

# NANOMATERIALS—WORLD MARKETS, APPLICATIONS & OPPORTUNITIES: 2006-2011 ANALYSIS AND FORECASTS

PUBLISHED APRIL 2006: BRAND NEW 2006-2011 REPORT!!

WITHIN THIS  
REPORT YOU  
WILL FIND...

#### ANALYSIS OF MARKET TRENDS

- What forces drive the nanomaterials industry?
- How will production capabilities affect future market demand?
- Developing commodity markets
- Product and Application Analyses
- Affects from Emerging End-Use Markets and Applications.

#### DATA USEFUL IN:

- Market sizing (\$MM) by product type: 2006-2011
- Developing Market Strategies
- Assessing End-User Needs
- Finding New Regional Markets

- Analyzing Distribution
- Analyzing the Competition
- Creating Forecast Models
- Presentations to Sales & Marketing Teams

#### WORLDWIDE MARKET STATISTICS

- Global demand (\$MM) by country: 2006-2011
- Shifts in Market Dynamics
- Pricing by Product Type
- Developing Markets: China, Asia, North America, Europe...

#### WORLD COMPETITIVE ENVIRONMENT

- Market Share (\$MM) by Product Type
- Marketing Strategies
- Company Background • Corporate Families
- New Market Entrants • Patent Trends

## SUMMARY OF REPORT CONTENTS

### INTRODUCTION

- Scope • Report Objectives
- Methodology • Statistical Notes

### PRODUCTS COVERED

- Nanoparticles
  - Advanced Ceramics • Metals • Minerals
  - Polymers • Other Particles
- Carbon Nanotubes
  - Single-Walled
  - Double-Walled
  - Multi-Walled
- Nanofibers
- Quantum Dots (aka Nanocrystals) • Other

### END-USER INDUSTRIES COVERED

- Aerospace • Automotive
- Chemical • Communications/IT
- Construction • Consumer Goods
- Defense/Military • Electronics
- Energy • General Machinery
- Life Sciences • Metalworking
- Paper & Pulp • Research • Textile • Other

### APPLICATIONS COVERED

- Biotech Research
- Chemical Additives (e.g., polymers, automotive catalysts)
- Coatings/Films
- Composites (e.g., polymers, advanced ceramics, tooling)
- Consumer Healthcare (e.g., cosmetics, skincare)
- Electronic Components (e.g., ICs, diodes, transistors)
- Electronic/Magnetic Data Storage
- EMI/RFI Shielding
- Environmental/Agricultural

- Fuel Storage (e.g., batteries, fuel cells, solar panels)
- Gear/Clothing (e.g., military gear, sportsgear)
- Instrumentation
- Materials Research
- Monitors/LCDs
- Pharmaceutical (e.g., drug development and drug delivery)
- Sensors
- Weaponry • Other

### GEOGRAPHIC REGIONS COVERED

- United States • Other NAFTA
- China • Japan • Korea
- Taiwan • Other Asia/Pacific
- Germany • France • United Kingdom
- Other Europe • Rest of World

### PERIOD COVERED

- 2005 (base year)
- 2006-2011 (forecast period by year)

### SECTION ONE: TECHNOLOGY OVERVIEW

- Background
- Definitions
- Nanomaterials
- Nanoparticles
- Carbon Nanotubes (CNT)
  - Single-Walled Nanotube (SwCNT)
  - Multi-Walled Nanotubes (MwCNT)
  - Double-Walled Nanotubes (DwCNT)
- Carbon Nanofibers (CNF)
- Quantum Dots/Nanocrystals

(continued on next page)

### DISTRIBUTION CHANNELS

- Developing Distribution Channels: international, national, regional, local
- Producer shipments (MM) by channel
- Distributor markups
- Discounting practices
- Changes in distribution channels & supply chain

### END-USER ANALYSIS

- End-User Industry Growth, Trends and Analysis: Automotive, Aerospace, Electronics, Medical, Military/Defense...
- What end-users expect from new products
- World Market by Application
- Purchasing trends by application
- Product Sophistication
- Technological Innovation

