healthcare, energy, and public infrastructure facilities. This endeavor aims to amplify segment efficiency and provide more effective services to the citizens, thereby fostering industry expansion. Hence, the aforementioned factors are set to proliferate the North America nanotechnology in energy applications market growth during the forecast period.

COMPETITIVE INSIGHTS

Leading players operating in the market are The Chemours Company, Honeywell International Inc, etc.

Our report offerings include:

- Explore key findings of the overall market
- Strategic breakdown of market dynamics (Drivers, Restraints, Opportunities, Challenges)
- Market forecasts for a minimum of 9 years, along with 3 years of historical data for all segments, sub-segments, and regions
- Market Segmentation caters to a thorough assessment of key segments with their market estimations
- Geographical Analysis: Assessments of the mentioned regions and country-level segments with their market share
- Key analytics: Porter's Five Forces Analysis, Vendor Landscape, Opportunity Matrix, Key Buying Criteria, etc.
- The competitive landscape is the theoretical explanation of the key companies based on factors, market share, etc.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- Company profiling: A detailed company overview, product/services offered, SCOT analysis, and recent strategic developments

Table of Contents:

TABLE OF CONTENTS

1. RESEARCH SCOPE & METHODOLOGY

1.1. STUDY OBJECTIVES

1.2. METHODOLOGY

1.3. ASSUMPTIONS & LIMITATIONS

2. EXECUTIVE SUMMARY

2.1. MARKET SIZE & ESTIMATES

2.2. MARKET OVERVIEW

2.3. SCOPE OF STUDY

2.4. CRISIS SCENARIO ANALYSIS

2.4.1. IMPACT OF COVID-19

2.4.2. IMPACT OF RUSSIA-UKRAINE WAR

2.5. MAJOR MARKET FINDINGS

2.5.1. ROLE OF NANOTECHNOLOGY IN REDUCING COST OF LITHIUM-ION BATTERIES

2.5.2. SOLAR PHOTOVOLTAICS' EXTENSIVE IMPORTANCE IN SYNCHRONIZING ENERGY SECTOR AND NANOTECHNOLOGY

3. MARKET DYNAMICS

3.1. KEY DRIVERS

3.1.1. RISE IN DEMAND FOR RENEWABLE ENERGY

3.1.2. INCREASING NEED FOR ENERGY SECURITY

3.1.3. NEED FOR COST REDUCTION AND SCALABILITY

3.1.4. GOVERNMENT PROGRAMS AND POLICIES

3.2. KEY RESTRAINTS

3.2.1. INTELLECTUAL PROPERTY (IP) AND PATENT ISSUES

3.2.2. HIGH COSTS OF TECHNOLOGY

4. KEY ANALYTICS

4.1. EMERGING UTILITY

4.2. LIFE-CYCLE ASSESSMENT OF NANOMATERIALS

4.3. KEY MARKET TRENDS

4.4. PORTER'S FIVE FORCES ANALYSIS

4.4.1. BUYERS POWER

4.4.2. SUPPLIERS POWER

4.4.3. SUBSTITUTION

4.4.4. NEW ENTRANTS

4.4.5. INDUSTRY RIVALRY

4.5. GROWTH PROSPECT MAPPING

4.6. MARKET CONCENTRATION ANALYSIS

4.7. VALUE CHAIN ANALYSIS

4.7.1. RESEARCH & DEVELOPMENT (R&D)

4.7.2. NANOMATERIAL MANUFACTURING

4.7.3. COMPONENT & DEVICE MANUFACTURING

4.7.4. SYSTEM INTEGRATION & ASSEMBLY

4.7.5. DISTRIBUTION & SALES

4.7.6. INSTALLATION & DEPLOYMENT

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 5. MARKET BY MATERIAL TYPE
 - 5.1. NANO-STRUCTURE MONOLITHIC
 - 5.1.1. MARKET FORECAST FIGURE
 - 5.1.2. SEGMENT ANALYSIS
 - 5.2. SOLID NANOPARTICLE
 - 5.2.1. MARKET FORECAST FIGURE
 - 5.2.2. SEGMENT ANALYSIS
 - 5.3. NANOSENSOR
 - 5.3.1. MARKET FORECAST FIGURE
 - 5.3.2. SEGMENT ANALYSIS
 - 5.4. NANOTHIN FILM
 - 5.4.1. MARKET FORECAST FIGURE
 - 5.4.2. SEGMENT ANALYSIS
 - 5.5. OTHER MATERIAL TYPES
 - 5.5.1. MARKET FORECAST FIGURE
 - 5.5.2. SEGMENT ANALYSIS
- 6. MARKET BY APPLICATION
 - 6.1. PETROLEUM REFINING
 - 6.1.1. MARKET FORECAST FIGURE
 - 6.1.2. SEGMENT ANALYSIS
 - 6.2. FUEL CELL
 - 6.2.1. MARKET FORECAST FIGURE
 - 6.2.2. SEGMENT ANALYSIS
 - 6.3. ENERGY STORAGE DEVICE
 - 6.3.1. MARKET FORECAST FIGURE
 - 6.3.2. SEGMENT ANALYSIS
 - 6.4. SOLAR PHOTOVOLTAICS
 - 6.4.1. MARKET FORECAST FIGURE
 - 6.4.2. SEGMENT ANALYSIS
 - 6.5. OTHER APPLICATIONS
 - 6.5.1. MARKET FORECAST FIGURE
 - 6.5.2. SEGMENT ANALYSIS
- 7. MARKET BY END-USER
 - 7.1. TRANSPORT
 - 7.1.1. MARKET FORECAST FIGURE
 - 7.1.2. SEGMENT ANALYSIS
 - 7.2. ELECTRICAL
 - 7.2.1. MARKET FORECAST FIGURE
 - 7.2.2. SEGMENT ANALYSIS
 - 7.3. MANUFACTURING
 - 7.3.1. MARKET FORECAST FIGURE
 - 7.3.2. SEGMENT ANALYSIS
 - 7.4. OTHER END-USERS
 - 7.4.1. MARKET FORECAST FIGURE
 - 7.4.2. SEGMENT ANALYSIS
- 8. GEOGRAPHICAL ANALYSIS
 - 8.1. NORTH AMERICA

