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Markets for Self-Cleaning Coatings and Surfaces: 2015 to 2022

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Abstracts

n-tech believes that self-cleaning materials will become one of the largest segments of the smart materials market in terms of revenue generation. The selling proposition of a self-cleaning surface is obvious and in fact self-cleaning coatings for cars and windows have been around for years.

Nonetheless, self cleaning materials have remained a niche. Today's self-cleaning materials do not have long lifetimes and more importantly are often mediocre performers when it comes to their actual ability to self-clean. The opportunity here, therefore is to improve self-cleaning materials so they become more autonomic and longer-lasting. If these objectives can be achieved, then the addressable market for smart materials will grow exponentially.

In this report, n-tech discusses how self-cleaning coatings and surfaces will evolve over the next eight years. We survey what products are available now along with the latest R&D in this space to provide a self-cleaning material technology roadmap. We also examine the product /market strategies related to self-cleaning materials that are emerging at both the largest specialty chemical, glass, plastics and textile firms and at startups.

Materials and Technology

This report provides complete coverage of the self-cleaning materials business and the technologies that sustain it:

Much of the discussion centers around the development of hydrophobic and hydrophilic surfaces and the emergence of super-hydrophobic and super-

hydrophilic technologies. We also examine how hydrophobic and hydrophilic materials can be combined in multi-layer surfaces to maximize the kinds of dirt that can be self-cleaned.

This report also covers other types of self-cleaning materials technology that we believe will become increasingly commercially successful. These include those based of electrostatic and catalytic approaches. In addition, we look a novel approaches to self-cleaning that are not based on smart materials, but which may prove highly competitive to self-cleaning materials. These include ultrasound and technologies based on micro-vacuum technology.

Also covered are the likely business potential for multifunctional surfaces that combine self-cleaning with other smart material functionality. As n-tech sees it there are significant markets for materials that combine self-cleaning with some kind of self-healing or smart antimicrobial functionality. Another related development is that of the omniphobic surface – a surface that can self-clean itself from almost anything.

Applications and Markets for Smart Composites

This report also includes an analysis of the application areas where n-tech sees smart self-cleaning surfaces and coatings generating significant revenues in the next decade. These areas include:

Construction – interior and exterior surfaces and windows

Energy – solar panels and wind generators

Automotive – interior and exterior surfaces, mirrors and windows

Clothing and textiles

Consumer products – electronics and appliances

Medical surfaces.

Eight-Year Forecasts

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This report contains detailed forecasts of the self-cleaning coatings and surfaces market including:

Revenue ($ Millions)

Volume (square meters)

Breakout by application

Breakout by materials and technology.

Strategic Profiles

In this report n-tech also examines the product development and marketing strategies of the firms to watch in self-cleaning materials including an analysis of their R&D programs.

The evaluation of self-cleaning coatings and surfaces markets in this report is based on interviews with key influencers in smart materials markets, as well as numerous secondary resources. It also draws on n-tech's insider knowledge of the smart materials business.

We believe that this report will be invaluable reading for marketing and business development specialists in coatings firms, specialty chemical companies and glass firms, building products companies, automotive firms, specialty clothing companies, as well as sophisticated investors interested in this space.

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ACRONYMS AND ABBREVIATIONS USED IN THIS REPORT

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