

The Global Market for Nanocoatings to 2027

<https://marketpublishers.com/r/G988455503BEN.html>

Date: August 2018

Pages: 702

Price: US\$ 1,150.00 (Single User License)

ID: G988455503BEN

Abstracts

The incorporation of nanomaterials into thin films, coatings and surfaces leads to new functionalities, completely innovative characteristics and the possibility to achieve multi-functional coatings and smart coatings. The use of nanomaterials also results in performance enhancements in wear, corrosion-wear, fatigue and corrosion resistant coatings. Nanocoatings demonstrate significant enhancement in outdoor durability and vastly improved hardness and flexibility compared to traditional coatings.

The Global Market for Nanocoatings examines a market that is already providing significant economic, hygiene and environmental benefit for sectors such as consumer electronics, construction, medicine & healthcare, textiles, oil & gas, infrastructure and aviation.

Nanocoatings covered include: Anti-fingerprint; Anti-microbial; Anti-corrosion; Abrasion & wear-resistant; Barrier; Smart; Anti-fouling and easy-to-clean; Self-cleaning; Photocatalytic; UV-Resistant; Thermal barrier; Flame retardant; Anti-icing & deicing; Anti-reflective; Self-healing.

Report contents include:

Size in value for the nanocoatings market, and growth rate during the forecast period, 2017-2027.

Size in value for the End-user industries for nanocoatings and growth during the forecast period.

Market drivers, trends and challenges, by end user markets.

The regional markets for nanocoatings

Market outlook for 2018.

In-depth market assessment of opportunities for nanocoatings, by type and markets.

The latest trends in nanostructured surface treatments and coatings.

Benefits of nanocoatings, by markets and applications

Addressable markets for nanocoatings, by nanocoatings type and industry

Estimated market revenues for nanocoatings to 2027, by market and applications

Functional and smart nanocoatings applications.

330 company profiles including products and target markets.

Contents

1 INTRODUCTION

- 1.1 Aims and objectives of the study
- 1.2 Market definition
 - 1.2.1 Properties of nanomaterials
 - 1.2.2 Categorization

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

- 3.1 High performance coatings
- 3.2 Nanocoatings
- 3.3 Market drivers and trends
- 3.4 Market size and opportunity
 - 3.4.1 Main markets
 - 3.4.2 Total revenues 2010-2027
 - 3.4.3 Revenues by market
 - 3.4.4 Revenues by nanocoatings type
 - 3.4.5 Regional demand
- 3.5 Market and technical challenges

4 NANOCOATINGS TECHNICAL ANALYSIS

- 4.1 Properties
- 4.2 Benefits of using nanocoatings
 - 4.2.1 Types
- 4.3 Main production and synthesis methods
- 4.4 Hydrophobic coatings and surfaces
 - 4.4.1 Hydrophilic coatings
 - 4.4.2 Hydrophobic coatings
 - 4.4.2.1 Properties
- 4.5 Superhydrophobic coatings and surfaces
 - 4.5.1 Properties
 - 4.5.2 Durability issues
 - 4.5.3 Nanocellulose
- 4.6 Oleophobic and omniphobic coatings and surfaces