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 8.1.1. MARKET SIZE & ESTIMATES
- 8.1.2. NORTH AMERICA NANOTECHNOLOGY IN ENERGY APPLICATIONS MARKET DRIVERS
- 8.1.3. NORTH AMERICA NANOTECHNOLOGY IN ENERGY APPLICATIONS MARKET CHALLENGES
- 8.1.4. NORTH AMERICA NANOTECHNOLOGY IN ENERGY APPLICATIONS MARKET REGULATORY FRAMEWORK
- 8.1.5. KEY PLAYERS IN NORTH AMERICA NANOTECHNOLOGY IN ENERGY APPLICATIONS MARKET
- 8.2. COUNTRY ANALYSIS
 - 8.2.1. UNITED STATES
 - 8.2.1.1. UNITED STATES NANOTECHNOLOGY IN ENERGY APPLICATIONS MARKET SIZE & OPPORTUNITIES
 - 8.2.2. CANADA
 - 8.2.2.1. CANADA NANOTECHNOLOGY IN ENERGY APPLICATIONS MARKET SIZE & OPPORTUNITIES
- 9. COMPETITIVE LANDSCAPE
 - 9.1. KEY STRATEGIC DEVELOPMENTS
 - 9.1.1. PRODUCT LAUNCHES & DEVELOPMENTS
 - 9.1.2. PARTNERSHIPS & AGREEMENTS
 - 9.1.3. BUSINESS EXPANSIONS & DIVESTITURES
 - 9.2. COMPANY PROFILES
 - 9.2.1. A123 SYSTEMS LLC
 - 9.2.1.1. COMPANY OVERVIEW
 - 9.2.1.2. PRODUCT LIST
 - 9.2.2. ADVANCED NANO PRODUCTS CO LTD
 - 9.2.2.1. COMPANY OVERVIEW
 - 9.2.2.2. PRODUCTS LIST
 - 9.2.2.3. STRENGTHS & CHALLENGES
 - 9.2.3. ALTAIRNANO
 - 9.2.3.1. COMPANY OVERVIEW
 - 9.2.3.2. PRODUCT LIST
 - 9.2.4. ASPEN AEROGELS INC
 - 9.2.4.1. COMPANY OVERVIEW
 - 9.2.4.2. PRODUCT LIST
 - 9.2.4.3. STRENGTHS & CHALLENGES
 - 9.2.5. BLACK DIAMOND STRUCTURE LLC
 - 9.2.5.1. COMPANY OVERVIEW
 - 9.2.5.2. PRODUCT LIST
 - 9.2.6. CNANO TECHNOLOGY CO LTD (JIANGSU CNANO)
 - 9.2.6.1. COMPANY OVERVIEW
 - 9.2.6.2. PRODUCT LIST
 - 9.2.6.3. STRENGTHS & CHALLENGES
 - 9.2.7. FORGE NANO
 - 9.2.7.1. COMPANY OVERVIEW
 - 9.2.7.2. PRODUCT LIST
 - 9.2.8. HONEYWELL INTERNATIONAL INC
 - 9.2.8.1. COMPANY OVERVIEW
 - 9.2.8.2. SERVICE LIST
 - 9.2.8.3. STRENGTHS & CHALLENGES
 - 9.2.9. HYPERION CATALYSIS INTERNATIONAL INC
 - 9.2.9.1. COMPANY OVERVIEW
 - 9.2.9.2. PRODUCT LIST

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

9.2.10. NEI CORPORATION
9.2.10.1. COMPANY OVERVIEW
9.2.10.2. PRODUCT LIST
9.2.11. THE CHEMOURS COMPANY
9.2.11.1. COMPANY OVERVIEW
9.2.11.2. PRODUCT LIST
9.2.11.3. STRENGTHS & CHALLENGES

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

North America Nanotechnology In Energy Applications Market Forecast 2023-2032

Market Report | 2023-08-18 | 168 pages | Inkwood Research

To place an Order with Scotts International:

- ☐ - Print this form
- ☐ - Complete the relevant blank fields and sign
- ☐ - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User Price	\$1600.00
	Global Site License	\$2200.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>
		Date	<input type="text" value="2025-05-04"/>
		Signature	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com