

# MICRO-STRUCTURAL TECHNOLOGY; NANO-TECHNOLOGY

## B81 MICRO-STRUCTURAL TECHNOLOGY [7]

- (1) This class covers micro-structural devices or systems, including at least one essential element or formation characterised by its very small size, typically within the range of  $10^{-4}$  to  $10^{-7}$  meters, i.e. its significant features can not, in at least one dimension, be completely discerned without the use of an optical microscope. [7]
- (2) In this class, the following expressions are used with the meaning indicated: [7]
  - “micro-structural devices” covers: [7]
    - (i) micro-mechanical devices comprising movable, flexible or deformable elements; and [7]
    - (ii) three-dimensional structures without movable, flexible or deformable elements, comprising microformations designed to accomplish an essential structural function for interacting with their environment, as opposed to purely electronic or chemical functions, regardless of whether the structures are combined with micro-electronic devices or formed from specific materials; [7]
  - “micro-structural systems” covers: [7]
    - (i) systems of cooperating micro-structural devices; and [7]
    - (ii) micro-electro-mechanical or micro-opto-mechanical systems, which combine on a common substrate the specific features of micro-structural devices and electrical or optical components, e.g. for controlling, analysing or signalling the functioning of micro-structural devices. [7]

## B81B MICRO-STRUCTURAL DEVICES OR SYSTEMS, E.G. MICRO-MECHANICAL DEVICES (piezo-electric, electrostrictive or magnetostrictive elements per se H01L 41/00) [7]

- (1) This subclass does not cover: [7]
  - purely electrical or electronic devices per se which are covered by section H, e.g. subclass H01L; [7]
  - purely optical devices per se which are covered by subclasses G02B or G02F; [7]
  - essentially two-dimensional structures, e.g. layered products which are covered by subclass B32B; [7]
  - chemical or biological structures per se which are covered by section C; [7]
  - structures in atomic scale produced by manipulation of single atoms or molecules, which are covered by group B82B 1/00. [7]
- (2) Devices or systems classified in this subclass are also classified in appropriate subclasses providing for their structural or functional features, if such features are of interest. [7]

1/00	Devices without movable or flexible elements, e.g. micro-capillary devices [7]	7/00	Micro-structural systems [7]
3/00	Devices comprising flexible or deformable elements, e.g. comprising elastic tongues or membranes (B81B 5/00 takes precedence) [7]	7/02	containing distinct electrical or optical devices of particular relevance for their function, e.g. micro-electro-mechanical systems (MEMS) (B81B 7/04 takes precedence) [7]
5/00	Devices comprising elements which are movable in relation to each other, e.g. comprising slidable or rotatable elements [7]	7/04	Networks or arrays of similar micro-structural devices [7]

## B81C PROCESSES OR APPARATUS SPECIALLY ADAPTED FOR THE MANUFACTURE OR TREATMENT OF MICRO-STRUCTURAL DEVICES OR SYSTEMS (making microcapsules or microballoons B01J 13/02; processes or apparatus specially adapted for the manufacture or treatment of piezo-electric, electrostrictive or magnetostrictive elements per se H01L 41/22) [7]

### Note

This subclass does not cover: [7]

- processes or apparatus for the manufacture or treatment of purely electrical or electronic devices, which are covered by section H, e.g. group H01L 21/00; [7]
- processes or apparatus involving the manipulation of single atoms or molecules, which are covered by group B82B 3/00. [7]

1/00	Manufacture or treatment of devices or systems in or on a substrate (B81C 3/00 takes precedence) [7]	3/00	Assembling of devices or systems from individually processed components [7]
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99/00    *Subject matter not provided for in other groups of this*                      *subclass [2010.01]*