5 NANOMATERIALS USED IN NANOCOATINGS

5.1 GRAPHENE

5.1.1 Properties and coatings applications

5.1.1.1 Anti-corrosion coatings

5.1.1.2 Anti-microbial

5.1.1.3 Anti-icing

5.1.1.4 Barrier coatings

5.1.1.5 Heat protection

5.1.1.6 Smart windows

5.2 CARBON NANOTUBES

5.2.1 Properties and applications

5.2.1.1 Conductive films

5.2.1.2 EMI shielding

5.2.1.3 Anti-fouling

5.2.1.4 Flame retardant

5.3 SILICON DIOXIDE/SILICA NANOPARTICLES

5.3.1 Properties and applications

5.3.1.1 Easy-clean and dirt repellent

5.3.1.2 Anti-fogging

5.3.1.3 Scratch and wear resistance

5.3.1.4 Anti-reflection

5.4 NANOSILVER

5.4.1 Properties and applications

5.4.1.1 Anti-bacterial

5.4.1.2 Electrical conductivity

5.4.1.3 Anti-reflection

5.5 TITANIUM DIOXIDE NANOPARTICLES

5.5.1 Properties and applications

5.5.1.1 Exterior and construction glass coatings

5.5.1.2 Outdoor air pollution

5.5.1.3 Interior coatings

5.5.1.4 Improving indoor air quality

5.5.1.5 Waste Water Treatment

5.5.1.6 UV protection coatings

5.6 ALUMINIUM OXIDE NANOPARTICLES

5.6.1 Properties and applications

5.6.1.1 Scratch and wear resistant

5.7 ZINC OXIDE NANOPARTICLES

5.7.1 Properties and applications

5.7.1.1 UV protection

5.7.1.2 Anti-bacterial

5.8 DENDRIMERS

5.8.1 Properties and applications

5.9 NANOCELULOSE

5.9.1 Properties and applications

5.9.2 Cellulose nanofibers (CNF)

5.9.2.1 Applications

5.9.3 NanoCrystalline Cellulose (NCC)

5.9.3.1 Properties

5.9.4 Bacterial Cellulose (BCC)

5.9.4.1 Applications

5.9.5 Abrasion and scratch resistance

5.9.6 UV-resistant

5.9.7 Superhydrophobic coatings

5.9.8 Gas barriers

5.9.9 Anti-bacterial

5.10 NANOCLAYS

5.10.1 Properties and applications

5.10.1.1 Barrier films

6 NANOCOATINGS MARKET STRUCTURE

7 MARKET SEGMENT ANALYSIS, BY NANOCOATINGS TYPE

7.1 ANTI-FINGERPRINT NANOCOATINGS

7.1.1 Market drivers and trends

7.1.2 Benefits of nanocoatings

7.1.3 Applications

7.1.4 Global market size

7.1.4.1 Nanocoatings opportunity

7.1.4.2 Global revenues 2010-2027

7.1.5 Companies

7.2 ANTI-BACTERIAL NANOCOATINGS

7.2.1 Market drivers and trends

7.2.2 Benefits of nanocoatings

7.2.3 Applications

- 7.2.4 Global market size
 - 7.2.4.1 Nanocoatings opportunity
 - 7.2.4.2 Global revenues 2010-2027
- 7.2.5 Companies
- 7.3 ANTI-CORROSION NANOCOATINGS**
 - 7.3.1 Market drivers and trends
 - 7.3.2 Benefits of nanocoatings
 - 7.3.3 Applications
 - 7.3.4 Global market size
 - 7.3.4.1 Nanocoatings opportunity
 - 7.3.4.2 Global revenues 2010-2027
 - 7.3.5 Companies
- 7.4 ABRASION & WEAR-RESISTANT NANOCOATINGS**
 - 7.4.1 Market drivers and trends
 - 7.4.2 Benefits of nanocoatings
 - 7.4.3 Markets
 - 7.4.4 Global market size
 - 7.4.4.1 Nanocoatings opportunity
 - 7.4.4.2 Global revenues 2010-2027
 - 7.4.5 Companies
- 7.5 BARRIER NANOCOATINGS**
 - 7.5.1 Market drivers and trends
 - 7.5.2 Benefits of nanocoatings
 - 7.5.3 Global market size
 - 7.5.3.1 Nanocoatings opportunity
 - 7.5.3.2 Global revenues 2010-2027
 - 7.5.4 Companies
- 7.6 ANTI-FOULING AND EASY-TO-CLEAN NANOCOATINGS**
 - 7.6.1 Market drivers and trends
 - 7.6.2 Benefits of nanocoatings
 - 7.6.3 Applications
 - 7.6.4 Global market size
 - 7.6.4.1 Nanocoatings opportunity
 - 7.6.4.2 Global revenues 2010-2027
 - 7.6.5 Companies
- 7.7 SELF-CLEANING (BIONIC) NANOCOATINGS**
 - 7.7.1 Market drivers and trends
 - 7.7.2 Benefits of nanocoatings
 - 7.7.3 Global market size

- 7.7.3.1 Nanocoatings opportunity
- 7.7.3.2 Global revenues 2010-2027
- 7.7.4 Companies
- 7.8 SELF-CLEANING (PHOTOCATALYTIC) NANOCOATINGS
 - 7.8.1 Market drivers and trends
 - 7.8.2 Benefits of nanocoatings
 - 7.8.3 Applications
 - 7.8.3.1 Self-Cleaning Coatings
 - 7.8.3.2 Indoor Air Pollution and Sick Building Syndrome
 - 7.8.3.3 Outdoor Air Pollution
 - 7.8.3.4 Water Treatment
 - 7.8.4 Global market size
 - 7.8.4.1 Nanocoatings opportunity
 - 7.8.4.2 Global revenues 2010-2027
 - 7.8.5 Companies
- 7.9 UV-RESISTANT NANOCOATINGS
 - 7.9.1 Market drivers and trends
 - 7.9.2 Benefits of nanocoatings
 - 7.9.2.1 Textiles
 - 7.9.2.2 Wood coatings
 - 7.9.3 Global market size
 - 7.9.3.1 Nanocoatings opportunity
 - 7.9.3.2 Global revenues 2010-2027
 - 7.9.4 Companies
- 7.10 THERMAL BARRIER AND FLAME RETARDANT NANOCOATINGS
 - 7.10.1 Market Drivers and trends
 - 7.10.3 Applications
 - 7.10.4 Global market size
 - 7.10.4.1 Nanocoatings opportunity
 - 7.10.4.2 Global revenues 2010-2027
 - 7.10.5 Companies
- 7.11 ANTI-ICING AND DE-ICING
 - 7.11.1 Market drivers and trends
 - 7.11.2 Benefits of nanocoatings
 - 7.11.2.1 Hydrophobic and superhydrophobic coatings (HSH)
 - 7.11.2.2 SLIPS
 - 7.11.2.3 Heatable coatings
 - 7.11.2.4 Anti-freeze protein coatings
 - 7.11.3 Global market size

