

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  
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Application  
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- 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.

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Citation (search report)

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