Australian Government
Department of Innovation, Industry, Science and Research

Australian Office of Nanotechnology

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What is nanotechnology and why is it important?

Nanotechnology is the precision-engineering of materials at the scale of 10^{-9} metres (one ten-thousandth the breadth of a human hair), at which point, new functionalities are obtained, resulting in products, devices and processes that will transform various industries.

- Nanotechnology is a set of emerging technologies.
- Nanotechnology is happening NOW with nano-enhanced products already on the shelves.
- Further developments are in the pipeline across a wide range of industry sectors, fuelled by a vibrant science sector.
- Benefits are seen as smaller, smarter, cheaper, safer and cleaner products and processes.
- A national strategy on nanotechnology

The Australian National Nanotechnology Strategy commenced on July 2007.

Key initiatives within the strategy are:

- a state-of-the-art atomic force microscope for the National Measurement Institute (NMI) to provide new calibration service for nanoscale standards in Australia;
- a Health, Safety and Environmental (HSE) Working Group to coordinate regulatory issues relating to nanotechnology; and
- a Public Awareness and Engagement Program.

The Australian Office of Nanotechnology (AON) implementation strategy can be downloaded here.

Fact Sheets

The Australian Office of Nanotechnology provides a series of fact sheets on nanotechnology-related matters. The first in the series is 'Nanotechnology - working with the smallest things' - [PDF 125 KB]

Publications

Senator the Hon Kim Carr, Minister for Innovation, Industry, Science and Research, has released two documents that will support policy and regulatory activity by the Commonwealth Government.

The Australian Government Approach to the Responsible Management of Nanotechnology. The

objectives identified in this paper will guide government agencies, including regulators and policy makers in their decision making process and policy development for nanotechnology.

The independent report, *A review of possible impacts of nanotechnology on Australia's regulatory framework*, was commissioned by the Australian Office of Nanotechnology to assess the adequacy of nanotechnology regulation. It was produced by the Centre for Regulatory Studies at Monash University. It is being closely examined by Australian regulators and policy makers.

Click here to download a copy of the Australian Office of Nanotechnology (AON) implementation strategy.

Click here - [PDF 6.1 MB] to download a copy of the Nanotechnology capability directory

Options for a National Nanotechnology Strategy Report. On 12 September 2006, the Government released the Taskforce report *Options for a National Nanotechnology Strategy*

National Academies Forum Report - April 2006 - report on the environmental, social, legal and ethical aspects of nanotechnology.

PMSEIC Report – March 2005 - The *Prime Minister's Science, Engineering and Innovation Council* (PMSEIC) received a presentation and report from a Working Group on the industrial opportunities that nanotechnology provides Australian industry and the impediments to its uptake.

"Australian Community Attitudes Held about Nanotechnology – Trends 2005-2007"
The public awareness survey below was commissioned to assess the Australian public's knowledge of and views about nanotechnology. This report compares results to a similar survey conducted in 2005, and demonstrates that since then, the number of respondents who see the benefits of nanotechnology as outweighing the risks has increased from 39% to 54%, among other key findings.

"Nanotechnology Business Survey- Wave 2 2006"
The AON, in cooperation with Nanotechnology Victoria (Nanovic), has also commissioned a survey to assess how businesses are responding to the impact of nanotechnology. The firms that participiated in this survey were recognised as having a potential interest in nanotechnology.

Additional information

Additional information about nanotechnology can be found here, including:

- Who was consulted - The Nanotechnology Strategy Taskforce consulted widely to develop proposals for a national strategy;
- Surveys that helped informed The Nanotechnology Strategy Taskforce;
- Nanotechnology Profiles - 10 people working in nanotechnology developments discuss what interests them about their work; and
- The Australian Nanotechnology Capability & Commercial Potential, 3rd Edition, 2007

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