- 7.11.3.1 Nanocoatings opportunity
- 7.11.3.2 Global revenues 2010-2027

7.11.4 Companies

7.12 ANTI-REFLECTIVE NANOCOATINGS

7.12.1 Market drivers and trends

7.12.2 Benefits of nanocoatings

7.12.3 Global market size

7.12.3.1 Nanocoatings opportunity

7.12.3.2 Global revenues 2010-2027

7.12.4 Companies

7.13 SELF-HEALING NANOCOATINGS

7.13.1 Extrinsic self-healing

7.13.1.1 Capsule-based

7.13.1.2 Vascular self-healing

7.13.2 Intrinsic self-healing

7.13.3 Healing volume

7.13.4 Self-healing coatings

7.13.4.1 Anti-corrosion

7.13.4.2 Scratch repair

8 MARKET SEGMENT ANALYSIS, BY END USER MARKET

8.1 AVIATION AND AEROSPACE

8.1.1 Market drivers and trends

8.1.2 Applications

8.1.2.1 Thermal protection

8.1.2.2 Icing prevention

8.1.2.3 Conductive and anti-static

8.1.2.4 Corrosion resistant

8.1.2.5 Insect contamination

8.1.3 Global market size

8.1.3.1 Nanocoatings opportunity

8.1.3.2 Global revenues 2010-2027

8.1.4 Companies

8.2 AUTOMOTIVE

8.2.1 Market drivers

8.2.2 Applications

8.2.2.1 Anti-scratch nanocoatings

8.2.2.2 Conductive coatings

- 8.2.2.3 Hydrophobic and oleophobic
- 8.2.2.4 Anti-corrosion
- 8.2.2.5 UV-resistance
- 8.2.2.6 Thermal barrier
- 8.2.2.7 Flame retardant
- 8.2.2.8 Anti-fingerprint
- 8.2.2.9 Anti-bacterial
- 8.2.2.10 Self-healing
- 8.2.3 Global market size
 - 8.2.3.1 Nanocoatings opportunity
 - 8.2.3.2 Global revenues 2010-2027
- 8.2.4 Companies
- 8.3 CONSTRUCTION, ARCHITECTURE AND EXTERIOR PROTECTION**
 - 8.3.1 Market drivers and trends
 - 8.3.2 Applications
 - 8.3.2.1 Protective coatings for glass, concrete and other construction materials
 - 8.3.2.2 Photocatalytic nano-TiO₂ coatings
 - 8.3.2.3 Anti-graffiti
 - 8.3.2.4 UV-protection
 - 8.3.2.5 Titanium dioxide nanoparticles
 - 8.3.2.6 Zinc oxide nanoparticles
 - 8.3.3 Global market size
 - 8.3.3.1 Nanocoatings opportunity
 - 8.3.3.2 Global revenues 2010-2027
 - 8.3.4 Companies
- 8.4 ELECTRONICS**
 - 8.4.1 Market drivers
 - 8.4.2 Applications
 - 8.4.2.1 Waterproof coatings
 - 8.4.2.2 Conductive nanocoatings and films
 - 8.4.2.3 Anti-fingerprint
 - 8.4.2.4 Anti-abrasion
 - 8.4.2.5 Self-healing consumer electronic device coatings
 - 8.4.2.6 Flexible and stretchable electronics
 - 8.4.3 Global market size
 - 8.4.3.1 Nanocoatings opportunity
 - 8.4.3.2 Global revenues 2010-2027
 - 8.4.4 Companies
- 8.5 HOUSEHOLD CARE, SANITARY AND INDOOR AIR QUALITY**

- 8.5.1 Market drivers and trends
- 8.5.2 Applications
 - 8.5.2.1 Self-cleaning and easy-to-clean
 - 8.5.2.2 Food preparation and processing
 - 8.5.2.3 Indoor pollutants and air quality
- 8.5.3 Global market size
 - 8.5.3.1 Nanocoatings opportunity
 - 8.5.3.2 Global revenues 2010-2027
- 8.5.4 Companies
- 8.6 MARINE
 - 8.6.1 Market drivers and trends
 - 8.6.2 Applications
 - 8.6.3 Global market size
 - 8.6.3.1 Nanocoatings opportunity
 - 8.6.3.2 Global revenues 2010-2027
 - 8.6.4 Companies
- 8.7 MEDICAL & HEALTHCARE
 - 8.7.1 Market drivers and trends
 - 8.7.2 Applications
 - 8.7.2.1 Anti-fouling
 - 8.7.2.2 Anti-microbial and infection control
 - 8.7.2.3 Nanosilver
 - 8.7.2.4 Medical device coatings
 - 8.7.3 Global market size
 - 8.7.3.1 Nanocoatings opportunity
 - 8.7.3.2 Global revenues 2010-2027
 - 8.7.4 Companies
- 8.8 MILITARY AND DEFENCE
 - 8.8.1 Market drivers and trends
 - 8.8.2 Applications
 - 8.8.2.1 Textiles
 - 8.8.2.2 Military equipment
 - 8.8.2.3 Chemical and biological protection
 - 8.8.2.4 Decontamination
 - 8.8.2.5 Thermal barrier
 - 8.8.2.6 EMI/ESD Shielding
 - 8.8.2.7 Anti-reflection
 - 8.8.3 Global market size
 - 8.8.3.1 Nanocoatings opportunity

