

Title (en)
NANO-ELECTRONIC STRUCTURE AND METHOD OF PRODUCING SUCH

Title (de)
NANO-ELEKTRISCHE STRUKTUR UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
STRUCTURE NANOÉLECTRONIQUE ET PROCÉDÉ DE PRODUCTION ASSOCIÉ

Publication
EP 2095426 A4 20121010 (EN)

Application
EP 07861100 A 20071222

Priority

- SE 2007001171 W 20071222
- SE 0602840 A 20061222
- SE 0700102 A 20070112
- US 81222607 A 20070615
- SE 0702404 A 20071026

Abstract (en)
[origin: WO2008079077A2] The present invention provides a semiconductor device comprising a semiconductor nanoelement (100) and a volume element (105) arranged in epitaxial connection to each other. The semiconductor device is electrically connectable with the volume element (105) and the nanoelement (100) electrically connected in series. The volume element (105) is at least partly doped to provide a high charge carrier concentration into the nanoelement (100) and a low access resistance in an electrical connection to the volume element (105). Preferably the nanoelement (100) protrudes from a semiconductor substrate (110). A concentric layer (106) may be arranged on the volume element (105) to form an electrical contact. LED structures comprising nanoelement-volume element structures (100, 105) are disclosed. A method for producing a semiconductor device according to the invention is also presented.

IPC 8 full level
H01L 29/06 (2006.01); **B82B 1/00** (2006.01); **H01L 21/205** (2006.01)

CPC (source: EP)
B82Y 10/00 (2013.01); **B82Y 30/00** (2013.01); **H01L 21/02381** (2013.01); **H01L 21/0254** (2013.01); **H01L 21/02543** (2013.01); **H01L 21/02546** (2013.01); **H01L 21/02603** (2013.01); **H01L 21/02606** (2013.01); **H01L 21/02639** (2013.01); **H01L 21/02653** (2013.01); **H01L 29/0665** (2013.01); **H01L 29/0673** (2013.01); **H01L 29/0676** (2013.01); **H01L 33/24** (2013.01); **H01L 29/2003** (2013.01); **H01L 33/18** (2013.01); **H01L 33/20** (2013.01)

Citation (search report)

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Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2008079077 A2 20080703; **WO 2008079077 A3 20080821**; EP 2095426 A2 20090902; EP 2095426 A4 20121010

DOCDB simple family (application)
SE 2007001171 W 20071222; EP 07861100 A 20071222