### TECHNOLOGY AND PRODUCT DEVELOPMENT

- New Technologies Market Impact
- Standards and Specifications Development
- Product Introductions
- Pricing by product type

### FUTURE OUTLOOK

- Product Forecasts through 2011
- Impact on market growth and development
- Technological Advances • Advances in R&D
- High-growth Markets: 2006-2011

### WHO SHOULD USE THIS REPORT:

- Manufacturers & End-Users
- Raw Materials Suppliers
- Investment Bankers • Venture Capitalists
- Distributors
- Manufacturer's Representatives
- Government Agencies
- Marketing & Sales Teams
- Internal Research Departments

## PRODUCTION OF NANOMATERIALS

- Arc Discharge
- Laser-Vaporization/Ablation
- Chemical Vapor Deposition
- Catalytic Decomposition
- Sol-Gel Processing
- Mechanical Processing
- Others

## PURIFICATION OF NANOMATERIALS

### PROPERTIES

- General • Electrical • Electronic
- Thermal Conductivity • Chemical Composition
- Mechanical Structure

### APPLICATIONS DEFINED

(see above for categories)

### TECHNOLOGICAL PROGRESS

- Advancements and Issues of Note
- Electronics • Optoelectronics
- Drug Delivery

### PATENT TRENDS

### NEW MATERIALS

**Each of the following sections is analyzed by product type and end-user industry demand levels throughout the forecast period. Tables and analysis are presented according to each heading within each section.**

## SECTION TWO: WORLD MARKET

- Total Global Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Global Market by Product Type (see above for product breakdown)
  - Pricing by Type
  - Decline in Prices
- Global Market by Country: 2005-2011 (see above for country breakdown)
- Global Market by End-User (see above for end-user breakdown)
- Global Market by Application (see above for application breakdown)
- Competitive Environment
- Future Outlook

## NORTH AMERICA MARKET

### SECTION THREE: US MARKET

- Total U.S. Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- Technological Advancements
- United States Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011
- Pricing by Type
- United States Market by End-User (\$MM, Kg, \$/Kg): 2005-2011

### SECTION FOUR: OTHER NAFTA MARKET

- Total Nafta Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- Other Nafta Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011

## ASIA/PACIFIC MARKET

### SECTION FIVE: CHINA MARKET

- Total China Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- China Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011

- Pricing by Type
- China Market by End-User (\$MM, Kg, \$/Kg): 2005-2011

### SECTION SIX: JAPAN MARKET

- Total Japan Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- Japan Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011
- Pricing by Type
- Japan Market by End-User (\$MM, Kg, \$/Kg): 2005-2011

### SECTION SEVEN: KOREA MARKET

- Total Korea Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- Korea Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011
- Pricing by Type
- Korea Market by End-User (\$MM, Kg, \$/Kg): 2005-2011

### SECTION EIGHT: TAIWAN MARKET

- Total Taiwan Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- Taiwan Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011
- Pricing by Type
- Taiwan Market by End-User (\$MM, Kg, \$/Kg): 2005-2011

### SECTION NINE: OTHER ASIA/PACIFIC MARKET

- Total Asia/Pacific Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- Other Asia/Pacific Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011

## EUROPE MARKET

### SECTION TEN: GERMANY MARKET

- Total Germany Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- Germany Market by Type (\$MM, Kg, \$/Kg): 2005-2011
- Pricing by Type
- Germany Market by End-User (\$MM, Kg, \$/Kg): 2005-2011

### SECTION ELEVEN: FRANCE MARKET

- Total France Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- France Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011
- Pricing by Type
- France Market by End-User (\$MM, Kg, \$/Kg): 2005-2011

### SECTION TWELVE: UK MARKET

- Total United Kingdom Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- United Kingdom Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011
- Pricing by Type
- United Kingdom Market by End-User (\$MM, Kg, \$/Kg): 2005-2011