- 8.8.3.2 Global market revenues 2010-2027
- 8.8.4 Companies
- 8.9 PACKAGING
 - 8.9.1 Market drivers and trends
 - 8.9.2 Applications
 - 8.9.2.1 Nanoclays
 - 8.9.2.2 Nanosilver
 - 8.9.2.3 Nanocellulose
 - 8.9.3 Global market size
 - 8.9.3.1 Nanocoatings opportunity
 - 8.9.3.2 Global market revenues 2010-2027
 - 8.9.4 Companies
- 8.10 TEXTILES AND APPAREL
 - 8.10.1 Market drivers and trends
 - 8.10.2 Applications
 - 8.10.2.1 Protective textiles
 - 8.10.2.2 Conductive coatings
 - 8.10.3 Global market size
 - 8.10.3.1 Nanocoatings opportunity
 - 8.10.3.2 Global market revenues 2010-2027
 - 8.10.4 Companies
- 8.11 ENERGY
 - 8.11.1 Market drivers and trends
 - 8.11.2 Applications
 - 8.11.2.1 Wind energy
 - 8.11.2.2 Solar
 - 8.11.2.3 Anti-reflection
 - 8.11.2.4 Gas turbine coatings
 - 8.11.3 Global market size
 - 8.11.3.1 Nanocoatings opportunity
 - 8.11.3.2 Global market revenues 2010-2027
 - 8.11.4 Companies
- 8.12 OIL AND GAS
 - 8.12.1 Market drivers and trends
 - 8.12.2 Applications
 - 8.12.3 Global market size
 - 8.12.3.1 Nanocoatings opportunity
 - 8.12.3.2 Global market revenues 2010-2027
 - 8.12.4 Companies

8.13 TOOLS AND MANUFACTURING

8.13.1 Market drivers and trends

8.13.2 Applications

8.13.3 Global market size

8.13.3.1 Global market revenues 2010-2027

8.13.4 Companies

8.14 ANTI-COUNTERFEITING

8.14.1 Market drivers and trends

8.14.2 Applications

8.14.3 Global market size

8.14.3.1 Global market revenues 2010-2027

8.14.4 Companies

9 NANOCOATINGS COMPANIES. 442-683 (358 COMPANY PROFILES)

10 REFERENCES

List Of Tables

LIST OF TABLES

Table 1: Categorization of nanomaterials

Table 2: Properties of nanocoatings

Table 3: Markets for nanocoatings

Table 4: Estimated revenues for nanocoatings, 2010-2027, millions USD

Table 5: Estimated revenues for nanocoatings, 2017, millions USD, by market

Table 6: Estimated revenues for nanocoatings, 2027, millions USD, by market

Table 7: Estimated revenues for nanocoatings, 2017, millions USD, by type

Table 8: Estimated revenues for nanocoatings, 2027, millions USD, by type

Table 9: Disadvantages of commonly utilized superhydrophobic coating methods

Table 10: Technology for synthesizing nanocoatings agents

Table 11: Film coatings techniques

Table 12: Contact angles of hydrophilic, super hydrophilic, hydrophobic and superhydrophobic surfaces

Table 13: Applications of oleophobic & omniphobic coatings

Table 14: Nanomaterials used in nanocoatings and applications

Table 15: Graphene properties relevant application in coatings

Table 16: Nanocellulose applications timeline in the coatings and paints markets

Table 17: Applications of cellulose nanofibers(CNF)

Table 18: Applications of bacterial cellulose (BC)

Table 19: Companies developing cellulose nanofibers products in paper coatings and non-packaging coating products, applications targeted and stage of commercialization

Table 20: Nanocoatings market structure

Table 21: Anti-fingerprint nanocoatings-Nanomaterials used, principles, properties and applications

Table 22: Market assessment for anti-fingerprint nanocoatings

Table 23: Potential addressable market for anti-fingerprint nanocoatings

Table 24: Revenues for anti-fingerprint nanocoatings, 2010-2027, millions USD

Table 25: Anti-fingerprint coatings product and application developers

Table 26: Anti-bacterial nanocoatings-Nanomaterials used, principles, properties and applications

Table 27: (A) illustrates biocidal nanocoating resistance to bacteria. (B) illustrates biocidal nanocoating resistance to fungus

Table 28: Nanomaterials utilized in Anti-bacterial coatings-benefits and applications

Table 29: Anti-bacterial nanocoatings markets and applications

Table 30: Nanomaterials utilized in Anti-bacterial coatings-benefits and applications

Table 31: Market assessment of Anti-bacterial nanocoatings

Table 32: Opportunity for Anti-bacterial nanocoatings

Table 33: Revenues for Anti-bacterial nanocoatings, 2010-2027, US\$

Table 34: Anti-bacterial nanocoatings product and application developers

Table 35: Anti-corrosion nanocoatings-Nanomaterials used, principles, properties and applications

Table 36: Anti-corrosion nanocoatings markets and applications

Table 37: Market assessment for anti-corrosion nanocoatings

Table 38: Opportunity for anti-corrosion nanocoatings

Table 39: Revenues for anti-corrosion nanocoatings, 2010-2027

Table 40: Anti-corrosion nanocoatings product and application developers

Table 41: Abrasion & wear resistant nanocoatings-Nanomaterials used, principles, properties and applications

Table 42: Abrasion & wear resistant nanocoatings markets and applications

Table 43: Abrasion and wear resistant nanocoatings markets, applications and potential revenues

