

SECTION B — PERFORMING OPERATIONS; TRANSPORTING

B82 NANOTECHNOLOGY

Note(s) [2011.01]

In this class, the following terms are used with the meaning indicated:

- "nanosize" or "nanoscale" relate to a controlled geometrical size below 100 nanometres (nm) in one or more dimensions;
- "nanostructure" means an entity having at least one nanosized functional component that makes physical, chemical or biological properties or effects available, which are uniquely attributable to the nanoscale.

B82B NANOSTRUCTURES FORMED BY MANIPULATION OF INDIVIDUAL ATOMS, MOLECULES, OR LIMITED COLLECTIONS OF ATOMS OR MOLECULES AS DISCRETE UNITS; MANUFACTURE OR TREATMENT THEREOF [7]

Note(s) [7, 2011.01]

1. This subclass does not cover chemical or biological nanostructures per se, provided for elsewhere, e.g., in classes C08 or C12.
2. Attention is drawn to the Note following the title of class B82, which defines the meaning of the terms "nanosize", "nanoscale" and "nanostructure" in this subclass.
3. Subject matter classified in this subclass is further classified in subclass B82Y, in order to enable a comprehensive search of nanostructure technology using classification symbols of B82Y in combination with classification symbols of B82B.
4. Nanostructures having specialised features or functions are further classified in appropriate places in other subclasses that provide for those features or functions, e.g. in G01Q, G02F 1/017, H01L 29/775.

1/00 Nanostructures formed by manipulation of individual atoms or molecules, or limited collections of atoms or molecules as discrete units [7, 2006.01]

3/00 Manufacture or treatment of nanostructures by manipulation of individual atoms or molecules, or limited collections of atoms or molecules as discrete units [7, 2006.01]

B82Y SPECIFIC USES OR APPLICATIONS OF NANOSTRUCTURES; MEASUREMENT OR ANALYSIS OF NANOSTRUCTURES; MANUFACTURE OR TREATMENT OF NANOSTRUCTURES [2011.01]

Note(s) [2011.01]

1. This subclass covers applications and aspects of nanostructures which are produced by any method, and is not restricted to those that are formed by manipulation of individual atoms or molecules.
2. Attention is drawn to the Note following the title of class B82, which defines the meaning of the terms "nanosize", "nanoscale" and "nanostructure" in this subclass.
3. This subclass is intended to enable a comprehensive search of subject matter related to nanostructures by combination of classification symbols of this subclass with classification symbols from other subclasses. Therefore, this subclass covers aspects of nanostructures that might also be entirely or partially covered elsewhere in the IPC.
4. This subclass is for obligatory supplementary classification of subject matter already classified as such in other classification places, e.g.:
 - B82B.....Nanostructures formed by individual manipulation of atoms, molecules, or limited collections of atoms or molecules as discrete units; manufacture or treatment thereof
 - A61K 9/51.....Nanocapsules for medicinal preparations
 - B05D 1/20.....Langmuir-Blodgett films
 - C01B 32/15.....Carbon nanostructures, e.g. bucky-balls, nanotubes, nanocoils, nanodoughnuts or nanoonions
 - G01Q.....Scanning probe techniques
 - G02F 1/017.....Optical quantum wells or boxes
 - H01F 10/32.....Nanostructured thin magnetic films
 - H01F 41/30.....Molecular beam epitaxy [MBE]
 - H01L 29/775.....Quantum wire FETs
5. The classification symbols of this subclass are not listed first when assigned to patent documents.

5/00 Nanobiotechnology or nanomedicine, e.g. protein engineering or drug delivery [2011.01]

10/00 Nanotechnology for information processing, storage or transmission, e.g. quantum computing or single electron logic [2011.01]

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| 15/00 | Nanotechnology for interacting, sensing or actuating, e.g. quantum dots as markers in protein assays or molecular motors [2011.01] | 30/00 | Nanotechnology for materials or surface science, e.g. nanocomposites [2011.01] |
| 20/00 | Nanooptics, e.g. quantum optics or photonic crystals [2011.01] | 35/00 | Methods or apparatus for measurement or analysis of nanostructures [2011.01] |
| 25/00 | Nanomagnetism, e.g. magnetoimpedance, anisotropic magnetoresistance, giant magnetoresistance or tunneling magnetoresistance [2011.01] | 40/00 | Manufacture or treatment of nanostructures [2011.01] |
| | | 99/00 | Subject matter not provided for in other groups of this subclass [2011.01] |