

Teknisk specifikation

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**Nanoteknologi – Terminologi och definitioner för nano-
objekt – Nanopartikel, nanofiber och nanoplatta
(ISO/TS 27687:2008)**

**Nanotechnologies – Terminology and definitions for nano-
objects – Nanoparticle, nanofibre and nanoplat
(ISO/TS 27687:2008)**

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TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
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English Version

**Nanotechnologies - Terminology and definitions for nano-objects
- Nanoparticle, nanofibre and nanoplat (ISO/TS 27687:2008)**

Nanotechnologies - Terminologie et définitions relatives aux
nano-objets - Nanoparticule, nanofibre et nanoplat (ISO/TS
27687:2008)

Nanotechnologien - Terminologie und Begriffe für
Nanopartikel (ISO/TS 27687:2008)

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SIS-CEN ISO/TS 27687:2008 (E)

Foreword

This document (CEN ISO/TS 27687:2008) has been prepared by Technical Committee ISO/TC 229 "Nanotechnologies" in collaboration with Technical Committee CEN/TC 352 "Nanotechnologies" the secretariat of which is held by BSI.

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Endorsement notice

The text of ISO/TS 27687:2008 has been approved by CEN as a CEN ISO/TS 27687:2008 without any modification.

Introduction

As many authorities predict that applications of nanotechnologies will pervade all areas of life and will enable dramatic advances to be realized in all areas of communication, health, manufacturing, materials and knowledge-based technologies, there is an obvious need to provide industry and research with suitable tools to aid the development and application of those technologies. It is also essential that regulators and health and environmental protection agencies have available reliable measurement systems and evaluation protocols supported by well-founded and robust standards.

Often in the field of nanotechnologies, researchers with the aid of microscopes name materials inspired by the shape of objects found in everyday life although the physical size is much smaller. The prefix, nano-, is often added to denote the small size of the object. (The prefix nano-, is also used in S.I. units to indicate 10^{-9} e.g. 1 nanometre = 10^{-9} metre.)

To create a unitary standard, this terminology and definitions document encompasses terms used in both nanosciences and nanotechnologies concerning particles at the nano-scale. Nano-object and other new terms are coined to allow development of a rational hierarchical system of definitions. This hierarchy will allow systematic building of vocabulary and is contained in a larger hierarchy of terms under development for nanotechnologies. This document provides an up-to-date listing of terms and definitions relevant to the area. It forms one part of a projected multi-part terminology and definitions document covering the different aspects of nanotechnologies. It is intended to facilitate communications between organizations and individuals in industry and those who interact with them.

This document is concerned with the definition of terminology and definitions for these small objects. These objects come in several shapes; the three basic shapes referred to in this document are illustrated in Figure 1:

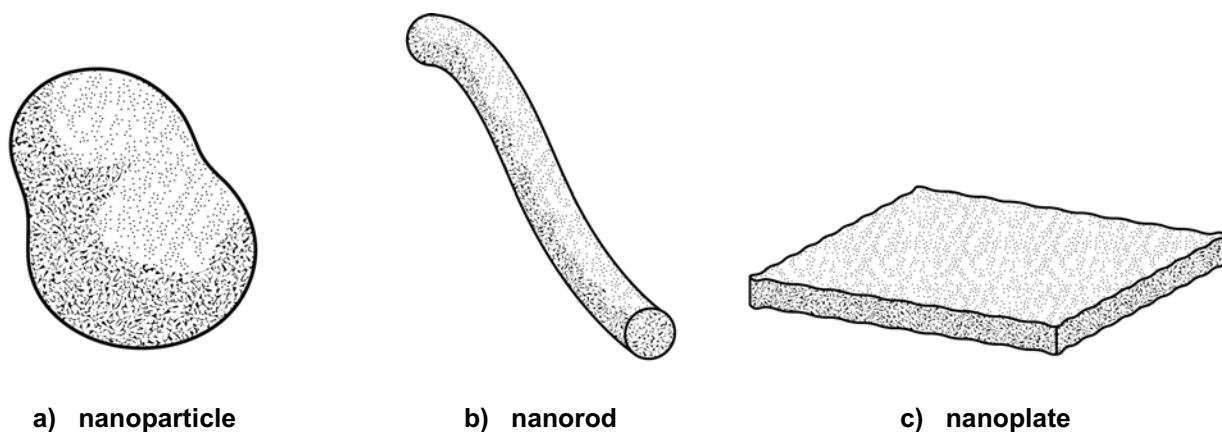


Figure 1 — Schematic diagrams showing some shapes for nano-objects

There is a hierarchical relationship between many of the different terms in the document. Some elements of this are shown in Figure 2 to illustrate some of the relationships that exist.

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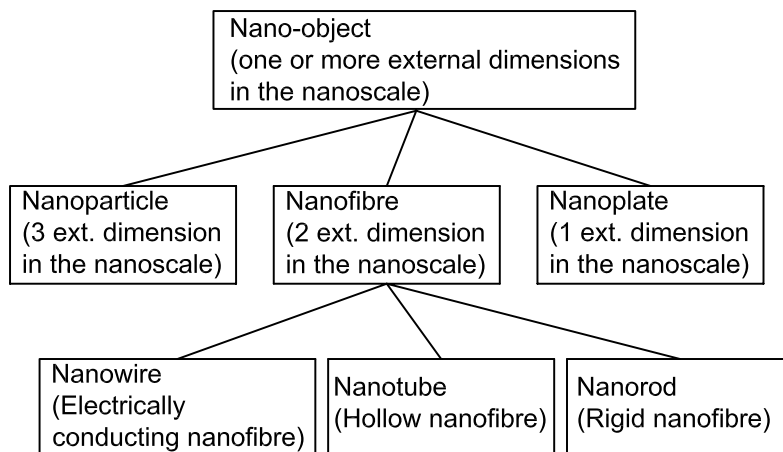


Figure 2 — Fragment of hierarchy of terms related to nano-objects