Table 44: Market assessment for abrasion and wear resistant nanocoatings

Table 45: Revenues for abrasion and wear resistant nanocoatings, 2010-2027, US\$

Table 46: Abrasion and wear resistant nanocoatings product and application developers

Table 47: Barrier nanocoatings markets, applications and potential addressable market

Table 48: Market assessment for barrier nanocoatings and films

Table 49: Revenues for barrier nanocoatings, 2010-2027, US\$

Table 50: Barrier nanocoatings product and application developers

Table 51: Anti-fouling and easy-to-clean nanocoatings-Nanomaterials used, principles, properties and applications

Table 52: Anti-fouling and easy-to-clean nanocoatings markets, applications and potential addressable market

Table 53: Market assessment for anti-fouling and easy-to-clean nanocoatings

Table 54: Revenues for anti-fouling and easy-to-clean nanocoatings, 2010-2027, US\$

Table 55: Anti-fouling and easy-to-clean nanocoatings product and application developers

Table 56: Self-cleaning (bionic) nanocoatings-Nanomaterials used, principles, properties and applications

Table 57: Self-cleaning (bionic) nanocoatings-Markets and applications

Table 58: Market assessment for self-cleaning (bionic) nanocoatings

Table 59: Revenues for self-cleaning nanocoatings, 2010-2027, US\$

Table 60: Self-cleaning (bionic) nanocoatings product and application developers

Table 61: Self-cleaning (photocatalytic) nanocoatings-Nanomaterials used, principles, properties and applications

Table 62: Photocatalytic nanocoatings-Markets, applications and potential addressable market size by 2027

Table 63: Market assessment for self-cleaning (photocatalytic) nanocoatings

Table 64: Revenues for self-cleaning (photocatalytic) nanocoatings, 2010-2027, US\$

Table 65: Self-cleaning (photocatalytic) nanocoatings product and application developers

Table 66: UV-resistant nanocoatings-Nanomaterials used, principles, properties and applications

Table 67: UV-resistant nanocoatings-Markets, applications and potential addressable market

Table 68: Market assessment for UV-resistant nanocoatings

Table 69: Revenues for UV-resistant nanocoatings, 2010-2027, US\$

Table 70: UV-resistant nanocoatings product and application developers

Table 71: Thermal barrier and flame retardant nanocoatings-Nanomaterials used, principles, properties and applications

Table 72: Nanomaterials utilized in thermal barrier and flame retardant coatings and benefits thereof

Table 73: Thermal barrier and flame retardant nanocoatings-Markets, applications and potential addressable markets

Table 74: Market assessment for thermal barrier and flame retardant nanocoatings

Table 75: Revenues for thermal barrier and flame retardant nanocoatings, 2010-2027, US\$

Table 76: Thermal barrier and flame retardant nanocoatings product and application developers

Table 77: Anti-icing nanocoatings-Nanomaterials used, principles, properties, applications

Table 78: Nanomaterials utilized in anti-icing coatings and benefits thereof

Table 79: Anti-icing and de-icing nanocoatings-Markets, applications and potential addressable markets

Table 80: Market assessment for anti-icing and de-icing nanocoatings

Table 81: Revenues for anti-icing and de-icing nanocoatings, 2010-2027, US\$, conservative and optimistic estimates

Table 82: Anti-icing and de-icing nanocoatings product and application developers

Table 83: Anti-reflective nanocoatings-Nanomaterials used, principles, properties and applications

Table 84: Market opportunity for anti-reflection nanocoatings

Table 85: Revenues for anti-reflective nanocoatings, 2010-2027, US\$

Table 86: Anti-reflective nanocoatings product and application developers

Table 87: Types of self-healing coatings and materials

- Table 88: Comparative properties of self-healing materials
- Table 89: Types of self-healing nanomaterials
- Table 90: Types of nanocoatings utilized in aerospace and application
- Table 91: Revenues for nanocoatings in the aerospace industry, 2010-2027
- Table 92: Aerospace nanocoatings product developers
- Table 93: Market drivers for nanocoatings in the automotive market
- Table 94: Anti-scratch automotive nanocoatings
- Table 95: Conductive automotive nanocoatings
- Table 96: Hydro- and oleophobic automotive nanocoatings
- Table 97: Anti-corrosion automotive nanocoatings
- Table 98: UV-resistance automotive nanocoatings
- Table 99: Thermal barrier automotive nanocoatings
- Table 100: Flame retardant automotive nanocoatings
- Table 101: Anti-fingerprint automotive nanocoatings
- Table 102: Anti-bacterial automotive nanocoatings
- Table 103: Self-healing automotive nanocoatings
- Table 104: Revenues for nanocoatings in the automotive industry, 2010-2027, US\$, conservative and optimistic estimate
- Table 105: Automotive nanocoatings product developers
- Table 106: Nanocoatings applied in the construction industry-type of coating, nanomaterials utilized and benefits
- Table 107: Photocatalytic nanocoatings-Markets and applications
- Table 108: Revenues for nanocoatings in construction, architecture and exterior protection, 2010-2027, US\$
- Table 109: Construction, architecture and exterior protection nanocoatings product developers.
- Table 110: Market drivers for nanocoatings in electronics
- Table 111: Main companies in waterproof nanocoatings for electronics, products and synthesis methods
- Table 112: Conductive electronics nanocoatings
- Table 113: Anti-fingerprint electronics nanocoatings
- Table 114: Anti-abrasion electronics nanocoatings
- Table 115: Nanocoatings applied in the consumer electronics industry
- Table 116: Revenues for nanocoatings in electronics, 2010-2027, US\$
- Table 117: Nanocoatings applications developers in electronics
- Table 118: Revenues for nanocoatings in household care, sanitary and indoor air quality, 2010-2027, US\$
- Table 119: Household care, sanitary and indoor air quality nanocoatings product developers