### SECTION THIRTEEN: OTHER EUROPE MARKET

- Total Europe Nanomaterials Market

(\$MM, Kg, \$/Kg): 2005-2011

- Major Trends Affecting Demand
- Other Europe Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011

### SECTION FOURTEEN: REST OF WORLD MARKET

- Total Rest of World Nanomaterials Market (\$MM, Kg, \$/Kg): 2005-2011
- Major Trends Affecting Demand
- ROW Market by Product Type (\$MM, Kg, \$/Kg): 2005-2011

### LIST OF TABLES

- Table 2.1: World Nanomaterials Market Total: 2005-2011
- Table 2.2: World Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 2.3: World Nanomaterials Volume by Type (Kg): 2005-2011
- Table 2.4: World Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 2.5: World Nanomaterials Demand by Region and Type (\$MM): 2005
- Table 2.6: World Nanomaterials Demand by Region (\$MM): 2005-2011
- Table 2.7: World Nanomaterials Demand by End-User (\$MM): 2005-2011
- Table 2.8: World Nanomaterials Demand by Application (\$MM): 2005-2011
- Table 3.1: U.S. Nanomaterials Market Total: 2005-2011
- Table 3.2: U.S. Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 3.3: U.S. Nanomaterials Volume by Type (Kg): 2005-2011
- Table 3.4: U.S. Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 3.5: U.S. Nanomaterials Demand by End-User (\$MM): 2005-2011
- Table 4.1: Other NAFTA Nanomaterials Market Total: 2005-2011
- Table 4.2: Other NAFTA Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 4.3: Other NAFTA Nanomaterials Volume by Type (Kg): 2005-2011
- Table 4.4: Other NAFTA Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 5.1: China Nanomaterials Market Total: 2005-2011
- Table 5.2: China Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 5.3: China Nanomaterials Volume by Type (Kg): 2005-2011
- Table 5.4: China Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 5.5: China Nanomaterials Demand by End-User (\$MM): 2005-2011
- Table 6.1: Japan Nanomaterials Market Total: 2005-2011
- Table 6.2: Japan Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 6.3: Japan Nanomaterials Volume by Type (Kg): 2005-2011
- Table 6.4: Japan Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 6.5: Japan Nanomaterials Demand by End-User (\$MM): 2005-2011
- Table 7.1: Korea Nanomaterials Market Total: 2005-2011
- Table 7.2: Korea Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 7.3: Korea Nanomaterials Volume by Type (Kg): 2005-2011
- Table 7.4: Korea Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 7.5: Korea Nanomaterials Demand by End-User (\$MM): 2005-2011
- Table 8.1: Taiwan Nanomaterials Market Total: 2005-2011
- Table 8.2: Taiwan Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 8.3: Taiwan Nanomaterials Volume by Type (Kg): 2005-2011
- Table 8.4: Taiwan Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 8.5: Taiwan Nanomaterials Demand by End-User (\$MM): 2005-2011
- Table 9.1: Other Asia/Pacific Nanomaterials Market Total: 2005-2011

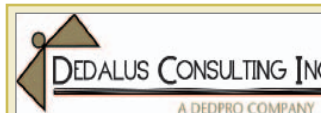
(continued on next page)