Table 120: Nanocoatings applied in the marine industry-type of coating, nanomaterials utilized and benefits

Table 121: Revenues for nanocoatings in the marine sector, 2010-2027, US\$

Table 122: Marine nanocoatings product developers

Table 123: Nanocoatings applied in the medical industry-type of coating, nanomaterials utilized, benefits and applications

Table 124: Types of advanced coatings applied in medical devices and implants

Table 125: Nanomaterials utilized in medical implants

Table 126: Revenues for nanocoatings in medical and healthcare, 2010-2027, US\$

Table 127: Medical and healthcare nanocoatings product developers

Table 128: Revenues for nanocoatings in military and defence, 2010-2027, US\$

Table 129: Military and defence nanocoatings product and application developers

Table 130: Revenues for nanocoatings in packaging, 2010-2027, US\$

Table 131: Packaging nanocoatings companies

Table 132: Applications in textiles, by advanced materials type and benefits thereof

Table 133: Nanocoatings applied in the textiles industry-type of coating, nanomaterials utilized, benefits and applications

Table 134: Applications and benefits of graphene in textiles and apparel

Table 135: Revenues for nanocoatings in textiles and apparel, 2010-2027, US\$

Table 136: Textiles nanocoatings product developers

Table 137: Revenues for nanocoatings in energy, 2010-2027, US\$

Table 138: Renewable energy nanocoatings product developers

Table 139: Desirable functional properties for the oil and gas industry afforded by nanomaterials in coatings

Table 140: Revenues for nanocoatings in oil and gas exploration, 2010-2027, US\$

Table 141: Oil and gas nanocoatings product developers

Table 142: Revenues for nanocoatings in Tools and manufacturing, 2010-2027, US\$

Table 143: Tools and manufacturing nanocoatings product and application developers

Table 144: Revenues for nanocoatings in anti-counterfeiting, 2010-2027, US\$

Table 145: Anti-counterfeiting nanocoatings product and application developers

List Of Figures

LIST OF FIGURES

- Figure 1: Estimated revenues for nanocoatings, 2010-2027, millions USD
- Figure 2: Market revenues for nanocoatings 2017, millions USD, by market
- Figure 3: Market revenues for nanocoatings 2027, millions USD, by market
- Figure 4: Markets for nanocoatings 2017, %
- Figure 5: Markets for nanocoatings 2027, %
- Figure 6: Market for nanocoatings 2017, by nanocoatings type, US\$
- Figure 7: Markets for nanocoatings 2017, by nanocoatings type, %
- Figure 8: Market for nanocoatings 2027, by nanocoatings type, US\$
- Figure 9: Market for nanocoatings 2027, by nanocoatings type, %
- Figure 10: Regional demand for nanocoatings, 2017
- Figure 11: Hydrophobic fluoropolymer nanocoatings on electronic circuit boards
- Figure 12: Nanocoatings synthesis techniques
- Figure 13: Techniques for constructing superhydrophobic coatings on substrates
- Figure 14: Electrospray deposition
- Figure 15: CVD technique
- Figure 16: SEM images of different layers of TiO₂ nanoparticles in steel surface
- Figure 17: The coating system is applied to the surface. The solvent evaporates
- Figure 18: A first organization takes place where the silicon-containing bonding component (blue dots in figure 2) bonds covalently with the surface and cross-links with neighbouring molecules to form a strong three-dimensional
- Figure 19: During the curing, the compounds organize themselves in a nanoscale monolayer. The fluorine-containing repellent component (red dots in figure 3) on top makes the glass hydrophobic and oleophobic
- Figure 20: (a) Water drops on a lotus leaf
- Figure 21: A schematic of (a) water droplet on normal hydrophobic surface with contact angle greater than 90° and (b) water droplet on a superhydrophobic surface with a contact angle > 150°
- Figure 22: Contact angle on superhydrophobic coated surface
- Figure 23: Self-cleaning nanocellulose dishware
- Figure 24: SLIPS repellent coatings
- Figure 25: Omniphobic coatings
- Figure 26: Antimicrobial activity of Graphene oxide (GO)
- Figure 27: Water permeation through a brick without (left) and with (right) “graphene paint” coating
- Figure 28: Graphene heat transfer coating

- Figure 29 Carbon nanotube cable coatings
- Figure 30 Formation of a protective CNT-based char layer during combustion of a CNT-modified coating
- Figure 31: Silica nanoparticle anti-reflection coating on glass
- Figure 32 Anti-bacterials mechanism of silver nanoparticle coating
- Figure 33: Mechanism of photocatalysis on a surface treated with TiO₂ nanoparticles
- Figure 34: Schematic showing the self-cleaning phenomena on superhydrophilic surface
- Figure 35: Titanium dioxide-coated glass (left) and ordinary glass (right)
- Figure 36: Self-Cleaning mechanism utilizing photooxidation
- Figure 37: Schematic of photocatalytic air purifying pavement
- Figure 38: Schematic of photocatalytic indoor air purification filter
- Figure 39: Schematic of photocatalytic water purification
- Figure 40: Types of nanocellulose
- Figure 41: CNF gel
- Figure 42: TEM image of cellulose nanocrystals
- Figure 43: Extracting CNC from trees
- Figure 44: An iridescent biomimetic cellulose multilayer film remains after water that contains cellulose nanocrystals evaporates
- Figure 45: CNC slurry
- Figure 46: Nanoclays structure. The dimensions of a clay platelet are typically 200-1000 nm in lateral dimension and 1 nm thick
- Figure 47: Schematic of typical commercialization route for nanocoatings producer
- Figure 48 Nanocoatings market by nanocoatings type, 2010-2027, USD
- Figure 49: Types of anti-fingerprint coatings applied to touchscreens
- Figure 50: The Tesla S's touchscreen interface
- Figure 51: Amtel touch screen interior concept
- Figure 52: Schematic of anti-fingerprint nanocoatings
- Figure 53: Toray anti-fingerprint film (left) and an existing lipophilic film (right)
- Figure 54: Anti-fingerprint nanocoatings markets and applications
- Figure 55: Revenues for anti-fingerprint coatings, 2010-2027, US\$
- Figure 56: Current end user markets for anti-fingerprint nanocoatings, %, based on nanocoatings company sales
- Figure 57: Mechanism of microbial inactivation and degradation with anti-microbial PhotoProtect nanocoatings
- Figure 58: Schematic of silver nanoparticles penetrating bacterial cell membrane
- Figure 59: Antibacterial mechanism of nanosilver particles
- Figure 60: Current end user markets for Anti-bacterial nanocoatings, %, based on nanocoatings company sales

- Figure 61: Potential addressable market for Anti-bacterial nanocoatings
- Figure 62: Revenues for Anti-bacterial nanocoatings, 2010-2027, US\$
- Figure 63: Nanovate CoP coating
- Figure 64: 2000 hour salt fog results for Teslan nanocoatings
- Figure 65: AnCatt proprietary polyaniline nanodispersion and coating structure
- Figure 66: Schematic of anti-corrosion via superhydrophobic surface
- Figure 67: Current end user markets for anti-corrosion nanocoatings, % based on nanocoatings company sales
- Figure 68: Potential addressable market for anti-corrosion nanocoatings
- Figure 69: Revenues for anti-corrosion nanocoatings, 2010-2027, US\$
- Figure 70: Potential addressable market for abrasion and wear resistant nanocoatings
- Figure 71: Revenues for abrasion and wear-resistant nanocoatings, 2010-2027, millions US\$
- Figure 72: Nanocomposite oxygen barrier schematic
- Figure 73: Schematic of barrier nanoparticles deposited on flexible substrates
- Figure 74: End user markets for barrier nanocoatings, %
- Figure 75: Potential addressable market for barrier nanocoatings and films
- Figure 76: Revenues for barrier nanocoatings, 2010-2027, US\$
- Figure 77: Anti-fouling treatment for heat-exchangers
- Figure 78: Markets for anti-fouling and easy clean nanocoatings, by %
- Figure 79: Potential addressable market for anti-fouling and easy-to-clean nanocoatings
- Figure 80: Revenues for anti-fouling and easy-to-clean nanocoatings 2010-2027, millions USD.
- Figure 81: Self-cleaning superhydrophobic coating schematic
- Figure 82: Markets for self-cleaning nanocoatings, %
- Figure 83: Potential addressable market for self-cleaning (bionic) nanocoatings
- Figure 84: Revenues for self-cleaning nanocoatings, 2010-2027, US\$
- Figure 85: Principle of superhydrophilicity
- Figure 86: Schematic of photocatalytic air purifying pavement
- Figure 87: TokyStation GranRoof. The titanium dioxide coating ensures long-lasting whiteness
- Figure 88: Markets for self-cleaning (photocatalytic) nanocoatings 2017, %
- Figure 89: Potential addressable market for self-cleaning (photocatalytic) nanocoatings
- Figure 90: Revenues for self-cleaning (photocatalytic) nanocoatings, 2010-2027, US\$
- Figure 91: Markets for UV-resistant nanocoatings, %
- Figure 92: Potential addressable market for UV-resistant nanocoatings
- Figure 93: Revenues for UV-resistant nanocoatings, 2010-2027, US\$
- Figure 94: Flame retardant nanocoating
- Figure 95: Markets for thermal barrier and flame retardant nanocoatings, %

Figure 96: Potential addressable market for thermal barrier and flame retardant nanocoatings

Figure 97: Revenues for thermal barrier and flame retardant nanocoatings, 2010-2027, US\$

Figure 98: Nanocoated surface in comparison existing surfaces

Figure 99: NANOMYTE SuperAi, a Durable Anti-ice Coating

Figure 100: SLIPS coating schematic

Figure 101: Carbon nanotube based anti-icing/de-icing device

Figure 102: CNT anti-icing nanocoating

Figure 103: Markets for anti-icing and de-icing nanocoatings, %

Figure 104: Potential addressable market for anti-icing and de-icing nanocoatings