- Table 9.2: Other Asia/Pacific Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 9.3: Other Asia/Pacific Nanomaterials Volume by Type (Kg): 2005-2011
- Table 9.4: Other Asia/Pacific Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 10.1: Germany Nanomaterials Market Total: 2005-2011
- Table 10.2: Germany Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 10.3: Germany Nanomaterials Volume by Type (Kg): 2005-2011
- Table 10.4: Germany Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 10.5: Germany Nanomaterials Demand by End-User (\$MM): 2005-2011
- Table 11.1: France Nanomaterials Market Total: 2005-2011
- Table 11.2: France Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 11.3: France Nanomaterials Volume by Type (Kg): 2005-2011
- Table 11.4: France Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 11.5: France Nanomaterials Demand by End-User (\$MM): 2005-2011
- Table 12.1: United Kingdom Nanomaterials Market Total: 2005-2011
- Table 12.2: United Kingdom Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 12.3: United Kingdom Nanomaterials Volume by Type (Kg): 2005-2011
- Table 12.4: United Kingdom Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 12.5: United Kingdom Nanomaterials Demand by End-User (\$MM): 2005-2011
- Table 13.1: Other Europe Nanomaterials Market Total: 2005-2011
- Table 13.2: Other Europe Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 13.3: Other Europe Nanomaterials Volume by Type (Kg): 2005-2011
- Table 13.4: Other Europe Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Table 14.1: Rest of World Nanomaterials Market Total: 2005-2011
- Table 14.2: Rest of World Nanomaterials Demand by Type (\$MM): 2005-2011
- Table 14.3: Rest of World Nanomaterials Volume by Type (Kg): 2005-2011
- Table 14.4: Rest of World Nanomaterials ASP by Type (\$MM/Kg): 2005-2011
- Graph 3.2C: U.S. Nanomaterials Market Forecast: 2005-2011
- Chart 3.5A: U.S. Nanomaterials Demand by End-User (\$MM): 2006
- Graph 3.5B: U.S. Nanomaterials Market Forecast by End-User (\$MM): 2005-2011
- Chart 3.5C: U.S. Nanomaterials Demand by End-User (\$MM): 2011
- Graph 4.1A: Other NAFTA Nanomaterials Market Forecast: 2005-2011
- Chart 4.2A: Other NAFTA Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 4.2B: Other NAFTA Demand by Type (\$MM): 2011
- Graph 4.2C: Other NAFTA Nanomaterials Market Forecast: 2005-2011
- Graph 5.1A: China Nanomaterials Market Forecast: 2005-2011
- Chart 5.2A: China Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 5.2B: China Demand by Type (\$MM): 2011
- Graph 5.2C: China Nanomaterials Market Forecast: 2005-2011
- Chart 5.5A: China Nanomaterials Demand by End-User (\$MM): 2006
- Graph 5.5B: China Nanomaterials Market Forecast by End-User (\$MM): 2005-2011
- Chart 5.5C: China Nanomaterials Demand by End-User (\$MM): 2011
- Graph 6.1A: Japan Nanomaterials Market Forecast: 2005-2011
- Chart 6.2A: Japan Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 6.2B: Japan Demand by Type (\$MM): 2011
- Graph 6.2C: Japan Nanomaterials Market Forecast: 2005-2011
- Chart 6.5A: Japan Nanomaterials Demand by End-User (\$MM): 2006
- Graph 6.5B: Japan Nanomaterials Market Forecast by End-User (\$MM): 2005-2011
- Chart 6.5C: Japan Nanomaterials Demand by End-User (\$MM): 2011
- Graph 7.1A: Korea Nanomaterials Market Forecast: 2005-2011
- Chart 7.2A: Korea Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 7.2B: Korea Demand by Type (\$MM): 2011
- Graph 7.2C: Korea Nanomaterials Market Forecast: 2005-2011
- Chart 7.5A: Korea Nanomaterials Demand by End-User (\$MM): 2006
- Graph 7.5B: Korea Nanomaterials Market Forecast by End-User (\$MM): 2005-2011
- Chart 7.5C: Korea Nanomaterials Demand by End-User (\$MM): 2011
- Graph 8.1A: Taiwan Nanomaterials Market Forecast: 2005-2011
- Chart 8.2A: Taiwan Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 8.2B: Taiwan Demand by Type (\$MM): 2011
- Chart 8.2C: Taiwan Nanomaterials Market Forecast: 2005-2011
- Chart 8.5A: Taiwan Nanomaterials Demand by End-User (\$MM): 2006
- Graph 8.5B: Taiwan Nanomaterials Market Forecast by End-User (\$MM): 2005-2011
- Chart 8.5C: Taiwan Nanomaterials Demand by End-User (\$MM): 2011
- Graph 9.1A: Other Asia/Pacific Nanomaterials Market Forecast: 2005-2011
- Chart 9.2A: Other Asia/Pacific Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 9.2B: Other Asia/Pacific Demand by Type (\$MM): 2011
- Graph 9.2C: Other Asia/Pacific Nanomaterials Market Forecast: 2005-2011
- Chart 10.1A: Germany Nanomaterials Market Forecast: 2005-2011
- Chart 10.2A: Germany Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 10.2B: Germany Demand by Type (\$MM): 2011
- Graph 10.2C: Germany Nanomaterials Market Forecast: 2005-2011
- Chart 10.5A: Germany Nanomaterials Demand by End-User (\$MM): 2006
- Graph 10.5B: Germany Nanomaterials Market Forecast by End-User (\$MM): 2005-2011
- Chart 10.5C: Germany Nanomaterials Demand by End-User (\$MM): 2011
- Graph 11.1A: France Nanomaterials Market Forecast: 2005-2011
- Chart 11.2A: France Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 11.2B: France Demand by Type (\$MM): 2011
- Graph 11.2C: France Nanomaterials Market Forecast: 2005-2011
- Chart 11.5A: France Nanomaterials Demand by End-User (\$MM): 2006
- Graph 11.5B: France Nanomaterials Market Forecast by End-User (\$MM): 2005-2011
- Chart 11.5C: France Nanomaterials Demand by End-User (\$MM): 2011
- Graph 12.1A: United Kingdom Nanomaterials Market Forecast: 2005-2011
- Chart 12.2A: United Kingdom Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 12.2B: United Kingdom Demand by Type (\$MM): 2011
- Graph 12.2C: United Kingdom Nanomaterials Market Forecast: 2005-2011
- Chart 12.5A: United Kingdom Nanomaterials Demand by End-User (\$MM): 2006
- Graph 12.5B: United Kingdom Nanomaterials Market by End-User (\$MM): 2005-2011
- Chart 12.5C: United Kingdom Nanomaterials Demand by End-User (\$MM): 2011
- Graph 13.1A: Other Europe Nanomaterials Market Forecast: 2005-2011
- Chart 13.2A: Other Europe Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 13.2B: Other Europe Demand by Type (\$MM): 2011
- Graph 13.2C: Other Europe Nanomaterials Market Forecast: 2005-2011
- Graph 14.1A: Rest of World Nanomaterials Market Forecast: 2005-2011
- Chart 14.2A: Rest of World Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 14.2B: Rest of World Demand by Type (\$MM): 2011
- Graph 14.2C: Rest of World Nanomaterials Market Forecast: 2005-2011