Figure 105: Revenues for anti-icing and de-icing nanocoatings, 2010-2027, US\$, conservative and optimistic estimates. Conservative estimates in blue, optimistic in red

Figure 106: Domsolar panels coated with nanocoatings

Figure 107: Schematic of AR coating utilizing nanoporous coating

Figure 108: Revenues for anti-reflective nanocoatings, 2010-2027, US\$

Figure 109: Schematic of self-healing polymers. Capsule based (a), vascular (b), and intrinsic (c) schemes for self-healing materials. Red and blue colours indicate chemical species which react (purple) theal damage

Figure 110: Stages of self-healing mechanism

Figure 111: Self-healing mechanism in vascular self-healing systems

Figure 112: Comparison of self-healing systems

Figure 113 Nanocoatings market by end user sector, 2010-2027, USD

Figure 114: Nanocoatings in the aerospace industry, by nanocoatings type %

Figure 115: Potential addressable market for nanocoatings in aerospace

Figure 116: Revenues for nanocoatings in the aerospace industry, 2010-2027, US\$

Figure 117: Nanocoatings in the automotive industry, by coatings type % 2017

Figure 118: Potential addressable market for nanocoatings in the automotive sector

Figure 119: Revenues for nanocoatings in the automotive industry, 2010-2027, US\$

Figure 120: Mechanism of photocatalytic NO_x oxidation on active concrete road

Figure 121: Jubilee Church in Rome, the outside coated with nanophotocatalytic TiO₂ coatings.

Figure 122: FN photocatalytic coating, applied in the Project of Ecological Sound Barrier, in Prague

Figure 123 Smart window film coatings based on indium tin oxide nanocrystals

Figure 124: Nanocoatings in construction, architecture and exterior protection, by coatings type %

Figure 125: Potential addressable market for nanocoatings in the construction, architecture and exterior coatings sector

Figure 126: Revenues for nanocoatings in construction, architecture and exterior protection, 2010-2027, US\$

Figure 127: Nanocoating submerged in water

Figure 128: Phone coated in WaterBlock submerged in water tank

Figure 129: Self-healing patent schematic

Figure 131: Self-healing glass developed at the University of Tokyo

Figure 132: Royole flexible display

Figure 133: Potential addressable market for nanocoatings in electronics

Figure 134: Revenues for nanocoatings in electronics, 2010-2027, US\$, conservative and optimistic estimates

Figure 135: Nanocoatings in household care, sanitary and indoor air quality, by coatings type %

Figure 136: Potential addressable market for nanocoatings in household care, sanitary and indoor air filtration

Figure 137: Revenues for nanocoatings in household care, sanitary and indoor air quality, 2010-2027, US\$

Figure 138: Potential addressable market for nanocoatings in the marine sector

Figure 139: Revenues for nanocoatings in the marine sector, 2010-2027, US\$

Figure 140: Nanocoatings in medical and healthcare, by coatings type %

Figure 141: Potential addressable market for nanocoatings in medical & healthcare

Figure 142: Revenues for nanocoatings in medical and healthcare, 2010-2027, US\$

Figure 143: Nanocoatings in military and defence, by nanocoatings type %

Figure 144: Potential addressable market nanocoatings in military and defence

Figure 145: Revenues for nanocoatings in military and defence, 2010-2027, US\$

Figure 146: O2 Block from Nanobiomatters

Figure 147: Nanocomposite oxygen barrier schematic

Figure 148: Osfresh food packaging incorporating antimicrobial silver

Figure 149: Potential addressable market for nanocoatings in packaging

Figure 150: Revenues for nanocoatings in packaging, 2010-2027, US\$

Figure 151: Omniphobic-coated fabric

Figure 152: Work out shirt incorporating ECG sensors, flexible lights and heating elements

Figure 153: Nanocoatings in textiles and apparel, by coatings type %

Figure 154: Potential addressable market for nanocoatings in textiles and apparel

Figure 155: Revenues for nanocoatings in textiles and apparel, 2010-2027, US\$

Figure 156: Self-Cleaning Hydrophobic Coatings on solar panels

Figure 157: Nanocoatings in renewable energy, by coatings type %

Figure 158: Potential addressable market for nanocoatings in renewable energy

Figure 159: Revenues for nanocoatings in energy, 2010-2027, US\$

Figure 160: Oil-Repellent self-healing nanocoatings

Figure 161: Nanocoatings in oil and gas exploration, by coatings type %

Figure 162: Potential addressable market for nanocoatings oil and gas exploration

Figure 163: Revenues for nanocoatings in oil and gas exploration, 2010-2027, US\$

Figure 164: Revenues for nanocoatings in Tools and manufacturing, 2010-2027, US\$

Figure 165: Security tag developed by Nanotech Security

Figure 166: Revenues for nanocoatings in anti-counterfeiting, 2010-2027, US\$

I would like to order

Product name: The Global Market for Nanocoatings to 2027

Product link: <https://marketpublishers.com/r/G988455503BEN.html>

Price: US\$ 1,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G988455503BEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970