## LIST OF EXHIBITS

- Graph 2.1A: World Nanomaterials Market Forecast: 2005-2011
- Chart 2.2A: World Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 2.2B: World Demand by Type (\$MM): 2011
- Graph 2.2C: World Nanomaterials Market Forecast by Product Type: 2005-2011
- Chart 2.5A: Total Nanomaterials Demand by Region (\$MM): 2006
- Chart 2.5B: Nanoparticles Demand by Region (\$MM): 2006
- Chart 2.5C: Carbon Nanotubes Demand by Region (\$MM): 2006
- Chart 2.5D: Nanofibers Demand by Region (\$MM): 2006
- Chart 2.6A: Nanomaterials Demand by Region (\$MM): 2011
- Graph 2.6B: World Nanomaterials Market Forecast by Region (\$MM): 2005-2011
- Chart 2.7A: World Nanomaterials Demand by End-User (\$MM): 2006
- Graph 2.7B: World Nanomaterials Market Forecast by End-User (\$MM): 2005-2011
- Chart 2.7C: World Nanomaterials Demand by End-User (\$MM): 2011
- Chart 2.8A: World Nanomaterials Demand by Application (\$MM): 2006
- Graph 2.8B: World Nanomaterials Market Forecast by Application (\$MM): 2005-2011
- Graph 3.1A: U.S. Nanomaterials Market Forecast: 2005-2011
- Chart 3.2A: U.S. Nanomaterials Demand by Product Type (\$MM): 2006
- Chart 3.2B: U.S. Demand by Type (\$MM): 2011

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